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China

The Hangzhou Summit

Leaders' views

Original content from world leaders focusing on the agenda of the G20 summit

Working towards the 2030 Agenda

Helen Clark writes an exclusive feature on the 2030 Sustainable Development Goals

Spotlight on China

We hear from Chinese government officials about progress and developments

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WELCOME MESSAGE

Towards an innovative, invigorated, interconnected and inclusive world economy

***Xi Jinping** explains how the Hangzhou Summit will make its indelible mark on the G20 process*

On 1 December 2015, the first day of China's G20 presidency, I outlined China's vision for the G20 Hangzhou Summit. And now, Hangzhou is ready to welcome with open arms guests from around the world to the September summit.

The G20 Hangzhou Summit comes at a special time. As the world grapples with weak growth, decelerated economic globalisation, sluggish trade and investment, a widening development gap, more acute global challenges, and growing factors of instability and uncertainties, we find ourselves at a crucial juncture of international economic cooperation.

Facing the new global economic reality, the world looks to the G20 leaders to make the right and courageous choice in Hangzhou. As the premier forum for international economic cooperation, the G20 must live up to its mission to restore global growth and confidence and chart the course for the future.

Since China assumed the presidency, with a focus on the theme of "Towards an Innovative, Invigorated, Interconnected and Inclusive World Economy", the G20 members have, over the past year, worked hand in hand to make sure that the Hangzhou Summit has a lasting and positive impact on the world.

To boost the global economy, we are working together on the G20 Blueprint on Innovative Growth. We call for innovation-driven growth, structural reform and efforts to seize the historic opportunities generated by such new factors as the new industrial revolution and the digital economy to give impetus to countries' medium- and long-term growth.

> *The world looks to the G20 leaders to make the right and courageous choice in Hangzhou*

4th Summit

2012 Elected

Xi Jinping

President, People's Republic of China

To respond to international economic and financial risks and challenges, we are working together to enhance macroeconomic policy coordination, improve the international financial and monetary system, and deepen cooperation on financial regulation, taxation, energy and anti-corruption to build stronger resilience against risks.

To address protectionism and deglobalisation, we are working together to build an open global economy. We are discussing the formulation of the G20 Strategy for Global Trade Growth and G20 Guiding Principles for Global Investment Policymaking to encourage greater openness, advance globalisation, and reinvigorate trade and investment as two engines of growth.

To narrow the global development divide, we are leading the way in implementing the 2030 Agenda for Sustainable Development. We will issue the G20 Initiative on Supporting Industrialisation in Africa and Least Developed Countries and work for the early entry into force of the Paris Agreement on Climate Change to ensure equal access by all people to the benefits of development.

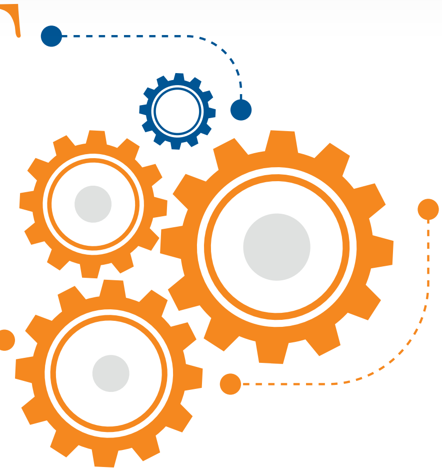
All these will enable the Hangzhou Summit to leave an indelible mark in the G20 process.

The Hangzhou Summit is held both for the G20 and for the world. As the host, China has embraced the spirit of partnership in its preparation for the summit to make sure that everything is open, inclusive and transparent. We have sent delegations to the headquarters of the United Nations and the African Union to solicit views and suggestions. We have hosted G20 ministerial meetings on agriculture, energy, trade, labour and employment to pool our wisdom together. We have also engaged representatives of the business community, women, youth, think tanks, labour and civil society groups to seek their input.

I have no doubt that these collective efforts and insights will enhance the leading role of the G20.

I look forward to meeting the leaders of participating countries and international organisations by the West Lake in Hangzhou, a city where history meets innovation. Together, let us write a new chapter in boosting global economic growth. **G20**

WHAT IS THE Role of Today's e-Commerce Platform to Achieve Real Economic INTEGRATION?



Merza Hasan, Ph.D., Dean of Executive Board and Executive Director at the World Bank Group answers this important question.

The role e-Commerce can play to integrate the real economy is enormous, however, we are not there yet. The job is only partially done.

The business-to-business (B2B) global market place is the mother of all industries at USD 140 trillion (Visa Commercial Consumption Expenditure Index) and completely dwarfs the current USD 1.13 trillion (Forrester) E-Commerce market. However, imagine a world where the best 21st Century digital tools are focused on the B2B marketplace. Imagine the efficiencies that would be created and the prosperity that would flow from unleashing the true power of the Digital Economy on B2B trade, rather than mainly focusing on the development of yet more products to deliver digital entertainment and media.

The lack of focus to optimize 'real economic integration' in the B2B marketplace with digital tools is directly contributing to sub-optimal growth in the global economy. Real economic integration is triggered at the moment when a buyer and seller for products or services meet and initiate a business transaction; this represents the nucleus for sustained economic growth.

In fact, for the first time ever the global leaders in their final 2015 G20 Communiqué have called for more digitization of our economy. Therefore, it is incumbent upon all of us to digitize our economy and real economic integration must be the starting point. For this process to happen, we must first be ready to think outside the box and second, we must be clear when presenting the benefits of our innovation to capture the attention of a wide audience and engender collaboration.

Today, the major challenge facing the developers of B2C and B2B e-Commerce systems is how to increase 'Conversion Ratios' i.e. the ratio between seeing a product or service to its acquisition. If we can identify and embed the key Conversion Ratio drivers at the moment of matching buyers and sellers of products or services we will be able to increase trade Conversion Ratios and achieve the economic expansion so coveted by all regions of the world. The question is, what are the key Conversion Ratio drivers that are required for success?

- ***First,*** *is the price and quality of products or services so that the buyer can make an informed judgment on the value offered*
- ***Second,*** *is the probability of financing the products or services, determined by the underwriting criteria of the lender*
- ***Third,*** *is the insurability of the business transaction, determined by the probability of loss, as assessed by the insurance underwriter*
- ***Fourth,*** *is the reliability of the logistics supply chain, determined by the efficiency of the parties involved in moving the goods from shelf-to-shelf on a recurring basis*
- ***Fifth,*** *is the level of system integration among the supply chain participants, determined by the seamless transfer of shipment information between the various entities required to move goods from shelf-to-shelf*

Such invaluable information will increase the Conversion Ratio from seeing to acquiring the Seller's product or services.

While fiscal, monetary and trade policies are important, at the ground level these 5 key Conversion Ratio drivers must be available at the very moment a buyer evaluates a seller's products or services. When this is achieved we will De-Risk business transactions, expedite decision making, increase commerce, expand the global trade market and drive sustainable growth in the global economy.

The trillion-dollar question is, what impedes the information technology industry to realize the above? The answer is the quality of data in use.

In the world of information, data can be divided into two extremes: Non-Validated Data (NVD) provided by a single source of data without validation, and Ultimate Data Quality (UDQ) provided to initiate an action in the real world that is validated through multiple sources of data in the same trade pipeline.

Merza Hasan, Ph.D.

Dean of Executive Board and Executive Director
World Bank Group

Today the information technology world is mainly reliant on NVD with high dependency on customer reviews, IP address behavior, like and dislike selections, etc. Whereas, UDQ is generated based on the historic, current, and planned real life trade transactions of each participant; hence, any information resulting from the UDQ will have a high degree of veracity and will facilitate informed decision making, triggering actions with confidence.

The question remains, where can we find the UDQ required to validate the 5 key Conversion Ratio drivers?

The answer lies within one of the 4 pillars of trade - Logistics. As shipments flow through the industry clusters in the value chains, shipment data is entered in the system to perform a real life action. It is continuously validated from multiple sources in the same trade lane pipeline as the shipment progresses from shelf-to-shelf; errors or anomalies are quickly identified and addressed in real time, thus generating UDQ. This UDQ is the fuel that can drive the other 3 pillars of trade; Commerce, Finance and Insurance to optimum levels of efficiency addressing the major challenge that inhibits global market expansion and rebalancing of the world economy.

Consider the current demographic situation. In high-income countries where 15% of the world's population lives, birth rates are low: the population is aging yet salaries remain high. This is an efficient and productive community challenged with low market demand. Meanwhile, in mid and low income countries, birth rates are high, population is young and skilled, but salaries are merely 20% of those of high-income countries. This is a highly populated community challenged with low buying power.

The strongest choice for the high-income countries is to build the buying power of the mid- and low-income countries, thus creating a vast new market for their products and services. Meanwhile, the strongest choice for the mid and low income countries is to commit to improving their business excellence thus achieving efficient and transparent operations.

In conclusion, an efficient logistics industry can: Connect the strengths of the high, mid and low income countries providing the digital tools to achieve business excellence. At the same time, it will supply the UDQ required for the 5 key Conversion Ratio drivers to De-Risk business transactions, expedite decision making, increase commerce, expand global trade and drive sustainable growth in the global economy.

The Power of De-Risking

Captain Samuel Salloum, Co-Chairman - Global Coalition for Efficient Logistics (GCEL) posits that the key to real economic integration is the necessity to De-Risk business transactions.

Taken in isolation, monetary and fiscal policies, Free Trade Agreements (FTA) and bi-lateral trade deals are not enough to achieve the sustained economic growth so desired by the citizens of the world. We must create economic expansion by stimulating the real economy of manufacturing, agriculture and service industries that support them rather than focus on the discredited financial engineering techniques that brought the global economy to its knees in 2008. Furthermore, we simply cannot ignore the development potential of the mid and low income countries given the world's current demographic trends.

We must unleash the power of today's 21st Century tools and shift current economic policy and practice to where it will have the greatest impact to connect and grow our global economy – the USD 140 trillion B2B marketplace.

In fact, this call to arms was echoed by the 2015 G20 Leaders. Following their lead, the 2016 China B20 SME Taskforce has called for the G20 to 'Endorse the concept of Electronic World Trade Platform (eWTP), a private sector-led and all stakeholder initiative, for public-private dialogue to incubate eTrade rules and foster a more effective policy and efficient policy and business environment for cross border electronic trade (eTrade) development.'

This is a great initiative and certainly a step in the right direction. However, since trade is of national security importance it is incumbent upon all of us to ensure that no one company, country or region can own an eWTP due to geo-political and monopolistic concerns. It is also not enough for such a platform to be merely an electronic shopping window, it must also provide the tools to increase trade efficiency, De-Risk our trade transactions and provide the right conditions to grow global trade.

This requires a true collaboration between the public and private sectors to ensure that the right policy and business environment is created to get the job done for the benefit of all.

Accordingly, the founding principle of any digital trade platform must be to stimulate growth in the real economy by providing new digital tools, enabling more efficient and secure trade with open and transparent access for all trade participants in the B2B marketplace, free of cost to end user. It must also streamline the process of real economic integration by providing a nexus for buyers and sellers to trade on a global basis by De-Risking trade. Finally, it must be created and governed by a multi-stakeholder coalition that draws on the brightest and best minds from the private and public sectors, all working in concert within a unique structure that offsets geopolitical and monopolistic concerns.

Why is De-Risking important?

International trade is an inherently risky business and requires enormous trust between trade participants. Trust that the products will be supplied to the right specification. Trust that accounts will be settled, in the absence of hard to come by trade finance and insurance and trust that goods will arrive at the intended destination in good condition. It is therefore no wonder that the engine of the global economy, the SMEs that represent up to 80% of all employment in some countries, find it so difficult to join global value chains. They will remain locked into local and national economies until international trade can be De-Risked to give them the confidence to trade more.

How can we De-Risk trade and thereby increase economic integration through improved Conversion Ratios?

Dr. Hasan previously introduced the 5 key Conversion Ratio Drivers of Economic Integration:

- Price and quality of products and services,
- Probability of financing the products and services,
- Reliability of the logistics supply chain, and
- System integration level among the supply chain participants.

I will now further expand on these key drivers and relate how they can De-Risk trade to create economic integration and ultimately drive global economic growth.

To facilitate expeditious and informed buying decisions, the 5 key Conversion Ratio drivers must be delivered instantaneously to potential buyers of products or services in an intuitive format. For example, consider a global manufacturer who needs to procure on a recurring basis high quality buttons needed for making high-end suits. Its procurement officer may search for suppliers online but be presented with over 10,000 vendors - How can the buyer decide which one to choose and how can the integrity of the vendors be validated? How can the buyer ensure the reliability of logistics and secure the required financing and insurance?

While price is an important determinant in the decision making process, a plethora of other factors must be considered before making a decision on which vendor will be the most suitable long-term business partner. For a professional buyer to make an informed purchasing decision, he or she must undertake due diligence on several potential suppliers and evaluate proposals by undertaking a weighted scoring exercise to ensure the best value is obtained. This is a time consuming and rather subjective process due to the lack of quality data available in real time generated from the transactions in the normal course of business.

Captain Samuel Salloum

Co-Chairman

Global Coalition for Efficient Logistics (GCEL)

To expedite the process, what is needed is a dynamic digital scoring matrix delivered digitally at the very moment a buyer evaluates a seller's products or services. The scoring matrix must be a précis of the 5 key Conversion Ratio Drivers and underpinned by UDQ, data that is continuously validated from multiple sources in the same trade lane pipeline as shipments progress from shelf-to-shelf.

We extend our apologies for the following brief technical detail but it is necessary to present a roadmap that can transform policies into action. Therefore, it is important to understand the components of such a dynamic scoring matrix and how it can improve B2B e-Commerce Conversion Ratios, thereby empowering the finance and insurance firms to unleash the availability of trade finance and insurance.

First, there must be a simple metric, such as a score on a scale of 1 to 5 – 5 being the most attractive – that can signal the overall trade worthiness of a potential trade partner being assessed for a product or service. Next, the score needs to be based on a comprehensive set of parameters that capture value chain performance across all trade pillars – commerce, finance, insurance, and logistics – in an integrated way. Finally, the score needs to be based on data captured over sufficient duration to be able to forecast the performance of potential trade partners.

In effect, the overall score must represent the trade worthiness of a B2B participant in a comprehensive manner across the 5 key Conversion Ratio Drivers.

These drivers are summarized as follows:

1. **Product/Service Quality:** Is a measure of risk related to a Seller's production of quality products that comply with its customers' specifications based on past, current and forecasted activities. Furthermore, is a measure based on years in business, sales, customer size, etc.

2. **Financing Probability:** Is a measure of risk that allows the creation of the smart e-finance matrix providing the dynamic scoring level needed for:
   - Trade Finance Risk Mitigation - by minimizing underwriter risk based upon the borrower's historic and future global trade finance activities
   - Minimize Transaction Risk – by maximizing the lender's capability to ensure loan proceeds are electronically directed to the borrower's preapproved sellers of products and services
   - Asset Recovery Risk – by maximizing the lender's capability to seize assets in the trade pipeline for liquidation to minimize asset impairment loss, which will be covered by insurance firms who countersigned the financing scoring criteria

3. **Insurability:** Is a measure of risk that allows the creation of the smart e-Insurance matrix providing the dynamic scoring level needed for trade insurance risk mitigation based upon all trade lane participants' historic performance as well as specific trade pipeline routes and destinations.

4. **Logistics Reliability:** Is a measure of non -performance risk as to the timely and secure delivery of purchased goods, based on the historic performance level of logistics services providers from the seller's to buyer's postal code.

5. **Supply Chain Integration:** Is a measure of the risk of being unable to seamlessly handoff trade information in an efficient manner among the supply chain participants based on: system integration capabilities, e-documentation level, extent of shipment tracking and visibility, etc.

> **"ALL THE ABOVE SHOULD BE AVAILABLE AT THE MOMENT WHEN THE BUYER MAKES ITS PROCUREMENT DECISIONS"**

The dynamic delivery of the aforementioned 5 key drivers that comprise a comprehensive scoring matrix empowered by UDQ will De-Risk business locally, nationally and globally serving to enhance the decision making of trade participants.

So, what kinds of organizations are able to deliver the e-World Trade Platform required to provide the UDQ based scoring to De-Risk B2B e-Commerce? There are two options available to us:

1. A private sector led entity that provides a platform to enable all large corporations and SMEs to collaborate and share logistics information openly. However, since trade is essentially a horizontal process, more vertical systems will not integrate value chains and provide the required UDQ. Additionally, no one

entity, country or region can own and deploy an e-World Trade platform due to geopolitical and monopolistic concerns.

2. Create a Public/Private Partnership (PPP) to provide the necessary, leadership, roadmap, tools and conditions to create the horizontal linking of existing trade and logistics platforms, with the overlay of e-Commerce, e-Finance and e-Insurance capability. Thereby creating the smart e-Matrix required for the creation of UDQ, De-Risking trade, increasing Conversion Ratios and thus powering the engine of the global economy.

The world has come to a cross road, either we continue to live with the current economic conditions or we embrace the power of digitization and direct its force to empowering the B2B marketplace. Global leaders have bravely taken up the call to arms and now look for the world to help them implement their policies through the Digital Economy. It is now up to us – All of us to come together to build an empowered Digital Economy, based on an open access and transparent Digital Economy Platform, delivered to the world, free of cost to the end user.

In response to this clarion call, we have established a Swiss based non-profit global PPP that has brought together leading organizations through its HumaWealth Program to launch the DEP that will drive real economic integration and De-Risk the global B2B marketplace.

The HumaWealth Program has four foundations to deliver sustained economic growth:

1. *Defined and achievable targets benefitting the real economy participants*

These targets encompass the global economy and include but are not limited to:

- Reduce annual trade costs by USD 1.3 trillion
- Increase annual trade by USD 1.2 trillion
- Provide a new USD 6 trillion service market opportunity
- Create a USD 1 trillion SME fund
- Generate 100 million jobs
- Enhance Cargo Security and improve Food Safety
- Expedite Disaster Relief Response and reduce Carbon Footprint

2. *A clear roadmap based on the economic strengths and demographics of each world region*

To reach the defined targets, the PPP has published Economic Roadmaps and executed MOUs to deploy the DEP covering the Americas, Asia, and EMEA in collaboration with the Organization of American States, African Union, Organization of Islamic Cooperation, League of Arab States, ASEAN-BAC, and with leading organizations in China and India, among other G20 nations.

3. *The necessary digital tools to reach the defined targets, free of cost to the end user, delivered by the trusted technology industry*

At the ground level, 86% of the G20 citizens represented by 71 government ministries, industry associations, academia, and private sector experts have commenced diagnostic trade efficiency assessments to define the digital tools they need. So far the results have been staggering: 85% of the trade participants assessed have no integrated system and 89% have defined what the proposed DEP should look like and want its implementation.

To date, 26 of the world's leading technology firms have signed strategic agreements as a first step to be selected as one of 12 "Technology Gateways" realizing they cannot deploy the DEP alone. These firms will work together with a renowned academic institution, an innovative public body and a leading technology firm to form "The E-Hub of the World". This global team will deliver the DEP under the protection of the international community and provide open and continuous access for all, free of cost to the end user.

4. *A global consensus to expedite deployment and offset monopolistic and geopolitical concerns*

The supporters of the PPP include more than 150 governments represented through their pan regional organizations and 26 IGOs / NGOs including the United Nations. Private sector members include the world's most prominent finance, insurance and technology firms that collectively represent 2.7 million workers servicing 60% of the world's GDP.

An extraordinary coalition of leading global organizations has prepared for a defining moment in the history of the world, the dawn of the Fourth Wave of the industrial revolution. Empowered by 21st Century digital tools, we can now De-Risk business to enable real economic integration that will reenergize international trade and thereby pave the way that leads to ***Connecting the Strengths of the World Community, Creating Well-Being Across Humanity.***

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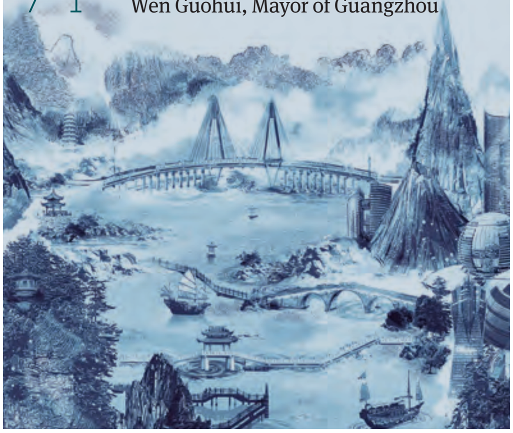

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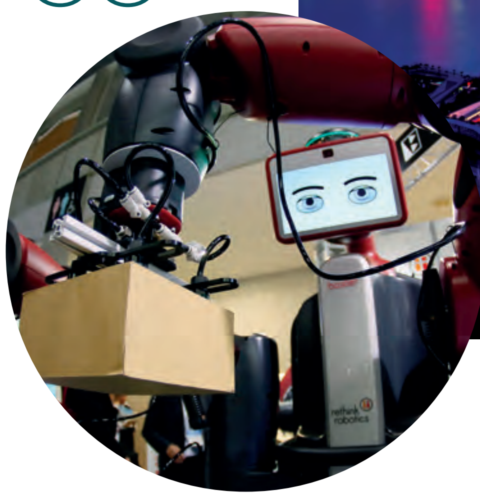

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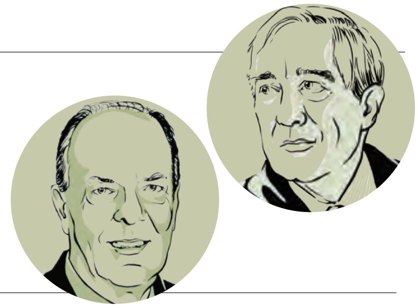

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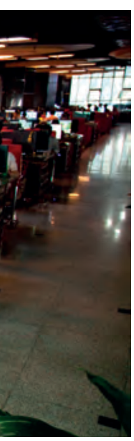

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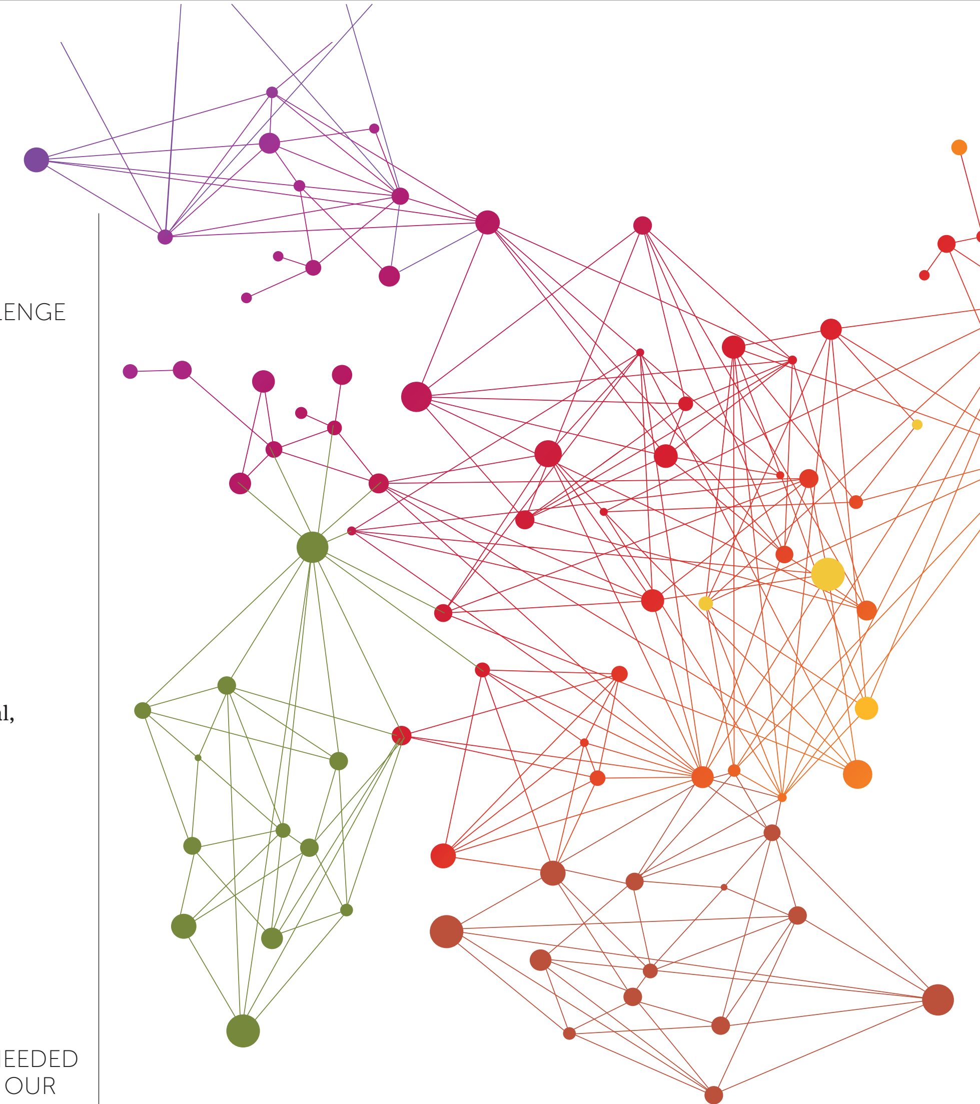

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LEADER'S VIEW

Building blocks for a better future

China and Mexico both want to promote financial inclusion and create new paths for growth, writes ***Enrique Peña Nieto***

EDUARDO VERDUGO/AP/PRESS ASSOCIATION IMAGES

4th Summit

2012 Elected

Enrique Peña Nieto

President, Mexico

China's proposal to centre this year's discussion on achieving an innovative, invigorated, interconnected and inclusive world economy is right on the mark. The 'four Is' subsume some of the most important challenges – or opportunities, depending on how they are framed – facing G20 governments in their goal of achieving strong, sustainable and balanced growth. I would like to share Mexico's achievements in the realms of interconnection and inclusiveness.

Interconnectedness and inclusion in Mexico

Investing in quality infrastructure has a direct impact on the enhancement of connectivity and inclusion, boosting competitiveness and contributing in general to economic growth and sustainable development. For that reason, in 2014 Mexico launched the National Infrastructure Programme, supported in part by collaborative work with the private sector through public-private partnerships, and encompassing key sectors such as energy, transportation, communications, water management, healthcare, tourism, housing and urban development.

In its first two years, the programme has contributed to the creation of new jobs and is generating an environment conducive to the flourishing of new businesses and increased productivity. Several projects are underway, including 32,000 kilometres of new or refurbished toll highways and roads, the doubling of our seaport's capacity to 500 million tonnes, increasing gas pipelines by 85 per cent to 21,282 kilometres, and the construction of the New International Airport of Mexico City, which is expected to start operating by 2020.

A second set of priority projects involves the creation, for the first time in Mexico's history, of Special Economic Zones in the South and Southeast of Mexico. This area, despite its productive and logistics potential, has for years lagged behind as a result of structural barriers. The projects will be paired with fiscal incentives and policies aimed at developing human capital and fostering innovation and technology transfers.

Both the National Infrastructure Programme and the Special Economic Zones focus on facilitating the integration of local firms, namely micro, small and medium-sized enterprises, into national and global value chains, hence contributing to Mexico's interconnection and inclusiveness. The ultimate objectives of these efforts include reducing regional gaps, promoting sustainable development and improving the prosperity of every citizen in Mexico.

Mexico has designed a comprehensive National Policy for Financial Inclusion, consisting of six core pillars

Financial inclusion

In its role as president of the G20, China has also given more prominence to financial inclusion, a crucial aspect of the development of the financial system and economic growth. Despite the technological advances of the past two decades, there are sectors of the population that still do not have sufficient access to financial tools to engage in productive economic activities, even in countries with what are considered to be deep financial markets. Bringing these individuals into a safe financial network can break barriers that disenfranchise and marginalise them, and provide them with concrete opportunities to reach a better life.

Mexico has designed a comprehensive National Policy for Financial Inclusion, consisting of six core pillars: developing capabilities for a more efficient use of the financial system, through financial education programmes; promoting the use of technological innovations that enable lower transaction costs; enhancing the supply of financial services; encouraging the access and use of formal financial services through the design of carefully tailored products and services; developing greater trust in the financial system through strengthened consumer protection mechanisms; and generating data and indicators to assess performance and identify areas of opportunity for the design of new financial inclusion tools.

We have also leveraged one of the largest social welfare programmes in the region, PROSPERA, to increase financial inclusion by promoting access to financial education mechanisms, microloans, savings schemes and life insurance to more than one million beneficiaries. By the end of the first quarter of 2016, more than 900,000 individuals in rural areas have acquired microfinance opportunities; 82 per cent of them live in towns of less than 15,000 inhabitants.

We are also in the first year of operation of a new programme targeting young Mexicans aged between 18 and 30 years with little or no credit history, to help them start-up or consolidate a business. We had awarded almost 1,000 soft loans, fostering financial inclusion, entrepreneurship and economic growth.

With these and other actions, Mexico contributes to the G20's mission of achieving strong, sustainable and balanced growth. I wish to commend Chinese President Xi Jinping for his leadership during his country's presidency of the G20 in 2016. I am confident that the Hangzhou Summit will become a milestone of our political determination to work together and create new paths for growth, to build more efficient and effective global economic and financial governance, to have robust international trade and investment, and to attain an inclusive and interconnected development. **G20**

LEADER'S VIEW

Africa's quest to industrialise

*Numerous programmes and initiatives provide opportunities for G20 members in Africa, writes **Jacob Zuma***

9th
Summit

2007
Elected

Jacob Zuma
President, South Africa

South Africa recognises itself as an integral part of the African continent. It is therefore encouraging that Africa has been placed at the centre of the development agenda of the Chinese G20 presidency in 2016. Key in this regard is the G20 Action Plan on the Implementation of the 2030 Agenda for Sustainable Development, the G20 Initiative on Supporting the Industrialisation of Africa and Least Developed Countries, and the G20 Blueprint on Innovative Growth.

The proposed outcomes of the Hangzhou Summit will dovetail with and add value to Africa's own blueprint for growth, prosperity and peace, as contained in the African Union's Agenda 2063 and reflected in the 2030 Agenda. This will give further impetus to the development and growth trajectory of the continent.

Many factors make Africa an attractive destination for investment. The African Economic Outlook 2016 indicates that Africa has achieved impressive economic growth over the past 15 years, with gross domestic product (GDP) growth averaging above five per cent between 2001 and 2014. Africa's economic performance held firm in 2015, amid global headwinds and regional shocks. The industrialisation of African economies will significantly increase the growth trajectory and contribute positively to global growth and trade.

Africa is the second-fastest growing region in the world after Asia. It has enormous reserves of natural resources, 60 per cent of unused arable agriculture land, a young and growing population, and a growing middle class, coupled with vast improvements in political and economic governance. However, the continent's full potential will remain unfulfilled unless we address the infrastructure deficit, small and fragmented markets, underdeveloped production structures, inadequate economic diversification, and exclusion from the global value chain. One of Africa's important development challenges is structural transformation, namely to shift its current growth path based on minerals and commodity exports onto a more sustainable industrial development path.

Synergy and complementarity

Sustainable Development Goal nine directs that we "build resilient infrastructure, promote sustainable industrialisation and foster innovation". This corresponds with the continent's Agenda 2063, which seeks to promote a "prosperous Africa, based on inclusive growth and sustainable development." Agenda 2063 is a transformative agenda to position Africa as a long-term strategic market and supplier of beneficiated resources through the prioritisation of:

- labour intensive manufacturing and industrialisation;
- doubling both the agricultural productivity and value addition of the blue economy; and
- regional industrialisation hubs linked to global value chains and commodity exchanges, the African Minerals Development Centre and the African Centre for Blue Economy.

The central role of industrialisation for achieving both the 2030 Agenda and Agenda 2063 was once again highlighted during the 35th Summit of New Partnership for Africa's Development (NEPAD) Heads of State and Government Orientation Committee meeting that took place in Rwanda in July.

Industrialisation through partnership

It is recognised that industrialisation, reinforced by beneficiation and value addition, is critical to the economic growth of the African continent. If the African continent is to develop faster and take advantage of regional integration, globalisation and further improve its prospects, we need to address the constraints facing the supply side of African economies, including those related to inadequate regional infrastructural linkages. Key in this regard will be our ability to address the continent's high dependency on primary products, low value addition to commodities before exports, high exposure to commodity price volatility, high infrastructure deficit, limited investment in research and development, science, innovation and technology, an undercapitalised private sector, and skills challenges.

To address some of the challenges the continent has embarked on a number of initiatives and programmes that include, among others, the NEPAD African Action Plan, the Presidential Infrastructure Championing Initiative, the African Mining Vision and the Programme for the Infrastructural Development of Africa. These programmes and initiatives provide significant opportunities for G20 members in terms of investment and partnership.

Africa's vulnerabilities and limited participation in

Africa has placed industrialisation at the core of its efforts to promote sustainable growth and development

global value chains indicate an archaic trade pattern of reliance on the export of raw commodities and the import of value-added products. This emphasises the need for increased efforts to transform the structure of African economies to improve productivity, increase manufacturing, enhance economic diversification and address supply-side constraints.

Advances in innovation and technology are increasingly important contributors to economic growth through innovation support instruments that promote technological innovation in industry, and to develop collaboration frameworks focused on increasing investment in technology development, diffusion and commercialisation. The use of modern technology has the potential to catapult the continent's industrialisation process. As we contemplate the fourth and new industrial revolution, we must ensure that no one is left behind and that Africa and the least-developed countries are not further marginalised.

Africa has placed industrialisation at the core of its efforts to promote sustainable growth and development, as well as its regional integration initiatives. Critical to Africa's effective participation in the global economy and its ability to attain the goals of the 2030 Agenda would be honouring the G20's commitments to forge strong partnerships with the continent to ensure the means of implementation and the necessary investments in technology and infrastructure development, technology transfer, skills development and industrial financing that will improve Africa's competitiveness and productive capacity, as well as reduce transaction costs.

NEPAD's authors recognised that Africa's development is not only an economic imperative, but also a political and security one as well. Underdevelopment and Africa's economic marginalisation will continue to be potential sources of instability on the continent. For African leaders the linkage between development and peace is well appreciated and in a globalised world the mutual benefit of development was made manifest in NEPAD's assertion that "for industrialised countries, development in Africa will reduce the levels of global social exclusion and mitigate a major potential source of global social instability".

Africa's industrialisation will therefore not only contribute to the eradication of poverty, the reduction of inequality and job creation, but will also contribute positively to global growth and our collective ideal of a prosperous and peaceful world. It will realise Africa's grand vision of "an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the global arena". **G20**

JON HRUSA/EPA/ALAMY

Narendra Modi
Prime Minister, India

3rd
Summit

2014
Elected

LEADER'S VIEW

Adapting to climate change is an opportunity

*During the International Conference on the Rule of Law for Supporting the 2030 Development Agenda, **Narendra Modi** encouraged global sustainability*

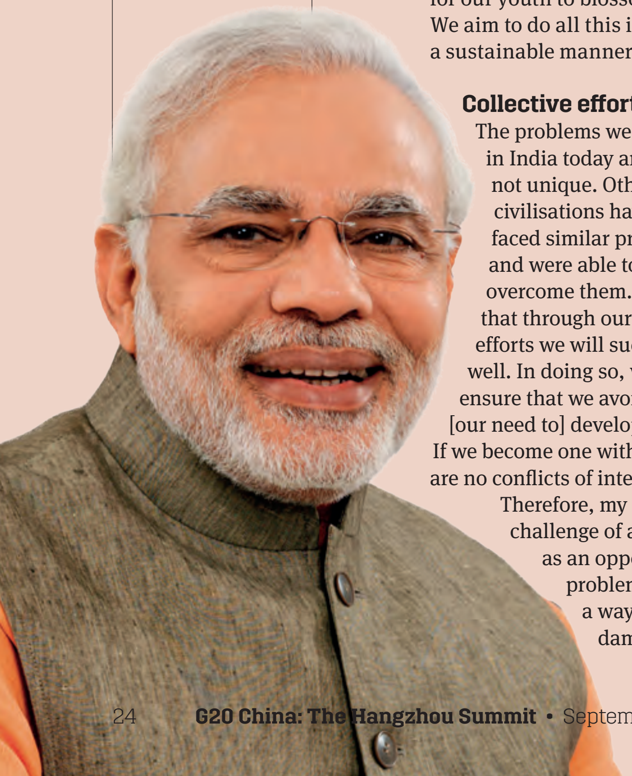
I am sure all of us agree that poverty is the biggest challenge for the environment. Therefore, the eradication of poverty is one of the fundamental goals of my government. Guided by our core values, we are working towards achieving this goal with sincerity. We want to create an environment for 1.25 billion Indians to develop and prosper. We are encouraging education, skill development, digital connectivity and entrepreneurship to provide an enabling ecosystem for our youth to blossom. We aim to do all this in a sustainable manner.

Collective efforts

The problems we face in India today are not unique. Other civilisations have also faced similar problems and were able to overcome them. I believe that through our collective efforts we will succeed as well. In doing so, we must ensure that we avoid contradictions between [our need to] develop and develop sustainably. If we become one with the universal order, there are no conflicts of interest.

Therefore, my government is treating the challenge of adapting to climate change as an opportunity rather than a problem. We must do things in a way that causes minimum damage to the environment.

> *We must do things in a way that causes minimum damage to the environment*



The rule of law dictates that no one can be punished for another's misdeed. We need to recognise that there are many people who are least responsible for the problem of climate change. They are also the people who still wait for access to modern amenities. They face the adverse impact of climate change more than anyone else. This includes cyclones, droughts, floods, heat waves, and rising sea levels. The poor, vulnerable and other marginalised groups have fewer resources to cope with climate disasters.

Harmony with nature

Current and future generations are and will be burdened by laws and agreements regarding the environment. That is why I talk about 'climate justice'.

The rules, laws, practices and principles of one country cannot be applied to another uniformly. Every country has its own challenges and its own ways of dealing with them. If we apply the same set of rules for all countries and for all people, it will not work.

Sustainable development is our responsibility. I am confident that we can achieve it, collectively. I am also confident that we can find ways for development that are in harmony with nature. We can find them along the road travelled by our forefathers. I hope the deliberations during this workshop will help in developing a shared understanding of these imperatives. **G20**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LEADER'S VIEW

Practical solutions to pressing challenges

Jean-Claude Juncker *explains how investment, structural reform and responsible public finance can combat insecurity, economic uncertainty and social discontent*

The EU is pursuing a virtuous triangle of investment, structural reforms and responsible public finances

3rd Summit

2014 Elected

Jean-Claude Juncker

President, European Commission

If the G20 leaders' meeting at Hangzhou, China, on 4–5 September 2016 is to be remembered as a turning point rather than just one more high-level gathering, we will need to show leadership, join forces and deliver practical solutions to the pressing challenges of prosperity and security across our planet.

The need for global political coordination has never been so compelling. In an interdependent world, our prosperity and security are increasingly a shared responsibility. For its part, the European Union will continue to work for an economy that is governed by rules, increasingly transparent and as fair as possible. Our ultimate goal is clear: that our children and grandchildren should enjoy the free and open society that we have created, on a planet that we treat with respect and care because it is the only one we have.

Delivering a strategy

How can the G20 summit contribute to this agenda? First, it needs to deliver a comprehensive and credible strategy for sustainable growth, which spells out the macroeconomic policies and structural reforms that are needed. We need to meet our Brisbane commitment to enhance global growth by two per cent. Collectively we have agreed on the growth strategies that will help us to reach this target. Now we should implement them.

That is why the EU is pursuing a virtuous triangle of investment, structural reforms and responsible public finances. Our strategy is working and we will stay the course. In its first year, our Investment Plan for Europe is already giving 150,000 small businesses better access to finance. It has mobilised more than €107 billion in extra investment and reached 26 of our member states. Equally important, it is creating new jobs. This opens up a window of opportunity for national reforms that are more ambitious.

Second, we must use all means at our disposal to tackle tax avoidance, working in close cooperation with the Organisation for Economic Co-operation and Development (OECD). The EU's message is clear: all companies must pay their fair share. This is first and foremost a question of fairness. It has urgent practical implications as well. We cannot let down our schools, hospitals and public services that need this money.

The European Commission has proposed new measures for a fair, efficient and transparent corporate tax system. We are obliging multinational companies to publish information on where they make their profits and putting in place new measures against tax evasion, tax avoidance and money laundering. We should now implement the OECD's principles on the Automatic Exchange of Information and Base Erosion and Profit Shifting. And, as the Panama Papers have confirmed, we must shed more light on tax havens around the world. There must be nowhere to hide for those who try to shirk their responsibility to society.

Third, the G20 needs to help deliver a response to the global refugee crisis. The European Commission has put in place a European response to react immediately to the crisis: saving lives at sea, providing urgent humanitarian assistance, supporting countries under the most strain with financial and technical assistance, working with our neighbours to stem the flow of irregular migrants and ensuring solidarity between our member states. A country's location on the map should not alone dictate its share of the work.

Investment and unification

Global migration is here to stay. More than 65 million people in our world are displaced. We need to address the root causes of this situation. The only viable solutions are global, and they demand concerted action at all levels of government.

Beyond our work to bring peace and stability to regions of conflict, we must invest in the most fragile countries and give their young people a future in their own country. That is why the European Union launched the Emergency Trust Fund for Africa, using €1.8 billion of our budget and the Trust Fund for Syria with an EU contribution of €500 million. We will also shortly launch a new investment plan for our development partners. It will use public money to mobilise private finance for infrastructure and small and medium-sized enterprises and provide targeted technical assistance.

At a time of insecurity, economic uncertainty and social discontent – when millions of people in all of our countries are questioning the value of a global and interconnected world and too few are sharing the benefits of the global economy – the G20 must demonstrate its capacity to stay united against all forms of radicalisation and be able to deliver prosperity to all parts of society. The commitments we have made as the G20 are clear. Now we must implement them. **G20**

SEAN KILPATRICK / THE CANADIAN PRESS/PA IMAGES

LEADER'S VIEW

Working together for a better world

*Canada is taking a lead role on interconnectivity within G20, writes **Justin Trudeau***

I look forward to attending the G20 summit in Hangzhou, China.

Canada firmly believes in the work of the G20 and its ability to promote strong, sustainable, and inclusive global growth and prosperity. Our government places great importance on working with our G20 partners to help address some of the world's most pressing challenges – from building prosperity for the middle class to addressing the threat of climate change.

Closer and more coordinated

Our government has made a commitment to Canadians that we will strengthen Canada's place in the world and pursue Canadian interests and values at every opportunity.

The G20 is an opportunity for the leaders of 20 of the world's largest economies to sit down with one another and find ways to work closer – and in a more coordinated

Justin Trudeau

Prime Minister, Canada

2nd Summit

2015 Elected

We have a strong relationship with China that is based on respect and cooperation

manner – as we try to find answers to the problems that most preoccupy our citizens. Whether it's ensuring that people feel safe in their communities, or building an economy that grows the middle class, I will work hard for Canadians, for Canada, and for a better world.

At this year's G20 summit, China has proposed that our G20 partners work towards an inclusive, interconnected, invigorated, innovative world economy. These "four Is" are visionary themes that fit into our plan to create jobs, strengthen the middle class, and revitalise the Canadian economy.

First, we need to keep a strong focus on inclusive growth that supports the middle class and those working hard to join it. The benefits of this growth cannot only be felt by the wealthiest one per cent – they need to be felt by everyone. As governments, we have the ability to reduce this inequality through our policy choices. As such, I will speak to my counterparts about our plan to invest in our country and more importantly, in our people. In Budget 2016, we committed more than $120 billion in infrastructure spending that will directly benefit all Canadians. During the summit, I will also talk about our middle class tax cut, our new child benefit that will lift 300,000 children out of poverty, and our actions to strengthen our national pension plans.

Second, we need to recognise how our investments are connected. When we invest in public transit, for instance, we help Canadians get to work on time, ship their products across the country, and get to their kids' soccer game. When we invest in innovation and technology, we help connect Canadians to the world and create good-paying jobs that help the middle class grow. When we invest in green infrastructure, we help protect against the risks of climate change and we build a cleaner economy. That is why Canada is taking a lead role on interconnectivity within the G20. We will also continue to demonstrate Canada's openness to the world by strengthening our collective efforts on trade liberalisation while we hold ourselves accountable to our commitment to help the world's poorest and most vulnerable.

Third, we need to re-invigorate the global economy in the short term and support the longer-term productivity gains that will benefit middle class Canadians for years to come. Canada has played a leading role in ensuring that the national commitments of G20 members support growth. While in Hangzhou, I will urge my counterparts to make good on their commitments to deliver on the promised reforms to investment, employment, trade and competition.

Connections with stakeholders

Finally, for the G20 to be effective, we need to continue to strengthen our connections with stakeholders – such as representatives from the business community and civil society – and with other governments, such as our Commonwealth and Francophonie partners. I strongly support outreach efforts as an integral part of the G20 process.

In closing, this year's summit in China is important for Canada as a Pacific nation. We have a strong relationship with China that is based on respect and cooperation – one that has been cultivated over many years. Not only are our people increasingly connected, but our prosperity is as well. In Hangzhou, we will have an opportunity to deepen that friendship further, bolster our shared prosperity and grow Canada's middle class.

I look forward to working with China, and the rest of our G20 partners, to tackle the most pressing issues we face, both as individual nations and collectively as a connected global community. **G20**

GUEST LEADER'S VIEW

Combating tax avoidance and evasion

*Governments face a moral commitment that requires active international cooperation, writes **Mariano Rajoy***

As Spanish Prime Minister, I am firmly convinced that the fight against tax avoidance and evasion is a question of the utmost importance. We have a moral commitment to all our citizens. Every government has the duty to ensure a fair and equitable contribution to financing public expenditure and to fight all those practices and schemes aimed at exploiting gaps and mismatches in tax rules to artificially reduce the payment of taxes, which, ultimately, damages our society as a whole. This moral commitment is especially evident after years in which, as a result of the global financial crisis, citizens have had to make significant sacrifices.

The fight against fraud and tax evasion has always been a priority for the Spanish Government. We have acted with determination at a national level, enacting laws and regulations to help monitor and sanction practices and schemes that undermine our capacity to collect taxes. These measures include restrictions on cash payments, undeclared income not benefiting from any statute of limitations, the adoption of new reporting requirements and the criminalisation of new offences.

These efforts must always be compatible with international cooperation if we want to succeed.

National tax authorities must work together to ensure that economic activities are taxed wherever they take place

Guest leader

2011 Elected

Mariano Rajoy

Prime Minister, Spain

International tax diversity triggers aggressive tax planning practices in an increasingly interconnected world. This unfortunately enables low or no taxation. National tax authorities must work together to ensure that economic activities are taxed wherever they take place.

Spain is playing an active role in promoting several international initiatives to fight tax avoidance and evasion. We are making progress towards achieving the automatic exchange of information (AEOI) at the international level and fighting base erosion and profit shifting (BEPS) caused by harmful tax competition and tax havens. The G20 plays a key role as an international dialogue and cooperation forum.

Legislation ahead of schedule

Spain is fully committed to implementing all actions and measures under the BEPS project, supported by the Organisation for Economic Co-operation and Development (OECD) and the G20. This commitment has already led to the early incorporation into Spanish legislation of several measures well ahead of schedule and to the early implementation of recommendations in the Spanish tax framework. We can highlight the limitation of tax allowances for financial expenses as a tool aimed at tax base erosion and the neutralisation of the effects of hybrid products in order to avoid those no-taxation situations in which income was not subject to tax either at the recipient's tax base or at the taxpayer's.

Spain will be among the first countries to implement the country-by-country report through which any multinational enterprise (MNE) is obliged to report annually the taxes it pays in every state where it operates. As of 2016, MNEs with residence in Spain and the status of their parent company must provide Spanish tax authorities with information on taxes, incomes, gross profit, the amount of tax due and paid, and net book value of tangible assets on a country-by-country basis. These reports will enable a transparent and accurate picture of financial and tax information relating to the global allocation of income and taxes by an individual MNE, among other indicators of its economic activity.

The Spanish Government is encouraging this work stream within the European Union. In December 2014, in a letter addressed to the President of the European Commission, I pointed out several priority areas for immediate action, including the enactment of an anti-evasion directive in line with the BEPS project. Such a directive must be supplemented by a code of best practices that reflects the states' commitment to implement the measures responsibly and in good faith.

There have since been significant advances, such as approval by the European Commission of the Anti Tax Avoidance Package in January 2016. It contains concrete measures to prevent aggressive tax planning, boost tax transparency and create a level playing field for all businesses in the European Union. It also includes a proposal for a council directive laying down rules against tax avoidance practices that directly affect the functioning of the internal market, to ensure that companies pay tax wherever the profits are generated by including measures on artificial profit shifting or double exemption situations, and rules on interest allowance in line with those anti-BEPS initiatives developed in the G20-OECD meetings. We are also playing a very active role in fighting fraud and tax evasion through the international exchange of tax information.

The Spanish Government has fostered traditional bilateral agreements to avoid double taxation and reduce tax opacity, always abiding by the OECD transparency standards. We also strongly promote the Multilateral Competent Authority Agreement so that the exchange of financial account information becomes automatic and takes place according to common reporting standards. This will provide tax authorities with a powerful new tool to fight tax avoidance and evasion. Spain will be among the first countries to adopt this system envisaged for 2017.

Support and endorsements

We support the AEOI directive on tax rulings, which comes into force in 2017 and obliges members to exchange information automatically on tax arrangements with cross-border effects and on transfer pricing agreements. We have also endorsed the amendment of the directive on administrative cooperation in taxation, which sets out practical arrangements for exchanging information on MNEs.

Along with its G20 European colleagues of France, Italy, Germany and the United Kingdom, Spain has proposed creating a national register of ultimate beneficial owners by identifying individuals who control corporations and trusts, and exchanging information about them. The initiative was endorsed by 40 countries at the Anti-Corruption Summit held in London in May 2016.

I am convinced that these rules, procedures and political agreements regarding international cooperation are the only way forward for better control over taxing business activities, avoiding aggressive tax planning and reinforcing our fight against fraud. This will form the basis for our systems to gain greater efficiency and capacity for fairer and more commensurate taxation for all our citizens. In a globalised world, the motto 'strength through unity' is more relevant than ever. The path is already set out. We only need to persevere. Spain, of course, will do so. **G20**

Guest leader

2014
Elected

Abdel Fattah El-Sisi

President, Egypt

Collective efforts by the G20 should ensure sharing knowledge and experiences

It is a pleasure to participate in this year's G20 summit following the generous invitation of the Chinese President. It will enable us to plan our way forward in light of our discussions on the state of the global economy with the world's key players.

The global economy is approaching a critical stage as a result of a multitude of interconnected and complex challenges, amid expectations of a further slowdown in global growth as well as geopolitical risks in different parts of the world. We may have different explanations of how we have reached this stage, but they should not prevent us from working together. We share the common goal of achieving strong, sustainable, balanced and inclusive global economic growth.

Evolution and innovation

The rapid change in the world's economies reflects the vital need for more effective and efficient economic governance. The weighted voting structure of countries should be outlined fairly, while the relevant international institutions should act as a vanguard for harmonising countries' trade and investment policies to spur stronger growth.

As the world changes at an unprecedentedly rapid pace, our economies should evolve in an innovative manner. To recall the motto of this year's G20 summit, we need to clear a new path to ensure that common global prosperity is achieved.

Progress should be measured by maintaining the economic security of the state, improving the well-being of a greater portion of the world's population and enhancing transparency and fairness in the global economic system.

Egypt is keen to represent a balanced voice on behalf of a much wider group of countries that are not present at this year's G20 summit and are affected by the G20's policies and action plans. This evokes the essential need for establishing an innovative outreach modality with other key non-G20 players, which could serve as a sustained communication tool to exchange views and bridge the gap between different groups of countries across the globe. It is crucial to comprehend that progress and inclusive sustainable growth can be achieved if we draw the right lessons from the past and learn to work together to achieve our common goals. No one should be left behind.

Unlocking trade and investment

The Egyptian economy has faced tremendous challenges since 2011. We were able to achieve an economic turnaround starting in the fiscal year of 2014–15 after successfully completing the political road map by holding parliamentary elections as well as making significant progress on the security situation. In 2014-15, the economic growth rate reached 4.2 per cent, compared to a record slow 1.8 per cent in 2010–11.

In the same year, the annual growth rate of total investments increased by 26 per cent and the budget deficit fell from 12.8 per cent of gross domestic product to 11.5 per cent. The government is unlocking the country's trade and investment potential by focusing on three main pillars. These consist of carrying out a legislative reform programme to restore confidence and revive investments; implementing a number of mega infrastructure projects that include upgrading ports and road networks, establishing the strategic Suez Canal economic zone and modernising the energy sector; and creating an international trade hub by capitalising on Egypt's numerous free trade agreements and launching the Tripartite Free Trade Agreement to access 26 African markets.

A knowledge-based economy

Innovation is an important asset for establishing and consolidating a knowledge-based economy. It is capable of making the best use of its tools to achieve sustainable growth. In the spirit of shared responsibility towards achieving universal balanced and inclusive growth, collective efforts by the G20 should ensure the sharing of knowledge and experiences and capacity building, in addition to know-how and technology transfer.

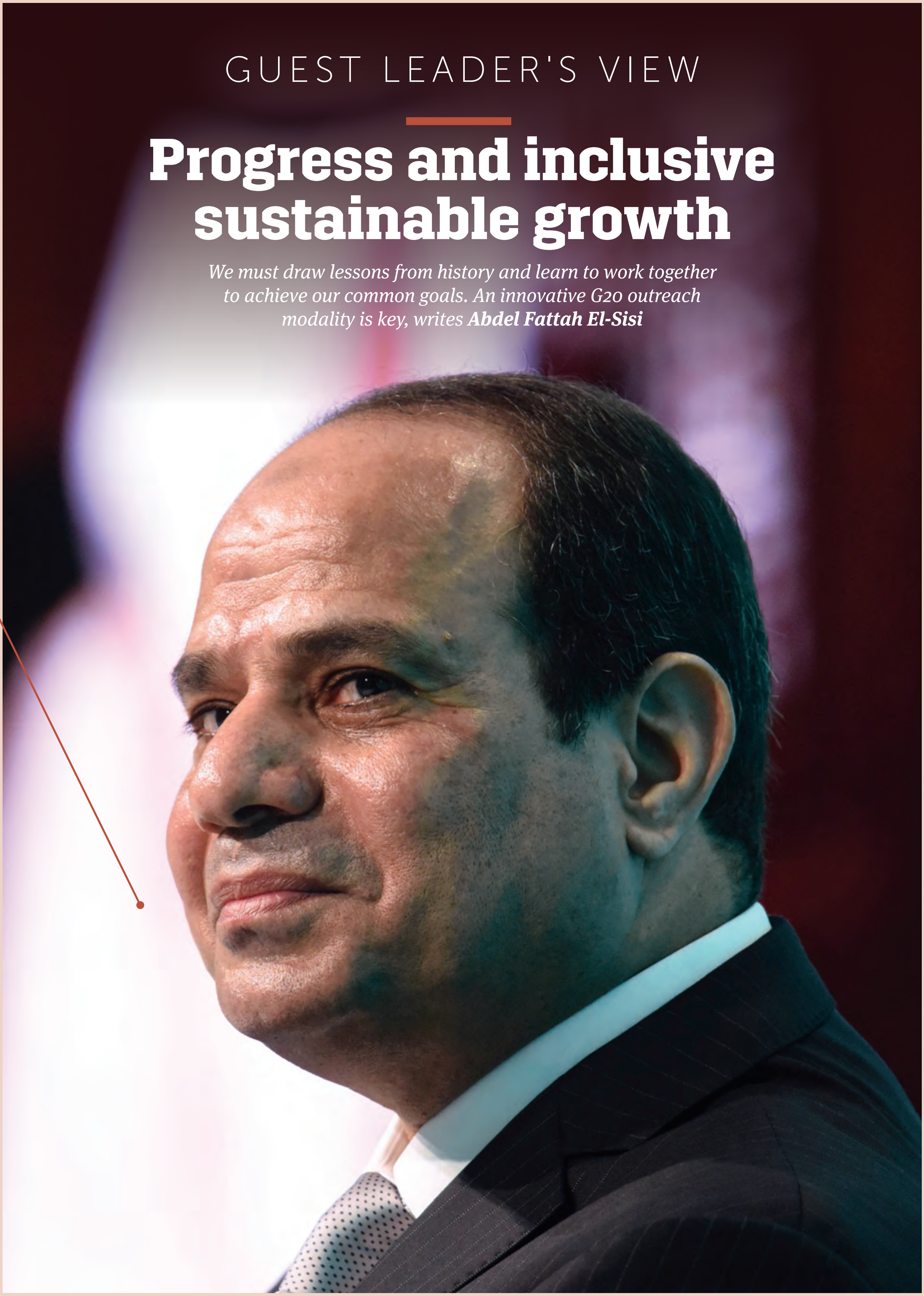
We are partners who share the responsibility of providing a better future for subsequent generations. Our overarching aim is to invest the ingenuity of human capital – the youth and entrepreneurs in particular – to efficiently take part in the new industrial and scientific revolution. We must also realise the aspirations of the world community for development.

In Hangzhou, Egypt looks forward to working closely with its G20 partners to fulfil the summit's objectives and set a new path for growth. **G20**

GUEST LEADER'S VIEW

Progress and inclusive sustainable growth

We must draw lessons from history and learn to work together to achieve our common goals. An innovative G20 outreach modality is key, writes ***Abdel Fattah El-Sisi***



RAINER JENSEN/DPA/ALAMY

ARAB AFRICAN INTERNATIONAL BANK

An industry trendsetter towards sustainable finance: **Arab African International Bank**

Egypt is in the right time and place to enact sustainable finance to generate an impact. For a country with its prospects and geopolitics, challenges bring with them much needed dynamism, which potentially translates into opportunities.

Sustainable development is increasingly prescribed for Egypt as not only the way out of its current debacle but also potentially the key to its future prosperity. While conventional interpretation tends to associate the tumultuous times Egypt is experiencing with instability, economic hardships and social unrest, another perspective would detect a rich terrain for development and growth potential. The relevance of the concept of Sustainability for Egypt's potential has made it the core-organising concept of its 2030 vision.

AAIB is the first bank in Egypt to join the United Nations Global Compact and the Equator principles

While the importance of sustainability is currently acknowledged and attested to by an increasing number of organisations and financial institutions around the world, Arab African International Bank (AAIB) is a financial institutions that recognised the value of corporate social responsibility and sustainability early on.

Stimulated by the conviction that sustainability is necessary for Egypt at large, AAIB realised the relevance of corporate social responsibility as an inherent component of its aggressive growth strategy mandated in 2003.

With the turn of the millennium, AAIB has readily perceived that sustainability is part and parcel of its dynamic growth. CSR and sustainability have been an expression of the bank's notion of balanced growth, whereby the bank ensures that its mission goes beyond profit making to include a moral mission towards society.

The notion of Value Creation to all stakeholders has become an organising concept guiding the bank as it moves forward.

Practicing sustainability as a value system entailed a journey of more than decade of dedicated efforts and diligent work. AAIB went through a gradual learning curve that led it to evolve beyond corporate social responsibility to embrace sustainable finance as a viable road to balanced growth. Mandating this direction has never been easy especially for a financial institution that is traditionally required to commit to the single bottom line as the indicator of success.

Embracing sustainability

Despite the fact that the concept of sustainable finance had been globally acknowledged and addressed by governments and international entities along with the financial sector decades earlier, the pace and scope of tangible progress has lagged behind. This required AAIB to innovate and adopt a challenging but more sensible path.

AAIB's experience in embracing sustainability unfolded a series of pioneering initiatives beyond the mainstream. A strong value system propelled insightful and proactive initiatives that introduced new norms in the industry and increasingly inspired the financial sector in Egypt to get closer to the social, environmental and governance concerns.

AAIB has been duly the trendsetter of sustainable finance in Egypt. The bank's journey started in 2003 by institutionalising sustainability within its structure establishing the first sustainability unit in the financial sector in Egypt.

This was followed by launching the Arab African International Bank Award, the first educational competition in banking and finance for undergraduates to bridge the gap between practice and academia. The award aims at challenging

Mostadam's first Certified Training Ceremony celebrating 35 Banking Executives (November 2015)

university students to innovate banking products and services. Driven by a national need for upgrading public health provisions across Egypt, the Arab African International Bank established the first foundation for Social Development in Egypt and the MENA Region, namely the We Owe It to Egypt Foundation. The Foundation aims at transforming public sector hospitals into centres of excellence emerging from a deep belief that health and education are the two pillars for development in any nation.

A history of being first

AAIB is the first bank in Egypt and the region to join the United Nations Global Compact in 2005 and abide by the four business principles of human rights, labor rights, anti-corruption and environment to guide its business practice and operations. AAIB also joined the Equator principles in 2009 to extend the sustainability practice into the business operations through endorsing social and environmental risk assessment into its corporate finance operations.

This competitive advantage won AAIB national, regional and international accolades between 2011 and 2016. The United Nations Global Compact named AAIB as one of few banks on a global scale whose projects and initiatives embody the notion of Sustainability among Financial Institutions.

Mostadam...Towards sustainable finance

In 2013, AAIB joined efforts with the United Nations Development Programm, and the Egyptian Corporate Responsibility Center to launch the MOSTADAM Platform for promoting sustainable finance in the region.

MOSTADAM envisions that there is room for the financial sector to play a crucial role in bringing about sustainable development creating winning synergies that integrate the social, environmental and economic dimensions.

The Egyptian financial sector has many prerogatives that qualify it to take the lead. Whereas the financial industry in other parts of the world was ailing under the detrimental impact of the 2008 crisis, the Egyptian financial sector successfully weathered the 2008 financial crisis and withstood the instability induced by two consecutive revolutions in 2011 and 2013. It managed to grow and generate sound return on equity while continuing to help the whole economy grow.

Still the sector is capable of more. It should be sensitised to cope with the emerging social and environmental realities and rise to assume the challenge of this historic moment. The prospects of the Egyptian financial sector to play a more significant role in enacting sustainable development, is given further impetus by the fact that the Central Bank in Egypt has initiated conscious steps to drive commercial lending to small and medium-sized enterprises (SME).

MOSTADAM urges banks to join efforts to enact the shift towards sustainable practices and to empower calibers with the knowledge required to make this industry change happen.

AAIB is determined to collaborate with peers to place Egypt on the map of sustainable finance globally and aspires to render sustainable finance a mainstream activity.

Arab African International Bank
www.aaib.com

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البنك العربي الأفريقي الدولي
arab african international bank

Bounnhang Vorachith

President, Lao PDR

Guest leader

2016

Elected

GUEST LEADER'S VIEW

Empowering Southeast Asia with help from the G20

Mutual assistance and support will lead to global benefits, writes ***Bounnhang Vorachith***

In my capacity as the chair of the Association of Southeast Asian Nations (ASEAN) for 2016 and on behalf of the Government and people of the Lao PDR, I feel honoured to be invited by Xi Jinping, President of China, to participate at the G20 summit this year. I believe that because of the efforts of the government and the people of China, this G20 summit will be crowned with success.

Economic growth

The 11th G20 summit will be held at a time when the global and regional economies are facing various challenges. All countries, including the members of the G20, are required to join hands and support each other in order to cope with them.

I am confident that the outcome of this G20 summit, held under the theme "Towards an Innovative, Invigorated, Interconnected and Inclusive World Economy", will contribute greatly to the efforts made by the international community to maintain the stability and sustainability of global economic growth.

For ASEAN in particular, 2016 is the first year of the establishment of its economic community moving towards regional integration and maintaining sustainable economic growth. This is consistent with an objective of the G20.

ASEAN and the G20 are considered forums that can empower mutual assistance and support each other in attaining their respective goals. ASEAN is ready to work closely with China, as well as other G20 members and other participating countries, to ensure the success of the summit. We share a mission to maintain peace, stability and prosperity.

The Government of Lao PDR attaches high importance to the strengthening of its friendly relations and sound cooperation with all countries in the world, including the members of the G20. Lao PDR also highly values the bilateral and multilateral assistance extended by the G20 to implement our socioeconomic development plan with the aim to attain the United Nations Sustainable Development Goals.

Helping developing countries

Lao PDR is considered one of the least-developed countries (LDCs) and has set a goal to graduate from this status by 2020.

I would like to commend China and other members to adopt the G20 plan of action on the 2030 Agenda for Sustainable Development and the G20 initiative to support the industrialisation in Africa and LDCs by means of providing assistance and strengthening growth potential and exchanging lessons and experiences. I believe that prompt and effective implementation of G20 initiatives will help developing countries to overcome challenges of globalisation and bring more tangible benefits. **G20**

AMSCO

Deepening African business roles in farmers' growth

Smallholder farmers in much of Africa require a combination of agricultural and business skills to succeed in a market system, as well as agricultural value chain actors including agro dealers.

A few medium to large enterprises are interested in investing in rural agro-enterprises. The agri-business sector therefore suffers from low skills and education, low productivity, low capital investments, low levels of technology, low farm-mechanisation and the inability to access markets. Zambia farmers face the same challenges.

It was against this reality that the African Management Services Company (AMSCO), a pan African development advisory group that provides integrated human capital development solutions partnered with Seed Co Limited, the leading producer and marketer of certified crop seeds based in Zambia, and Musika, a Zambian non-profit company that works to stimulate private sector investment in the smallholder markets in 2014.

Through a pilot project, the partnership specifically focused on addressing the business skills deficit in a selected number of agro dealers with potential to grow their businesses into farmer centric areas and increase their supply of hybrid seeds. This was intended to reduce the recycled seed in those areas, increase farm productivity and ultimately increase farmer incomes. Attaining full potential in agro-inputs distribution was a priority.

Musika, through Seed Co, provided a number of pilot containers to agro-dealers in highly productive rural markets with no brick and mortar facilities for seed sales. The initiative was aimed at reaching rural areas, where farmers struggle to travel long distances to buy seed and other agro-inputs.

AMSCO facilitated a business improvement training programme for 40 Seed Co agro dealers.

AMSCO, Seed Co and Musika also co-financed a programme that builds the entrepreneurial acumen of the agro-dealers and catalyse the development of last-mile agro dealer outlets to increase sales.

After a year, the participating agro dealers reported increased stocks, increased sales and opportunities for wage employment which confirmed that rural areas are viable agro-input markets.

Impact recorded for agro-dealers was as follows:

- 66 per cent of the target stockists had increased monthly sales by more than 30 per cent
- 30 per cent had grown their sales by between 10-30 per cent
- 38 per cent had grown their sales by between 31-50 per cent
- 29 per cent had expanded their sales by more than 50 per cent

The volume of hybrid seeds for Seed Co's 2013-14 season grew to 84 per cent of forecast for one region, a sign Seed Co's sales growth is likely to double.

If the lead firm – Seed Co – can derive immediate and long-term sustainable and quantifiable benefits from such a partnership, then the future development of such initiatives is guaranteed as the lead firm will commercially invest on their own after the intervention support comes to an end.

By leveraging existing local commercial, public and civil systems for farm to market service delivery, food security is achievable. In this case, not only did the agro-dealers form part of the engine for sustainable economic growth they played a significant part in poverty eradication.

Sustainable Development Goals "End poverty in all its forms, Zero Hunger, Decent work and economic growth, Industry innovation and infrastructure, and Partnerships for the goals" were achieved.

AMSCO works with the private sector, governments and development agencies to assist businesses to be globally competitive

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AMSCO
African Management Services Company

Macky Sall

President of the Republic of Senegal

GUEST LEADER'S VIEW

Bolstering our hopes in beautiful Hangzhou

*Africa has a key role to play in bringing innovation to global affairs, says **President Macky Sall***

When uncertainties remain and risks increase, the role played by innovation in influencing the course of world affairs becomes ever more vital. The theme of the 2016 G20 summit in China is therefore highly pertinent: 'Towards an innovative, dynamic, interconnected, and inclusive world economy.' The challenge it sets is to find new ideas and bring forth proposals to inspire new ways of propelling global development. At each G20 summit, I have noted real political impetus in this direction.

Africa's role

The world agrees that Africa has a key role to play in achieving this great ambition of bringing innovation to global affairs, particularly in the economic and financial sectors. Ensuring the growth of the global economy will require access to the continent's vast reserves of natural resources, its substantial population, and its human capital. For a variety of reasons, Africa remains a part of the world where even the very foundations for development are yet to be laid. Infrastructure, energy, education and training are in many cases, blank canvases awaiting investment.

Innovation is not solely a matter of technology. It is also, and more importantly, a way of formulating new strategies to more effectively overcome obstacles, a tool for enabling the world economy to push the boundaries of productivity and a mechanism that can ensure healthy and sustainable global growth. Giving priority to Africa and replacing the focus on aid with investment and partnership strategies, particularly in the sectors cited above, is not only necessary, but also crucial to the global economy as a way of increasing prosperity in all countries.

Change for progress

I call on the G20 leaders to engage more actively in reform of the international tax system, which must facilitate Africa's ability to leverage its natural resources. A more appropriate taxation system is required that would allow more resources allocated to developing countries, particularly in Africa. Likewise, tax evasion and fraud are significant factors in hindering growth. The continent also needs the support of the G20 for a change in current legislation, ensuring that countries are not unduly penalised. It is a matter of equality.

I am sure that China's presidency of the G20 will intensify the efforts already made in this direction, whilst sharing its vast experience in development and innovation, which has succeeded beyond question. China has achieved spectacular results in a very short period of time. This summit will give me the opportunity, as President of Senegal, to witness the dynamic cooperation between our two countries, sharing values of peace and solidarity.

I hope that the G20 summit, in the beautiful city of Hangzhou, will bolster our hopes of a better, more peaceful and more prosperous world. G20

REGIONAL EXPRESS TRAIN DAKAR - AIBD

The Senegalese Regional Express Train (TER), the First High-speed Electric Train in Sub-Saharan Africa

Context

In relation with the vision of His Excellency the President of the Republic, **to make an Emerging Country** out of Senegal, the transport sector planning and development strategy has to be global in order to support adequately, sustainable human development at both local and national scales.
To overtake this challenge, Senegal government is now focusing **on promotion, modernization and rationalization of its railway transportation** system.

Goals

- Promote urban development outside of congested areas of Dakar center city;
- Meet the needs of a balanced land distribution for a better wealth distribution;
- Upgrade rail infrastructure to strengthen the railway network of Senegal;
- Have an increasing role in solving the issues of urban and inter-urban mobility in the country and particularly the suburban areas;
- Link Dakar city center to new large development centers such as the new economic zone in Diass, the new urban pole of Diamniadio, Bargny projected logistic platform, the new Blaise Diagne International Airport, , the new touristic developments in Mbour, as well as within the rest of the country.

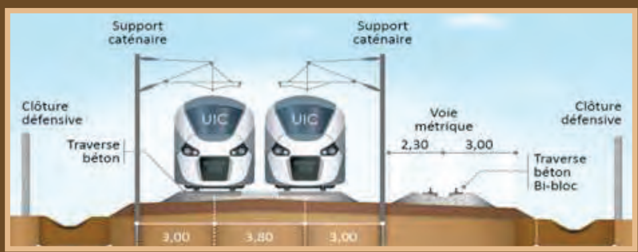
Description

The project consists of a railway link between downtown Dakar station, the new urban center of Diamniadio and AIBD, with a length of 55 km of which 36 km on the existing railway line between Dakar and Diamniadio, and 19 km of new infrastructure to the airport. The link will involve the construction and installation of a new 2-line standard gauge railway infrastructure (rails, structures, bridges, platform, earthwork, etc.) and electrical systems (power, signals, telecommunication, ticketing, etc.) for passenger transportation from the city of Dakar to the new Blaise Diagne International Airport (AIBD).

The train, with a brand new dual mode rolling stock, will serve fourteen (14) new train stations in the suburban areas including the new urban pole under development in Diamniadio before reaching its destination at the AIBD. The project will also include the reconstruction of the existing metric gauge line used for freight transportation from the center of Dakar to Diamniadio (disconnection point to AIBD) (38 km)

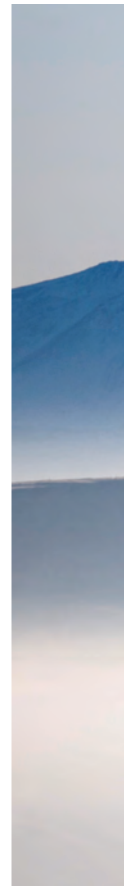
Technical Specifications

Speed: **160 km/h** (**45 min travel** time in service to AIBD Airport)
Two (2) **standard gauge double tracks**
One (1) metric gauge track for the freight train
Electrified train line (2 x 25 kV, Substation, Catenaries Lines, etc...)
Two (2) **Maintenance sites**
Defensive Walls to **secure the Right of Way**
ERTMS-2 Signaling and Telecommunication railway systems



Completion time : 2018-2019

LAISSEZ-VOUS TRANSPORTER



Helping business leaders to think big

"In a world that has become far more connected, one of the key issues is the lack of global governance," according to Unilever's Chief Executive Officer, Paul Polman. Tackling big societal issues is a commitment Polman has made since he took over the reins at Unilever in 2009. As a result he has stopped updating the stock market on quarterly performance to encourage a more long-term perspective and has launched initiatives such as the sustainable living plan that focuses on reducing calories in certain food products, cutting energy usage as well as backing the call for a price on carbon.

While the influence of large non-state actors in improving societal and environmental issues is increasingly relevant, the ability to mirror such big thinking is often hampered by a company's developmental stage and geographical location.

> *Being positively active can deliver a competitive advantage*

The task is even more difficult when we factor in rapid global economic and technological development that is questioning traditional reference points on corporate growth and leadership, particularly in emerging economies where there is a high level of transition from heavy industry to the service and e-commerce sectors.

Access to higher education and digital development is creating new shareholder expectations. The urbanisation of rural areas and the creation of middle class consumers with greater purchasing power, as well as increased and more sophisticated product demands mean business leaders in emerging economies are having to constantly rethink business models and readjust growth timeframes.

A fresh look at leadership

With such substantial changes taking place, there is an increasing need to develop and encourage leadership skills that embrace wider and more sustainable issues if the traps of short termism that now plague developed markets are to be avoided. In particular, developing the skill set of a younger generation of business leaders most likely to be involved in startups and e-commerce ventures who, in contrast to their older counterparts in more traditional sectors, consider 5-10 years as long term.

By looking at such issues through the lens of board structure we can identify common values and tools that can be used to develop a framework that strives for sustainable success for a company's stakeholders, as well as wider society. An important factor in establishing such a culture is challenging how leaders emerge by questioning the whole framework of recruitment, reward and pro-motion. It is about moving the focus away from rewarding short term performance over long term vision to explore systems that encourage the emergence of leaders with the right mix of qualities such as vision, conviction, courage and respect that good business leaders possess.

Not only gender diversity, but also diversity of age, culture and experience at board level, is important in identifying and empathising with societal needs and environmental issues. Adopting a framework that embraces these issues is also an important factor in a company's ability to attract future talent who are more likely to look to good leadership and levels of diversity as benchmarks for what constitutes a good company to work for.

A focus on education

In this respect, executive education has an increasingly important role to play in such a narrative. A more progressive approach to executive education can help emphasise a deeper understanding of wider societal and environmental issues to equip leaders with the appropriate tools conducive to a mindset that promotes long term thinking and decision making. This approach has particular resonance when we take into account

David Herbinet, Global Head of Audit & Assurance

Julie Laulusa, Managing Partner in Shanghai and Mainland China

that we currently have a number of different tools to measure a company's profitability, but no credible Key Performance Indicators (KPIs) for measuring the quality of decision making.

Certainly an approach that favours quantity over quality does little to measure the effect of corporate decision making on peoples' lives and the environment, both of which are important elements of sustainable business growth and board culture. At a granular level we can note that pressure on leaders to improve performance in the short term increasingly results in a trickle-down effect that creates a more stressful working environment that can have an adverse impact on the mental and physical health of employees, as well as lowering morale. By not nurturing its human capital, a company's effectiveness and its ability to compete is likely to be reduced. Developing a framework that encourages boards to adopt principles that help them identify and deal with the wider impact of their decisions, including corporate governance codes relating to areas such as tax transparency and social compliance, is therefore now more relevant than ever.

Articulating a shared value model

To this extent, finding a way to better articulate a shared value model that represents how being positively active in today's society can deliver a competitive advantage would be a huge step forward. This is particularly pertinent at a time when the interplay between developed and emerging markets is increasingly obscure and economies that have been driving global growth are slowing down. As a result, business leaders need to have a much clearer vision of how to achieve growth and identify market opportunities in the future.

This is not only about identifying new markets for products and services, but also about leaders having the vision and courage to take risks. There's an argument that companies focus too much on managing risk and the risk of things going wrong, which often sees cash-rich companies resort to the safe option of share buy backs. The counter argument suggests that not using cash to enhance long term value is in itself a risk, as it minimises a company's opportunity to grow.

Good leaders understand that there is no growth without risk, but also that the best way to develop markets and encourage growth is to answer societal needs. The more we can create a business environment where such ideas can be explored, the more able we will be to achieve a long term mindset that is at the very heart of what Business. For Good can look like.

We help business leaders to think and act long-term in order to enhance business performance and pursue profit responsibly for the benefit of companies, their stakeholders and wider society

www.mazars.com/Home/Business.-For-Good

OLKAN FURUNCU/ANADOLU AGENCY/GETTY IMAGES

10th Summit

2014 Elected

LEADER'S VIEW

Turkey and the Hangzhou Summit

***Recep Tayyip Erdoğan** reflects on the recent failed coup in his country and the G20's role around the world*

Recep Tayyip Erdoğan

President of the Republic of Turkey

The G20 Hangzhou Summit is taking place at a critical time, when we face political, social as well as economic challenges of a global scale. As a leader who has participated in G20 summits since 2008 and hosted the G20 summit in Antalya last year, I believe that the G20 has a vital role in this critical process.

Given current expectations and global needs, it is not realistic to limit the G20's mission to global economic coordination and the prevention of economic crises. It is imperative that G20 members, representing almost 90 per cent of the world economy, address geostrategic risks that have vital importance for global growth and stability and adopt a common stand to overcome these risks. Indeed, at the Antalya Summit, G20 leaders discussed the fight against terrorism and the refugee crisis in detail for the first time. The G20's common position on these two important challenges was strongly reflected in the Antalya communiqué.

On the occasion of this critical summit at Hangzhou, I deem it essential to again address the issue of the fight against terrorism. Fighting global terrorism that targets innocent people all around the world regardless of faith, nationality and race is a top priority for us in all platforms. It is impossible to safeguard global stability and enable sustainable economic growth without establishing international cooperation and solidarity against the terrorism that threatens the entire world. The coup attempt staged in Turkey on 15 July, which failed thanks to the courage, determination and resistance of the Turkish nation, has revealed a new face of terrorism that we had not experienced before. It is now an indisputable fact that certain terrorist organisations are seeking to realise their treacherous objectives by insidiously infiltrating and putting down roots in state institutions. →

> *We must maintain inclusiveness in innovation as well as other items on the G20 agenda*

→ On 15 July, the Fethullah Gülen terrorist organisation, which operates institutions that appear to be legal in pursuit of illegitimate objectives and exploits the goodwill and faith of the society by abusing the cracks in the system, committed one of the most heinous and bloodiest attacks in Turkish history. The international community must be vigilant and take action against this 'new-generation terrorist organisation' that threatens the national security not only of Turkey but also of all the countries where it is present. Indeed, the target of terrorism is never a single country; what is under threat is none other than the international system, global security and stability.

Inclusive understanding

In our work within the G20, it is important that we adopt a long-term perspective to put in place an inclusive understanding that is for the benefit of the whole of humanity. In this connection, we strongly support and welcome the Chinese presidency's introduction of innovation and the digital economy to this year's G20 agenda, which are important topics for sustainable growth. Technology transfer and information exchange are as important as the protection of intellectual property rights in promoting innovation. From this perspective, we must maintain the emphasis on inclusiveness in innovation as well as in other items on the G20 agenda.

Trade and investment are key drivers for more robust global economic growth. Unfortunately, global trade growth has been lagging behind global economic growth since the recent financial crisis.

65M
Forcibly displaced people worldwide

G20 members need to lead in taking steps towards stronger global trade. Turkey supports strengthening the multilateral trade system with the World Trade Organization at its centre. G20 members should ratify as early as possible the Trade Facilitation Agreement to encourage and set an example for the rest of the world. Development is another central element of the G20 agenda. Until recently, development was seen simply as developed countries extending aid to developing countries. With the adoption of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the United Nations last year, this approach has been abandoned. Development now conforms better with the realities and expectations of today. Sustainable development is now the common responsibility of all countries, developed and developing alike.

Without the better integration of low-income and developing countries into the world economy, it is not possible to ensure sustainable economic growth and prevent economic and political crises that affect the whole world. In this sense, the adoption of the G20 Action Plan on the 2030 Agenda for Sustainable Development is an important step in the right direction. For its part, Turkey is accelerating its efforts to harmonise its national development policies with the SDGs.

Turkey put inclusiveness and inclusive growth at the heart of its G20 presidency priorities last year. We aimed to address inclusiveness not only from the perspective of enabling women and young people to become more effective participants in the economy but also to help better integrate low-income and developing countries into the world economy. Inclusiveness was also identified as one of the G20 agenda priorities by the Chinese presidency, which contributes to establishing this important topic as one of the long-term objectives of the G20.

Cooperation, solidarity and sharing

We cannot attain sustainable and robust growth unless a more equitable and inclusive economic and political order is established at a global scale. To ensure global stability, we need to establish an understanding based on sustainable economic growth that is equitable.

More than ever before, we need cooperation, solidarity and burden sharing to resolve the challenges on a global scale arising from political crises and affecting millions of people. Today, the number of forcibly displaced people worldwide has reached 65 million, the highest figure since the Second World War. By hosting three million refugees, making it the country hosting the highest number of refugees in the world, Turkey has been directly affected by the social and economic consequences of this global challenge that has arisen from a political crisis. If we do not join forces to find lasting solutions to the refugee crisis and similar challenges, the stability of the global economic and political order may be endangered.

A spirit of cooperation, partnership, inclusiveness and solidarity is the only way to further stabilise and strengthen the global economic and political order. The journey ahead of us is long. I have every confidence that the G20 will remain one of the key platforms for cooperation in this long journey. **G20**

THE CENTRAL BANK OF THE ISLAMIC REPUBLIC OF IRAN

Iran is embracing international financial standards to promote economic cooperation and attract foreign investment

Iran: the land of promises

With thousands of years of history, Iran, previously known as Persia, is one of the main cradles of civilisation. Since its emergence in circa 10th to 8th millennium BC, this land has always been the leading cultural and political entity in the region. Not only did Iran develop into a prosperous empire, but it also contributed significantly to the progress of the whole world. The name of Iran reminds the world of Cyrus the Great acknowledged pioneer of human rights; Avicenna in medicine and philosophy; Omar Khayyam in poetry; Al-Biruni in mathematics and astrology; Ferdowsi for his epic masterpiece Shahnameh; and in recent years, film directors as well as many other leading stars in sports, science and art.

People

Iran takes pride in its young, vibrant highly educated population as its main capital. For instance, the literacy rate for the 15-24 year age group is 98 per cent. About 4.8 million students attend universities providing a potential source of highly skilled work force. Talented Iranians have consistently shone in the international arena in science, sports, art, literature, medicine, music, cinema and the like. The first human rights charter appeared on the Cyrus Cylinder in the Persian Empire about 25 centuries ago. Later, Iranian scientists contributed to the progress of global science and their masterpieces in mathematics, medicine and astronomy have widely been explored in academic circles.

Diversity
Iran is the land of diversity. Millions of people from various ethnicities and religions join hands to lead a life full of peace and passion. Fars, Turk, Lor, Azeri, Balooch, Arab and other ethnicities follow Islam, Christianity, Judaism and Zoroastrianism in an environment of brotherhood, making Iran the safest and most secure country amidst all the turbulences of the Middle East.

Natural Resources
Iran's proven natural resources place her on the top of the rankings among other nations. Her natural gas reserves are the largest worldwide, estimated at 1,200 trillion cubic feet. Iran has the potential capacity to provide Europe with gas for more than 90 years. Besides, with proven reserves of at least 158 billion barrels, Iran possesses the world's fourth largest crude oil reserves. The favourable nature of reserves makes extraction less onerous and pushes down production costs to very low levels.

This is not the whole story however. Despite being known primarily as a key hydrocarbon producer, Iran is bestowed with 68 types of minerals and metals and has the potential to generate revenues from its mines even more than it does from fossil fuels. Industrial minerals, non-ferrous metals as well as iron and ferroalloy metals constitute a massive potential source of revenue once the necessary investments are made by the government or the private sector.

Climate
Observing beautiful snow covered mountains, enjoying the freshness of mild weather and swimming in warm waters all on a single visit to a country may seem far beyond imagination. However, dreams turn to reality in Iran where four seasons are present throughout the year. This is the land of diversified climate which ranges from arid or semi-arid, and from subtropical to humid and rain forests. To the west, the Zagros Mountains experience severe winters with below zero average daily temperatures and heavy snowfall. The eastern and central basins are arid while the coastal plains of the Persian Gulf and Gulf of Oman in southern Iran have mild winters and humid and hot summers.

Geopolitics
Iran is located at the heart of a geopolitically important region. It connects south to north from the Persian Gulf to the states of the Middle Asia and provides a corridor from west to east. The well-known Silk Road continues to signify the importance of Iran in the distribution of goods and services in the region. Iran benefits from developed infrastructure including roads, railways and airports which have the potential to expand further and provide the exporters with efficient access to lucrative markets. Iran remains the land of promises.

"The Central Bank of the Islamic Republic of Iran (CBIRI) regulates and supervises the banking system"

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Industry
With its vast potential, Iran is an attractive target for businesses. Abundant natural resources, well-educated labour force and established infrastructures contribute to Iran's diversified economy. Although the industry is best known for its share of oil and gas, it is not dependent on them like other oil exporting countries. Sectors such as manufacturing, mining, construction, tourism, agriculture and finance have notable shares in domestic economy. For example, the Iranian car producers are the biggest in the Middle East and its banks the largest in the Islamic world. The Iranian industries contain unique opportunities both in manufacturing and in services.

International Reintegration
Recently Iran has become a priority destination for delegations from all over the world with interest in banking, oil and gas, aviation, tourism, automotive and infrastructure sectors. Implementation of the Joint Comprehensive Plan of Action (JCPOA) is expected to greatly reshape the economy. JCPOA is an agreement to address mutual concerns regarding Iran's nuclear plan. It is a landmark in politics. It also provides a significant opportunity for economic cooperation encouraging higher international trade and investment. Traditionally, Iran supplies the global market with oil and imports machinery to accommodate domestic production. With Iran fully reintegrated in the international market, the oil price has become more competitive benefiting oil importing countries. Meanwhile international companies can invest in or set up new businesses in Iran and benefit from partnership with local partners.

Banking and Finance
Iran has a long history of banking with some banks established more than 85 years ago and the vast majority of Iranians maintain bank accounts. Internet and electronic banking is common. The Central Bank of the Islamic Republic of Iran (CBIRI) regulates and supervises the banking system which is composed of long established publicly owned and recently formed dynamic private banks. Iran's Anti-Money Laundering legislation goes back to 2008 and its Counter Financing of Terrorism laws were enacted in 2016. It has always known its customers thoroughly and never allowed anonymous accounts. Iran is open to foreign investment in all sectors including banking.

METRO SMART INTERNATIONAL

Urban infrastructure revolution for a sustainable future

Urbanisation has grown at unprecedented rates in recent years with over half of the world's population now living in urban areas. By 2050, this will grow to 86 per cent, putting tremendous demand on infrastructure, energy consumption and services. Smart leaders are pursuing innovation in urban design, technologies and services to remain competitive and sustainable.

Metro Smart International (MSI) is recognised as an innovative expert in the global urban infrastructure industry. With its vibrant products and systems, the company is a breath of fresh air in a traditional industry. MSI has partnered with the world's largest aluminium manufacturer – Sapa Pole Products, rapidly expanding its business worldwide. MSI has also established relationships with GuangDong JuHao Lighting Electrical – a leading Chinese lighting company, and other leading companies to introduce its smart technologies into China.

Advocate passive safety infrastructure

Nearly 1.3 million people are killed and 20-50 million injured in road accidents worldwide annually, more than 15 per cent of which is caused by collisions with rigid roadside features such as galvanised poles. Frangible or breakaway poles yield on impact, reducing the severity of vehicle-pole collisions. MSI-SAPA is working with various governments on policies and regulations to phase out conventional rigid poles and structures.

> *Beyond rigid poles, MSI systems reshape urban streetscape into a smart future*

Modular infrastructure and Smart City integrator

Smart Cities are a future reality for municipalities around the world that rely on a collection of integrated hardware, software and network technologies. Over the years, a plethora of single-use poles, such as sign posts, communication and car charging piles already accumulate on our streets. There is a clear need for a scalable integration platform as the urban fabric supporting the existing and evolving technologies.

MSI is one of the pioneers introducing modular design to street infrastructure. The humble street pole has been revolutionised into a multifunctional technology hub. The simple to use plug-and-play allows city authorities to integrate technologies with ease. Apart from environmental and economic benefits, it offers flexibility in design, adaptiveness, and reusability.

Sustainability to reduce carbon footprint

MSI focuses on using sustainable aluminium which has its intrinsic uniqueness: high strength-to-weight ratio, durability, recyclability, great formability and high corrosion resistance. These superiorities significantly reduce the footprint through sustainable material, eliminating replacement, lowering maintenance costs and long lifespan.

We continue to utilise our core strengths at MSI: commitments to innovation, superior design and quality, and sustainability. We are dedicated to assist city authorities and councils to create aesthetic and smart urban infrastructure that is built to last.

DI YANG
CEO of Asia Region,
Metro Smart
International FZCO

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LEADER'S VIEW

Theresa May

Prime Minister, United Kingdom

We will continue to work together on a range of things

Speaking at a press conference in Rome, ***Theresa May*** *addressed the G20's role in maintaining international relations after Brexit*

1st Summit

2016 Elected

As we make a success of Brexit, it is crucial that we work with important member states such as Italy to strive for a solution which respects the decision of British voters, recognising that while the United Kingdom is leaving the European Union, it is still very much part of Europe.

This means we will continue to work together on a range of things. We have agreed on the importance of maintaining the closest possible economic ties once the UK leaves the EU.

Italy is the UK's eighth largest export market and trade in goods alone was worth £24 billion last year. We want that trade to continue, but of course it will take time to work out the nature of our relationship. We should take time to prepare for these negotiations, so that both sides can identify their objectives.

As long as we remain in the EU, we will respect the rights and obligations of EU membership. The UK will continue to be a strong voice for international free trade.

The recent attack in Northern France on an innocent Catholic priest in a place of sanctuary and peace was another brutal reminder of the threat that we all face. Following on from the atrocities in Nice and Germany, it reinforces the need for action both in Europe and on the wider global stage.

In Europe, we must increase further our intelligence cooperation and share vital information swiftly and effectively, enabling us to better protect ourselves from these terrorists who seek to destabilise us.

In Iraq and Syria, the UK and Italy are already leading players in the coalition to counter Daesh.

I think we agree on the importance of reinvigorating the political process in Syria, securing a genuine ceasefire and unlocking humanitarian access.

We have also discussed the situation in Libya where both Italy and the UK are at the forefront of international efforts to support the new government. It is in all our interests to help Prime Minister Serraj to restore stability and rebuild the economy.

That is the best way to prevent Libya becoming a base for Daesh and to tackle the criminal gangs that continue to exploit illegal migrants and traffic innocent men, women and children for profit.

Ninety per cent of migrants crossing the Central Mediterranean set off from Libya, so both our countries have urged our European partners to do more to stem the flow of illegal migration from there. Together we secured agreement to extend the EU's naval operation to include capacity building of the Libyan coastguard and we hope that training will get underway in September. We also agree on the need to do more upstream in the countries where migrants are coming from, particularly in the Horn of Africa and West Africa.

The UK is leaving the EU but we will continue to strengthen ties with our European friends. Outside of the EU, the UK and Italy will continue to cooperate through NATO, the G20 and the G7. **G20**

GUESTS' AND LEADERS' VIEWS

Europe and the Middle East

These leaders' and guest leaders' views were adapted from various speeches, bilaterals and interviews that reflect their opinions regarding the work of the G20

François Hollande
France

5th Summit

Our planet faces indeed several challenges. War and terrorism is not unrelated to the climate challenge, although one might ask: why make the connection? Because unfortunately wars are often produced by the issues of migration and the climate.

In 2015, record numbers unfortunately died in Syria and Iraq. There were also record temperatures, concentrations of greenhouse gases, catastrophic weather events and territory submerged by sea because of melting glaciers.

France acts in the fight against terrorism internationally with operations carried out by our armies, which I applaud. France acts to protect itself – the security forces are doing an admirable job. We even called for reinforcements from operational reserves. France also has to act in the name of values and principles, whatever the subject.

Angela Merkel
Germany

When Germany hosted the G7 last year, we launched some concrete initiatives. By 2020, Germany intends to double its contribution to climate financing compared to 2014. Public contributions are only one part of the equation. We also must interlink them with private investments in a savvy way.

Development banks play an important role. The World Bank, the Asian, African and Inter-American Development Banks, and not least the European Investment Bank all want to increase the contribution to climate financing in their portfolios. In this sense, development banks are strategic trailblazers for private investments.

What matters for all affected countries, especially for small island nations, is that the money arrives. At some point, the moment of truth comes.

11th Summit

Matteo Renzi
Italy

3rd Summit

In a bilateral meeting with Chinese Foreign Minister Wang Yi in May, Matteo Renzi noted that his visit to China two years ago is still fresh in his memory. Italy values the status and influence of China and hopes to deepen China and Italy's bilateral friendship, enhance mutually beneficial cooperation in trade, investment and other areas and advance the future-oriented comprehensive strategic partnership.

Italy is ready to boost communication and coordination with China in important international issues.

The G20 summit hosted by China this year is of significance because it can help revitalise the global economy. Renzi is looking forward to attending the summit in Hangzhou and is willing to conduct close cooperation with China to promote positive results.

Prince Mohammed bin Salman
Saudi Arabia

Guest

We are working to achieve the Saudi Arabia that we want in the future. However, this does not mean that we have to focus on how to educate, train, and develop our next generations. We are not looking for another Saudi Arabia. Our concern is the problems of housing and unemployment. Our ambition will take over these problems, whether unemployment, housing, or other problems.

We seek to develop our economy and create an attractive and perfect environment in our homeland. We seek to be proud of our country, and enable the latter to contribute to the development of the world, whether on the economic, environmental, civilisational or intellectual levels. We are ready to offer a lot to Saudi Arabia and to the world. Our ambition will take over the problems we are facing, God willing, in the coming years.

Nursultan Nazarbayev
Kazakhstan

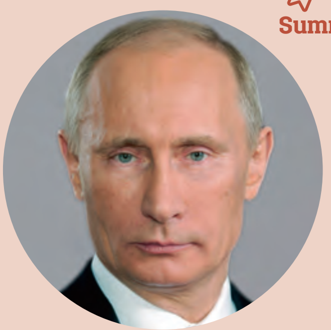
Guest

Peace is worth fighting for just as deliberately and persistently as did people in the past century. We should think hard about the future of our children and grandchildren. We must combine the efforts of governments, politicians, scientists, entrepreneurs, artists, and millions of people around the world in order to prevent a repetition of tragic mistakes of past centuries and spare the world from the threat of a war.

Failing to act or putting limits on efforts to promote peace risks global catastrophe. My *Manifesto: The World. The 21st Century* reflects a sincere concern for the fate of future generations, which will live and work in the coming decades. We, the leaders of states and politicians, bear an enormous responsibility for the future of humanity.

Vladimir Putin
Russia

5th Summit



A new type of relations, based on mutual respect, friendship and consideration for each other's interests...not only meet the fundamental interests of our peoples, the long-term objectives of Russia's and China's development, but also, as my friend President Xi Jinping has said, they are an important factor of global and regional stability and security.

In building the Russian-Chinese partnership, we have relied on many centuries of cooperation between our countries. The unprecedented level, achieved through mutual trust and understanding, enabled us to resolve complicated and fairly delicate issues that we inherited. Most importantly we have opened opportunities for moving forward for establishing multilateral relations in the most diverse areas.

Donald Tusk
European Council

The European Union welcomes China's presidency of the G20 this year. You can count on the EU to play a constructive role towards achieving a successful summit in Hangzhou. As two of the largest economies in the world, the EU and China have an important stake and a responsibility in ensuring the growth and stability of the global economy.

We have to employ all existing channels in both the bilateral and in multilateral contexts, such as the United Nations and the G20. Building on the positive experience of the Iran nuclear talks, we are confident there is much we can contribute to peace and prosperity around the world.

The same goes for global issues, such as migration, international development assistance, the environment and fighting climate change. These are challenges that can only be resolved through a global response. For this reason, a collaborative EU-China relationship is crucial.

2nd Summit

GUEST AND LEADERS' VIEWS

Asia Pacific & the Americas

These leaders' and guest leaders' views were adapted from various speeches, bilaterals and interviews that reflect their opinions regarding the work of the G20

Malcolm Turnbull
Australia

Every level of our policy effort is directed at ensuring Australia makes that successful transition to a new and more diverse economy. A stronger and more agile economy that is better able to seize the extraordinary opportunities that we are presented with today.

We are in the fastest-growing region in the world, where more than half of the world's middle class will be residing before very long. Forty years ago, China was not engaged in the global economy at all and today it is, depending on who is doing the measuring, either the world's largest single national economy, or about to be the world's largest single national economy.

These are extraordinary times.

2nd Summit

Shinzo Abe
Japan

4th Summit

At the G7 Ise-Shima Summit, the other leaders and I had frank discussions about the risk that the global economy faces. We agreed that "in order to avoid falling into another crisis" we would "take all appropriate policy responses in a timely manner", a position set forth in the Leaders' Declaration.

Although the global economy experienced negative growth in 2009, as it did in 2008, the risks were not fully recognised. For example, the IMF forecasting close to four per cent positive growth turned into negative growth at a stroke, an event that was difficult to recognise until immediately before it occurred.

I believe that we should take proper measures in order to accurately recognise the present risks and avoid a crisis.

Barack Obama
United States of America

10th Summit

We live in a time when more than half the world is under the age of 30. That means we have to make sure that all of our young people around the world have the tools they need to start new ventures, to create the jobs of the 21st century, and to help lift up entire populations. Many of you are already doing this.

As I travel around the world, one of the extraordinary things that I have the opportunity to do is to meet young people in every region and to see the problem solving and the energy and optimism that they're bringing to everything. From how to generate electricity in environmentally sound ways in remote places that are off the grid right now, to how do you employ women in remote areas who all too often have been locked out of opportunity. There is enormous creativity waiting to be tapped.

4th Summit

Park Geun-hye
Korea

Like many African states, a century ago Korea had to endure the agony of colonial rule. No more than 65 years ago, Korea witnessed the horrors of a fratricidal war that drove the entire nation to ruin. Only half a century ago, Korea remained plagued by starvation and despair.Nonetheless, the Korean people refused to let go of their dreams and hopes, and with unflinching conviction delivered the Miracle on the Han River.Such a feat was not achieved by the strength of Koreans alone. Without the assistance, understanding and partnership of the community of nations, including those in Africa, we would not have been able to prevail, or at least, the struggle would have been far more arduous.It is a pleasure that Korea can now offer help and join Africa a forge a new path towards the future, together with our friends who likewise helped Korea triumph over adversity. Africa has set sail on a voyage towards a grand dream of ushering in a new future.

The 'Agenda 2063' that envisions an 'Integrated, prosperous and peaceful Africa' presents a blueprint for such an African dream.

Lee Hsien Loong
Singapore

Guest

It is a world that changes very rapidly... So, we started off doing economic development, basically manufacturing of labour-intensive things.

We had to change our strategy to emphasise skills, we had to emphasise technology, we had to upgrade our people's education and they had to be prepared to learn new jobs as they did that. You have to do it not just once but many times because after the first time, the world changes again and you have to change again.

Michel Temer
Brazil

1st Summit

Innovation is important... for the economy, employment, technology, education and health. It is also key for business mobilisation. We live in a country with more than 11 million people unemployed who cannot get jobs. We must overcome this.

We welcome those studying abroad to bring back knowledge that can be applied in Brazil. We must establish the idea that this country is a multifaceted country with an economic focus.

The first social law is the right to employment. This is very connected to another constitutional principle: that that all people act on the basis of human dignity.

We preach to the private sector and ask entrepreneurs to extend their activities to provide employment, guided by the idea of constitutional human dignity.

Mauricio Macri
Argentina

1st Summit

Argentina-China relations enjoy a sound momentum and huge development potential. Argentina is grateful to China for its vigorous support in infrastructure construction, financial stability, economic reforms and other aspects, and welcomes Chinese enterprises to increase their investment in such areas as ports, railways, roads and agriculture in Argentina.

Argentina hopes both sides will expand exchanges and cooperation in areas such as infrastructure, finance, tourism, sports and people-to-people and cultural exchanges and is willing to provide more convenience in visa issuance for Chinese citizens. Argentina stands ready to enhance cooperation with China in international affairs, and will support China in hosting a successful G20 Summit in Hangzhou.

Joko Widodo
Indonesia

3rd Summit

At the beginning of this year, we experienced a pleasant surprise. Even as stock markets declined and the price of crude oil plummeted, our currency, the rupiah, was stable. [Then] we received another pleasant surprise. Our fourth-quarter GDP growth exceeded the forecasts of all 23 forecasting institutions. The consensus forecast was 4.8 per cent year-on-year growth. Instead, we achieved growth of 5.03 per cent, year-on-year, in the fourth quarter of 2015.

In 2014, the ruling coalition commanded only a minority in parliament. In 2015, we achieved a majority in parliament. Today, a larger amount of infrastructure is being built than at any given time in the last 15 years. Overall – I am cautiously optimistic... that we have reached a measure of economic stabilisation.

METRO SMART INTERNATIONAL FZCO

低碳智慧城市基础设施的创新性革命

近年来，城市化进程急速加剧，如今一半以上的世界人口选择居住在城市，到2050年会高达86%，使得对城市基础设施，能耗和服务的需求剧增。为此，各级政府正积极探索先进的城市设计，高新技术和创新服务以确保城市竞争力和可持续发展。

Metro Smart International (MSI) 是全球公认的最具创意的城市基础设施专家。凭借其充满创新活力的产品和系统，给这个传统制造行业注入了新的生命力。MSI已与 世界最大的铝材生产厂商 – Sapa Pole Products 建立了合作伙伴关系，产品销往世界各地。目前，MSI又与中国优质品牌商——广东钜豪照明电器公司以及其他中国顶尖公司建立了战略伙伴关系，致力于将全球领先的创新技术引进中国市场。

挽救生命做道路“被动安全设施”的倡导先锋

每年，全球近一百三十万人死于车祸，两千万到五千万人终生致残，其中大约15%的车祸是由于与刚性，如铁灯杆，路标等撞击造成。

可倒塌式或可折断式灯杆是一种被动安全装置，在受到剧烈冲击后会有控制的折断或倒塌，以降低车祸致命性。

作为被动安全系统的积极倡导者之一，MSI-SAPA致力于协助各国政府有关部门调整政策和法规，逐渐淘汰传统的刚性灯杆和装置。

模组化基础设施和智慧城市技术整合平台 – 传统行业的一场创新革命

如今模组化设计已充斥我们生活的各个角落，如在汽车，电脑，机械，建筑等领域均得到广泛应用，但这个设计理念还迟迟未能成功的引入城市道路设施行业，致使单一功能设施林立。

如今智慧城市的建设是当代城市发展不可逆转的历史潮流，技术层面上将涉及到多种先进信息技术和网络技术的铺设和实施。多年来，各种单一功能的杆子，通讯，汽车充电桩等设施已遍布大街小巷。搭建一个具可扩充性的可将各种现有或未来技术集成的整合平台是智慧城市不可或缺的硬件基础。

MSI是将模组化设计理念引进城市道路设施的先驱之一。简陋的电灯杆被蜕变成灵活的多功能技术枢纽。简单易用的即插即用方式给城市管理者提供了高效的工具，技术组件可以搭积木方式随意加拆。使现在还无法设想的新技术将来可无缝实施到位。这样的高科技整合平台既环保，又节约成本，灵活，百变，可成长，可扩展并可重复使用。

高效环保的可持续发展方案

MSI系统致力于应用环保材料，铝合金与其他金属相比具有独特的物理性能：高强度/重量比，耐用性，可回收性和极大的可塑性，使其当仁不让的成为打造街道基础设施的优良材料。由于铝合金的高耐腐蚀性，MSI的产品在绝大多数自然环境里不生锈，不腐蚀，可以轻松的持续使用数十年。帮助城市管理者避免定期喷漆，维护，更换造成的浪费和环保问题。

MSI将一如既往的保持我们的核心竞争力：坚持对创新的承诺， 坚持对优秀设计和高质量的承诺，坚持对环保可持续性发展的承诺。我们致力于协助城市当局创建：经久耐用的、美观大方的，更重要的是融入全球领先智慧技术的市政基础设施。

DI YANG
亚洲部CEO
METRO SMART
INTERNATIONAL FZCO

全新的多功能整合平台成就着智慧城市的灿烂未来

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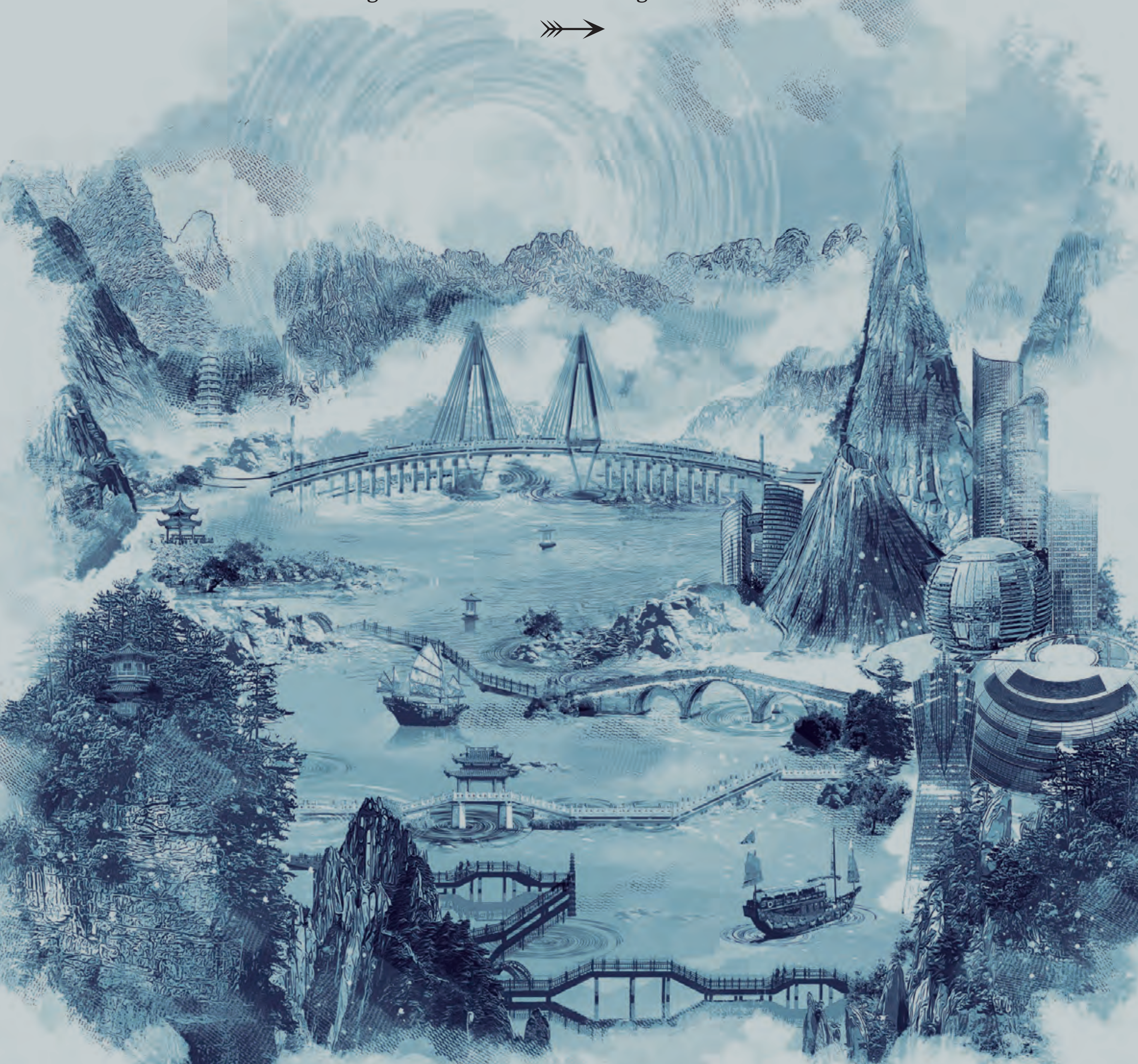
SPOTLIGHT ON CHINA

Top Chinese government officials welcome heads of state and government as well as delegates to the G20's



The Hangzhou Summit holds great promise, because it connects history with the future, and the East with the West

Li Baodong

Vice Minister of Foreign Affairs and G20 sherpa, People's Republic of China

As the G20 Hangzhou Summit draws close, China and the whole world are looking at the West Lake with growing expectations. As China's G20 sherpa, I am personally involved in the entire preparation process for the Hangzhou Summit, and I feel keenly that there is a lot one can expect from this summit.

The Hangzhou Summit comes at a crucial moment for the world economy and the G20 itself. Given the anaemic growth and pronounced risks and uncertainties facing the global economy, the International Monetary Fund has once again cut global growth forecasts for 2016 and 2017. Under such circumstances, the G20 needs to harness its own advantages and demonstrate leadership, taking an important step in Hangzhou to transform from a crisis response mechanism that coordinates short-term policies to mechanism for long-term governance that shapes medium- to long-term policies. It needs to encourage major economies to step up macroeconomic policy coordination, advance reform and innovation, and provide a sustained driving force for strong, sustainable and balanced growth.

The Hangzhou Summit is something to look forward to, because its outcomes will have a far-reaching impact on the world economy. Over the past year, parties concerned have exchanged ideas and built consensus on the theme "Towards an Innovative, Invigorated, Interconnected and Inclusive World Economy" put forth by Chinese President Xi Jinping. For the first time, the Summit introduced innovation as an agenda item and the G20 Blueprint on Innovative Growth will be jointly developed to open up a new pathway for the long-term and healthy growth of the world economy. The Summit is committed to improving global economic governance, encouraging deeper cooperation in the reform of the international financial system, energy, anti-corruption and other fields, and increasing the resilience of the world economy. The Summit will revitalise global trade and investment, strengthen the multilateral trade regime and inject new dynamism into economic globalisation. The Summit will focus on development issues and encourage the members to formulate the G20 Action Plan on the 2030 Agenda for Sustainable Development and the Initiative on Supporting Industrialisation in Africa and Least Developed Countries so that more people will benefit from economic growth. The Hangzhou Summit will also issue a leaders' communiqué, thus producing a real and tangible impact on the world economy.

The Hangzhou Summit gives people a lot to look forward to, because it is closely linked to China's development. For one thing, China, holding the G20 presidency, will continue to bring confidence and vitality to the world. In the first half of this year, the Chinese economy grew by 6.7 per cent, one of the highest growth rates among the major economies. Despite the complexities of the world economy, China's economy remains stable and is moving steadily forward. This sound momentum, combined with the outcomes of the Hangzhou Summit, will boost the confidence of the markets. In the meantime, hosting the Hangzhou Summit will create new opportunities for China's endeavour to comprehensively deepen reform and participate in global economic governance, and facilitate the historical process of implementing the 13th Five-Year Plan and attaining the first of its "two centenary goals". It will also enable China to be more deeply engaged in international economic cooperation, contribute more Chinese wisdom to the international society and provide more public goods to global economic governance.

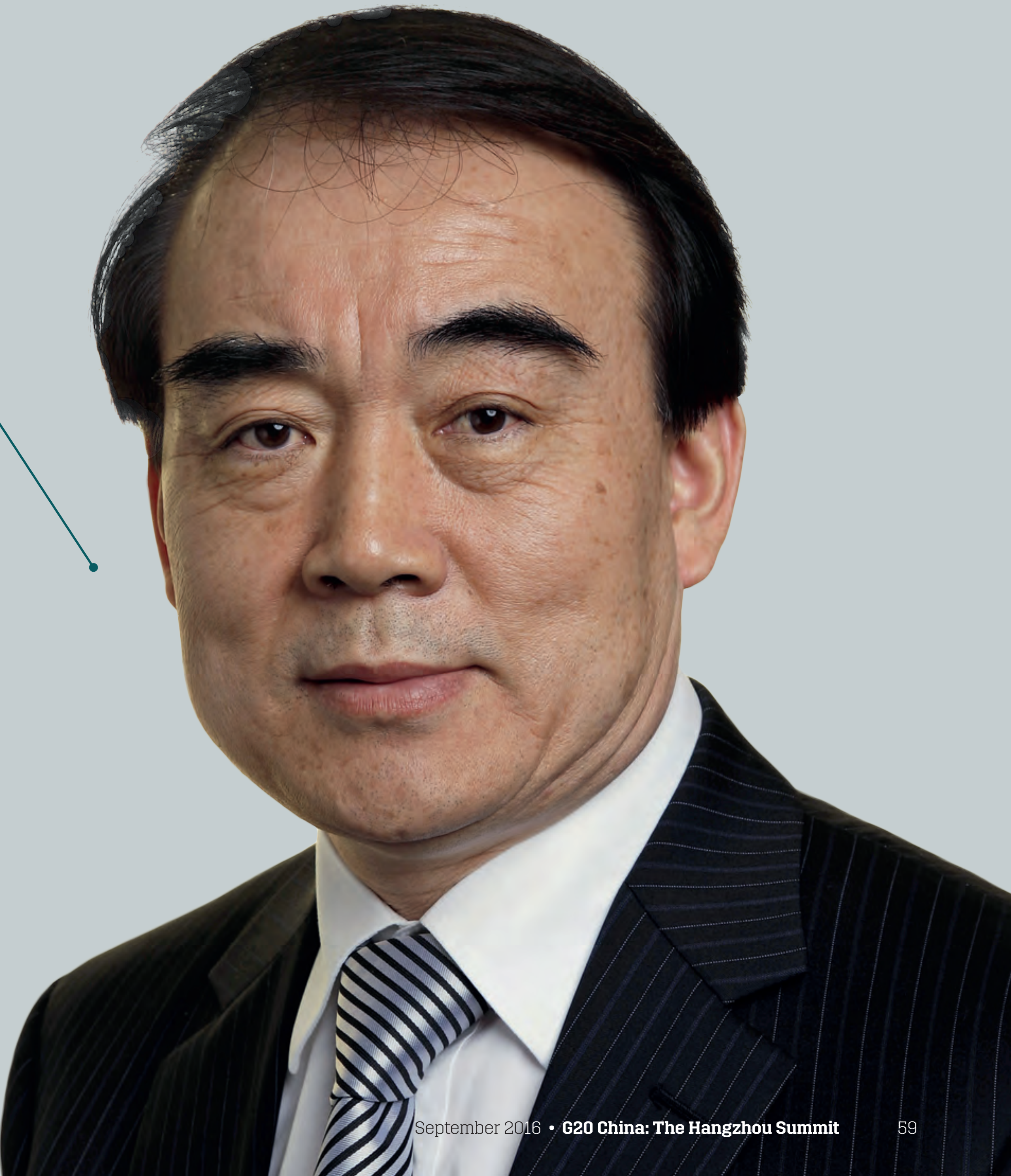
The Hangzhou Summit holds great promise, because it connects history with the future, and the East with the West. Its logo, featuring 20 lines arranged in the shape of a bridge, depicts the G20 as a bridge connecting China with the rest of the world, and a bridge of friendship that brings people of all countries closer together. Leaders of all countries and representatives of international organisations will feel the pulse of a modern Hangzhou, experience Chinese culture, draw inspiration from the ancient wisdom of the East and explore ways to invigorate the world economy. We hope that people of all countries, by following the Hangzhou Summit, will have a taste of the unique culture of southeastern China, a glimpse of the profound Chinese civilisation and an experience that only Hangzhou can offer.

There is a lot people can expect from the Hangzhou Summit, but expectations do not materialise on their own. Realisation of those expectations calls for the partnership among various parties of the G20, the concerted efforts of representatives from business, academia, women, youth, labour, civil society and other areas, and more importantly, active support from people of all countries. I am convinced that, with everyone working together, this autumn, we will witness history and embrace the future in Hangzhou. **G20**

SPOTLIGHT ON CHINA

The G20 Hangzhou Summit: a lot to look forward to

China will continue to bring confidence and vitality to the world, writes ***Li Baodong***



SPOTLIGHT ON CHINA

Responding to new challenges in the global economy

*Promoting strong, sustainable and balanced growth is key to the G20 Finance Track, writes **Lou Jiwei***

Lou Jiwei
Minister of Finance, People's Republic of China

Over the past eight years, as the premier forum for international economic cooperation, the G20 has been playing a vital role in dealing with the financial crisis, as well as in promoting the global recovery and economic governance reform. However, the global economy remains weak and fragile. Short-term downside risks and mid- to long-term challenges, including the slowing growth of total factor productivity and declining potential output, are intertwined. We still face the tough task of achieving strong, sustainable and balanced growth. After assuming the G20 presidency of 2016, China adopted "Towards an Innovative, Invigorated, Interconnected and Inclusive World Economy" as the theme of the Hangzhou Summit, and commits to achieving more sustainable growth and prosperity.

Great efforts

In this context, guided by the theme of the Hangzhou Summit, the G20 Finance Track took great efforts this year to strengthen the G20 structural reform agenda, further improve global economic governance and foster mid- to long-term economic growth, while taking proactive measures to cope with short-term global economic and financial risks and promote the economic recovery. The G20 members discussed issues concerning the global economy, the Framework for Strong, Sustainable and Balanced Growth, the international financial architecture, investment and infrastructure, financial sector reform, international tax, green finance, climate finance and anti-terrorist financing, and made joint contributions to a number of positive and pragmatic outcomes.

We made further progress on macroeconomic policy coordination. In response to shocks, including international financial market turmoil, commodity price volatility, geopolitical risks and the outcome of the referendum on the United Kingdom's membership in the European Union, since the beginning of 2016 G20 members took concerted actions in coordinated ways to boost growth and confidence. Among them, we are committed to using all policy tools – monetary, fiscal and structural – individually and collectively to strengthen growth, to consulting closely on exchange markets, to refraining from competitive devaluations and resisting all forms of protectionism. The prompt responses have served as important policy guidance to the global economy.

We achieved landmark results in enhancing the structural reform agenda. Structural reform is the fundamental way to achieve strong, sustainable and balanced growth. This year, for the first time, the G20 conducted a top-level design of the structural reform agenda. We have identified nine priority areas of structural reforms and developed 48 guiding principles. We also agreed upon common core indicators to help assess our efforts and progress on structural reform. This demonstrates our faith in addressing both the symptoms and root causes to foster growth. It will help increase the synergy among G20 members in implementing structural reforms, maximise their positive spillover effects, and further enhance the vitality and sustainability of the global economy.

We took a big step forward in boosting infrastructure investment. Infrastructure investment has great significance in boosting global demand and lifting medium- to long-term growth. Called upon by the G20, 11 major multilateral development banks announced their quantitative ambitions for high-quality infrastructure projects. We also launched the Global Infrastructure Connectivity Alliance Initiative, which will enhance the synergies and coordination among the existing regional and

national infrastructure connectivity programmes and mechanisms. In addition, we have made good progress on encouraging private-sector investment and diversifying financial instruments.

International tax cooperation has yielded substantial results. The G20 established the Inclusive Framework on Base Erosion and Profit Shifting (BEPS), under which we set up a governance body and developed a preliminary working road map. We endorsed objective criteria in identifying non-cooperative jurisdictions with respect to tax transparency and we encourage countries that have not yet signed the Multilateral Convention on Mutual Administrative Assistance for Tax Matters to do so. We also made efforts in supporting developing countries to strengthen tax capacity building. China will make its own contribution by establishing an International Tax Policy Research Centre. Furthermore, the G20 agreed to enhance the role of tax policy in promoting inclusive growth.

We took new measures to strengthen the international financial architecture. This year the G20 reactivated the International Financial Architecture Working Group and made a number of recommendations through extensive work in enhancing the role of the Special Drawing Right, improving the process of sovereign debt restructuring, strengthening the global financial safety net, promoting the International Monetary Fund's quota and governance reform, and improving the monitoring and management of capital flows.

The G20 Finance Track has made positive progress in 2016 in financial sector reform

These recommendations help set the direction for our next move towards further strengthening the international financial architecture as well as promoting international monetary system reform.

Confidence and commitment

In addition, the G20 Finance Track has also made positive progress in 2016 in financial sector reform, green finance, climate finance and anti-terrorist financing, and has achieved relevant outcomes.

As endorsed by the G20 finance ministers and central bank governors in Chengdu in July, the above-mentioned outcomes will be delivered for our leaders' review at their Hangzhou meeting. The outcomes reflect members' wisdom and consensus in the finance track, demonstrating the G20's confidence and commitment to addressing new challenges in the spirit of cooperation and solidarity. The fruitful deliverables will not only contribute to a successful Hangzhou Summit, but will also inject new impetus into the collaboration of G20 members, hence promoting an innovative, invigorated, interconnected and inclusive global economy. **G20**

SPOTLIGHT ON CHINA

Charting the course for global economic cooperation

***Gao Hucheng** explains how this year's G20 summit can spur trade and investment as engines of growth*

ZHAOJIANKANG/ISTOCK PHOTO

Gao Hucheng

Minister of Commerce, People's Republic of China

The G20 Summit will be held in Hangzhou, China, on 4–5 September 2016. High on the agenda will be robust international trade and investment. At present, the underlying impact of the international financial crisis is casting a long shadow over the global economic recovery and growth. International trade, stuck at a low level, has been outstripped by world economic growth for four consecutive years, while international investment has yet to bounce back to pre-crisis levels. The international community expects the G20 to play a leading role in tackling prominent global issues and invigorating the global economic recovery and growth.

Positive and practical outcomes

In recent years, as the G20's mission has evolved from crisis response to long-term governance. Trade and investment have assumed an increasingly important role. At the Antalya Summit in 2015, President Xi Jinping, together with other G20 leaders, asked G20 trade ministers to meet regularly and agreed to set up a supporting working group. Following the leaders' instruction, China and other G20 members established the G20 Trade and Investment Working Group (TIWG) in 2016, which has thus far held four meetings. On 9–10 July, China successfully held the first institutionalised G20 trade ministers meeting in Shanghai and released the first G20 Trade Ministers Meeting Statement, capturing numerous breakthroughs on various topics. This laid a solid foundation for the Hangzhou Summit to deliver positive and practical outcomes on trade and investment.

At the Hangzhou Summit, leaders have the potential to achieve historic trade and economic outcomes in the following five aspects.

First, endorse the terms of reference of the TIWG, institutionalising cooperation on trade and investment policy among G20 members. During China's presidency, the TIWG was created and important consensus was reached regarding implementing the leaders' instructions at the Antalya Summit to strengthen trade and investment cooperation and hold regular trade ministers' meetings. At this summit, leaders are expected to endorse the TIWG's terms of reference, which were proposed and drafted by China and define the scope of discussion and organisational matters. These will provide a stable institutional guarantee for the G20 in playing a greater role in global economic governance and promoting trade and investment growth.

Second, endorse the G20 Strategy for Global Trade Growth (SGTG), charting the course for promoting sustainable global trade and economic growth. The SGTG sets out seven cooperation pillars: lowering trade costs, harnessing trade and investment policy coherence, boosting trade in services, enhancing trade finance, developing a world trade outlook indicator, promoting e-commerce development, and addressing trade and development. It lays out targeted action plans. Leaders are also expected to welcome the B20's initiative on an Electronic World Trade Platform (eWTP) and the World Trade Organization's (WTO's) World Trade Outlook Indicator.

Third, endorse the G20 Guiding Principles for Global Investment Policymaking, making a historic contribution to strengthening global investment policy coordination. This document sets out nine principles, including opposing protectionism in relation to cross-border investment; establishing open, non-discriminatory, transparent and predictable investment conditions for investment; providing strong protection to investors and investments; and ensuring transparent policymaking. Being the world's first guiding document on investment policy, the guiding principles set out an overall framework for global investment rules, and serve as long-term institutional guidance for boosting global investment growth.

Fourth, firmly support the multilateral trading system and actively advance the WTO's Doha Development Agenda negotiations. At this summit, leaders will explicitly oppose trade protectionism and agree to extend their commitment to standstill and rollback protectionist measures until the end of 2018. They will agree to enhance the transparency of regional trade agreements and pledge to ratify the Trade Facilitation Agreement by the end of 2016. Leaders will also agree to continue to send political signals to advance the negotiations on the remaining Doha issues and to explore the possibility of initiating discussions on potential new issues of common interest and importance to the global economy.

Fifth, help developing countries and small and medium-sized enterprises (SMEs) integrate into global value chains by adopting comprehensive measures. To ensure a better share of the gains from globalisation for developing countries and SMEs, this summit will agree to carry out capacity building and other activities to advance the inclusive and coordinated development of global value chains and achieve balanced and sustainable global economic growth. By doing so, the summit will make a tangible contribution to the implementation of the WTO's Nairobi declaration on helping least developed countries better integrate into global trade and the United Nations 2030 Agenda for Sustainable Development.

Working together

As the G20 host in 2016, China looks forward to working together with other G20 members to jointly develop a trade and investment mechanism, improve global economic governance and make a greater contribution towards an open world economy. **G20**

Natural starting and ending point of the New Silk Route

East and West have always been connected. Trade has always flowed between Asia and the European continent. By land, by sea and by air. The Netherlands was among the first maritime trading nations to explore new sea routes to East Asia in order to establish commercial contacts. From the beginning of the 17th century onwards, the Dutch opened up trade relations with Chinese merchants, shipping tea and Chinese porcelain to the eager European markets.

The Chinese One Belt One Road echoes those ancient trade links between Asia and Europe. It opens up new opportunities for trade and developing new partnerships between China and the Netherlands.

Port of Rotterdam: a hub for global trade

"Trade is essential for economic growth and prosperity", says Allard Castelein, CEO of the Port of Rotterdam Authority. "We believe that working together is the only way to tackle the challenge of the future and strengthen our economic, social and cultural ties. Rotterdam cherishes a spirit of cooperation and sees itself as a long term strategic partner for the One Belt One Road initiative. The Port of Rotterdam is the natural start and end point of the new Silk Route."

> *Rotterdam is home to the largest Chinese business community in Europe*

The Port of Rotterdam is already the number 1 Chinese Port in Europe. In 2014, Rotterdam became the first European port since the start of the economic crisis in 2008 to handle more than three million TEU going to or coming from China. Chinese containers make up 25 percent of all containers handled in Rotterdam.

The port is situated at the mouth of two of the continent's major rivers, right next to Europe's busiest sea lanes. It is Europe's most important and largest deepsea port and the continent's number one hub and gateway. The port infrastructure has been ranked the best in the world for four years in a row. These major advantages and access without locks or tidal restrictions make Rotterdam a port with the fastest cargo handling for trade flowing from Asia to the Northern and Western Europe and vice versa. The Port of Rotterdam is also the port of choice for fresh products. It is the European hub for refrigerated products, which is reinforced by the Dutch market and trade in agricultural products. After the United States, the Netherlands is the largest exporter of vegetables and fruit in the world.

The Port of Rotterdam is well connected to more than 1,000 ports in the world and to Europe's extensive network of rail, road, barge and short sea. All major European industrial clusters and a market of over more than 500 million consumers are within 24 hour's reach. Rotterdam provides excellent Ro-Ro connections to the UK, barge connections to Germany and rail connections to Eastern Europe, etc.

Where rail meets sea

Rotterdam is not just an interesting option for sea transport to and from Asia. In the summer of 2015, the first train from China arrived in the Port of Rotterdam, a development that has attracted huge interest. With an average transit time of 15 days, rail transport is much faster than sea freight – and considerably cheaper than air freight.

Several companies such as HP and Ricoh are already using regular rail connections between the Netherlands and China, either via Tilburg or Duisburg. The Port of Rotterdam has been organising seminars to share knowledge and experiences, aiming to increase the amount of cargo transported to and from China by rail. Many companies already see the advantages of rail transport and are keen to

The Mayor of Rotterdam, Mr Aboutaleb

CEO of the Port of Rotterdam Authority, Mr Castelein

jump on board. In this respect, cold chain agro food logistics seem to have huge potential, positioning Rotterdam Cool Port well for connecting with China.

Link between Asia, the UK and the USA
The rail connection not only holds excellent opportunities for cargo shipments between the Netherlands and China. The port of Rotterdam also has weekly short sea and roll-on/roll-off (Ro-Ro) connections to more than 200 destinations in Europe. Multiple times a day, short sea and Ro-Ro vessels leave for the UK, Ireland, Scandinavia, Spain, Portugal and the Baltic countries. The Mediterranean, the Black Sea and North Africa are also easily accessible. The transit time is short. After arrival in the port by train, it only takes eight hours to load a container onto a short sea vessel. Regular shipping connections to the East Coast of the United States also make Rotterdam an excellent transfer port for cargo destined for the USA.

Rotterdam: solid ground for Chinese investors
Globally, Rotterdam is the third-most attractive urban region for foreign direct investments, according to IBM's Global Location Trends report (2016). The city offers a solid ground for international investors. It is the second largest city of the Netherlands, a country that combines political and economic stability with growth-oriented dynamism and a country that is ranked the eighth-most competitive country in the world.

Rotterdam has become an international trading and business centre, with its excellent business facilities, innovative climate, down-to-earth work ethic, highly skilled workforce and attractive price-quality ratio. International influences give Rotterdam a cutting edge design, international cuisine and a dynamic city atmosphere. People from no fewer than 170 countries around the world call Rotterdam their home.

The history and development of the city on the world stage is intimately linked to more than 400 years of successful experience in trade and shipping. The Chinese businesses play an integrated role in the regional economy. Ahmed Aboutaleb, Mayor of Rotterdam: "The City of Rotterdam has been home to the largest Chinese business community on the European continent since 1911. Many companies from mainland China and Hong Kong are present in our city, enabling newly arrived Chinese to settle down and start business quickly." The dedicated China desk of Rotterdam Partners, Rotterdam's investment agency, also plays a key role in this process.

Working together to create greater prosperity
East and West are better connected and more interdependent than ever. Of course, governments and businesses alike should collaborate to improve each aspect of the logistics chain – making trade faster, more efficient and better integrated.

Allard Castelein, CEO at the Port of Rotterdam Authority: "Sharing knowledge and ideas leads to innovations that benefit us all. Joint investments and initiatives consolidate these partnerships and create greater prosperity for all the nations along the new Silk Route."

STR/AFP/GETTY IMAGES

Rice farmers in Lianyungang, Jiangsu

SPOTLIGHT ON CHINA

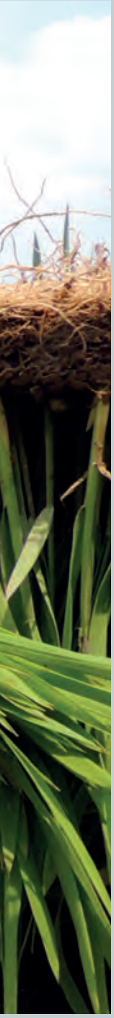
Pool wisdom and achieve synergy

The G20 has begun a new chapter of global agricultural innovation and sustainable development, writes ***Han Changfu***

The G20 agriculture ministers' meeting was successfully held in Xi'an, China, on 3 June 2016. President Xi Jinping sent his congratulations on the convening of the meeting, and welcomed all the delegates to discuss global agricultural growth and cooperation. The meeting received positive responses and attracted the participation of the agriculture ministers of all G20 members and guest countries, as well as the leaders of international organisations, including the Food and Agriculture Organization (FAO), the Food Programme and the International Fund for Agricultural Development. Under the theme of "Agricultural Innovation and Sustainable Development", participants had in-depth discussions and reached consensus on such issues as food security, sustainable agricultural development, technological innovation, investment and trade. The meeting was fruitful and uplifting, with many outcomes, among which was the G20 Agriculture Ministers Meeting Communiqué 2016.

A leading role

On a food security system, the meeting agreed that it is necessary to build a multi-tiered, multi-faceted system to improve food security. The G20 should continue to play a leading role, and North-South cooperation,



We will work together with other G20 members to advance international agricultural exchange and cooperation

Han Changfu

Minister of Agriculture, People's Republic of China

South-South cooperation and triangular cooperation should focus on developing countries and give priority to sustainable agriculture.

On sustainable agricultural development, the meeting supported the implementation of the 2030 Sustainable Development Goals (SDGs) that are related to agriculture, and encouraged the parties to carry out the exchange of experience, knowledge sharing and technology application, and to promote good practices including Globally Important Agricultural Heritage Systems.

On agricultural innovation, the parties committed to creating an enabling environment for agricultural technology innovation, raising the level of agricultural intensification and degree of organisation through institutional innovation, supporting the G20 Meeting of Agricultural Chief Scientists (MACS) to advance the establishment of a global agricultural research and cooperation platform, and beefing up knowledge and information-sharing.

On 'internet plus' modern agriculture, the meeting recognised the role of information and communication technologies (ICT) in facilitating the transformation and upgrade of agriculture, and the role of internet plus modern agriculture in the value adding, distribution and sale of agricultural products. It also entrusted the FAO to study the establishment of an agricultural ICT exchange and cooperation mechanism.

Coordinated development

On smallholder development and poverty relief, the meeting appreciated the significance of smallholders in agricultural development and food security. The parties committed themselves to improving the degree of smallholder organisation and market competitiveness, and enhancing their position and role in the global value chain. They highlighted the need to promote coordinated urban-rural development, strengthen the equal exchange and balanced distribution of production factors in urban and rural areas, and foster the integrated development of primary, secondary and tertiary industries.

On investment and trade, the meeting supported expanding agricultural investment in developing regions, so as to have a win-win result between investors and host countries. The meeting welcomed the convening of the first G20 Agricultural Entrepreneurs Forum (AE20), supported the private sector to have enhanced dialogue and cooperation, and supported multilateral trading systems to play a vital role in global food security.

The initiation and successful convening of the G20 agriculture ministers meeting during China's presidency has demonstrated China's commitment to agriculture, as well as the significant position and role of this sector in the G20.

With 59 per cent of the world's farmland, the G20 members produce 85 per cent of the world's grains, 81 per cent of its meat and 75 per cent of its dairy products. Their agricultural import and export volume accounts for 78 per cent and 81 per cent of the world's total. They thus play a significant role in global agricultural development.

Boosting economic growth

This successful meeting has been highly recognised by the international community.

First, it has sent a strong political signal. As a major platform for global economic governance, the G20 recognises the role of agriculture as the foundation and guarantee for boosting economic growth and stabilising people's livelihoods. The G20 is determined to keep playing a leading role in global agricultural development and food security, shouldering its responsibility.

Second, it has achieved landmark accomplishments. Participants have agreed on regular meetings of agricultural ministers to enhance the coordination of food and agricultural policies and to tackle major challenges. This helps improve the G20's existing economic governance structure and strongly underpins its switch from an emergency-response mechanism to a long-term governance mechanism.

Third, it has blazed new trails in working methods and elements. Building on the outcome of previous meetings, the 2016 meeting has proceeded with the implementation of the Action Plan on Food Price Volatility, and the reduction of food loss and waste. Participants also actively discussed emerging issues including agricultural ICT and coordinated development between urban and rural areas. We held the ministers meeting, the AE20 and the MACS in parallel to realise synergies among governments, enterprises and research institutes. This is a significant innovation in international governance system for food and agriculture.

Xi'an is the starting point of the ancient Silk Road and a critical juncture of eastern and western cultures. The successful convening of the G20 agriculture ministers meeting there started a new chapter in international agricultural cooperation. China will continue its commitment to food security, deepen agricultural and rural reforms, transform the model of agricultural growth, and adjust the agricultural structure. China will quicken the pace of agricultural modernisation to achieve poverty alleviation in rural areas and increase farmers' incomes, so as to make agriculture stronger, people in rural areas better off and rural China more beautiful. By doing so, we can build a moderately prosperous society in all respects as scheduled. We will work together with other G20 members to fulfill the commitment to agriculture and advance international agricultural exchange and cooperation, so as to contribute to an innovative, invigorated, interconnected and inclusive world economy and achieve the SDGs. **G20**

China Central TV Headquarters, Beijing

BINGDIAN/ISTOCK PHOTO

7.5%

Annual GDP growth in Beijing during the last five years

SPOTLIGHT ON CHINA

Beijing: a model of innovation in China

The historic capital city is ready to innovate on both local and international levels, writes ***Wang Anshun***

Beijing, a cultural city with 3,000 years of history including more than 860 years as the capital of China, is also a modern international metropolis full of innovative vigour. Beijing has been an honoured host of a number of G20 events in 2016. The theme of this G20 summit, "Towards an Innovative, Invigorated, Interconnected and Inclusive World Economy", is closely aligned with our goal of building a world-class metropolis that is harmonious and liveable. Beijing endeavours to live up to its strategic positioning as the country's centre of politics, culture, international exchanges, and science and technology innovation. Beijing strives to be more attractive by fostering development and improving people's lives, focusing on innovation.

Ranking first nationwide

We stimulate the vigour of the economy through innovation. Beijing's research and development (R&D) input accounted for 5.95 per cent of its gross domestic product (GDP) in 2015, ranking first nationwide. We top the country in progress on science and technology, and our capacity for innovation has constantly increased. Science and technology system reforms will help tap new potential for innovation, while cooperation with world-renowned universities and research institutions will raise the quality of our innovation. Enterprises are encouraged to make cross-border mergers and acquisitions and to set up overseas R&D centres or incubators, so as to make a better allocation of global resources and reach a more favourable position in innovation. Our innovation-driven development strategy will boost the productive service sector, modern manufacturing and new strategic industries, which in return will facilitate Beijing's economic structure, featuring high-grade, precision and advanced industries.

We make our city more eco-friendly and liveable through innovation. Beijing has in recent years made great progress in economic and social development. Over the past five years, Beijing secured 7.5 per cent GDP annual growth, while cumulatively reducing energy consumption, water consumption and carbon emissions per 10,000 yuan of GDP by 25 per cent, 24.5 per cent and 30 per cent respectively. Despite its rapid growth, Beijing faces challenges posed by air pollution, traffic congestion and other 'mega-city diseases'. Therefore, we will focus our efforts on building a clean energy system that prioritises electric power, natural gas and new energies such as solar, geothermal and wind power. We will put forth initiatives on green manufacturing, ultra-low-energy building technologies and prefabricated construction, so the city will become greener and more eco-friendly with lower carbon emissions. We will better manage traffic and alleviate traffic congestion by improving the rail-transit–based system and turn Beijing into a city of public transport. We will push forward the development of a 'sponge city', which means that by 2020, 70 per cent of rainfall in more than 20 per cent of the city's built-up areas will be drained and utilised on the spot.

Wang Anshun

Mayor of Beijing, People's Republic of China

Willing to exchange and cooperate

We improve public services through innovation. During the past five years, Beijing set up its urban-rural unified employment and pension system, and made clear progress in equal access to basic public services such as education, healthcare and culture. We will spread innovation in public services. In education, we will build more digital schools and classrooms, to maximise sharing quality education resources. In healthcare, pharmaceutical R&D and telemedicine will give patients a better experience. With regard to culture, we will explore new ways of providing cultural services to benefit as many as possible. And in social governance, we will adopt 'refined management' for 'refined services'.

Beijing is willing to exchange and cooperate with local governments around the world. I hope that the G20 summit pays constant attention to issues of city development, so the world's major countries can work together to take on the challenges facing cities, and help cities raise the level of development that is innovative, green and sustainable. **G20**

Yang Xiong
Mayor of Shanghai, People's Republic of China

SPOTLIGHT ON CHINA

The sustainable development of Shanghai

Applying G20 principles and results can help Shanghai's contribution to growth and governance, writes ***Yang Xiong***

Shanghai has hosted, since the beginning of this year, a G20 finance ministers and central bank governors meeting, the G20 trade ministers meeting, the Youth 20 (Y20) Summit, and the second G20 Employment Working Group meeting. Guided and supported by the central authorities, we planned meticulously and spared no efforts in the preparations to ensure the above G20 meetings were convened successfully. In the organising process, it has become clear to us that the G20 meeting mechanism and results will have positive effects on the development of the city of Shanghai.

An important initiative

First, implementing the principle of sustainable development. One of the key items on the agenda of this year's G20 summit is to formulate collective action plans to implement the United Nations 2030 Agenda for Sustainable Development. It is an important initiative to promote inclusive and coordinated development globally and is perfectly aligned with the principles and targets of Shanghai's development. Shanghai aims, by 2020, to become an international economic, financial, trade and shipping centre and to put in place the basic framework of a centre of innovation in science and technology (IST Center Initiative) with global influence. We are committed to developing an international metropolis that is brimming with the energy of innovation and that is green and liveable with a sustainable, inclusive and sharing economy. We have set our sights on becoming a truly global city.

Second, advancing structural reforms. Implementing structural reforms is the inevitable path that countries take to counter the downward pressures weighing on the global economy. It is also an important part of the G20 summit agenda. Shanghai is currently at a critical point of pushing for innovation-driven development and economic transformation and upgrading. We are therefore focusing on promoting supply-side structural reforms and losing no time in developing new growth momentum. In particular, we must prioritise the transformation of government functions, whereby we will streamline government procedures and delegate powers, balance regulation with liberalisation initiatives, and constantly improve government services, with an aim to cutting institutional transaction costs, unleashing the vigour and creativity of the market, and securing stable growth.

Third, promoting trade facilitation measures. G20 meetings advocate trade facilitation and the development of an inclusive multilateral trade cooperation mechanism. Since 2013, focusing on its free trade zone initiative, Shanghai has implemented a series of trade facilitation measures with significant impacts, including negative list management, international trade 'single window' management and categorised status-based cargo supervision. We will continue to benchmark against international best practices and develop a system consistent with the world's investment and trade norms, creating an internationalised business climate featuring convenience and the rule of law.

Global value chains

Fourth, seeking new space for international cooperation. G20 meetings advocate for solidarity in the spirit of partnership and seeking win-win cooperation in our endeavour to break new ground in international economic cooperation. This matches China's One Belt, One Road initiative perfectly and creates more opportunities for Shanghai to develop a more open economy.

We will follow the national strategy and integrate global value chains. Playing to Shanghai's strength as an international metropolis in pooling and distributing resources, we will allocate high-quality assets globally by encouraging businesses to invest overseas and take part in globalised supply chains and international cooperation in equipment and plant manufacturing. Shanghai will play an important role in international economic cooperation.

In upholding and implementing the national strategy, Shanghai will further the reform measures, open wider to the outside world, promote sustainable and sound development of the city, and make its due contribution to global growth and governance. **G20**

Baku: your logistics hub in Eurasia

The name has taken many forms – Atropates, Aturpatakan, Adharbaygan, Azarbaydjan and, nowadays, Azerbaijan. But no matter what the name, the location has attracted great conquerors, merchants and travellers of the world since the earliest of times.

At the heart of the Ancient Silk Road, the territory of the present day Azerbaijan has hosted a number of important caravanserais and big regional trading centres. Its ancient cities, Baku, Barda, Shamakhi and Ganja, produced natural dyes, animal (fish) glue, jewellery, and oil and have rung to the cries of merchants selling silk, paper, porcelain and grain from distant China, leather, furs and wax from Russia, Florence and Genoa. The Azerbaijani cities and caravanserais have habitually acted as commercial nodes and major 'hub and spoke' centres along the East-West and the North-South corridors.

Transcontinental services

Today, with the revival of the New Silk Road and China's 'One Belt, One Road' strategy linking China and Europe via land, the Central Eurasia is at the verge of giving birth to the megacities and land-based hubs of the 21st century.

Located at the strategic crossroads of Europe and Asia and nearby the sizeable markets like China, Turkey, Iran and Russia, Azerbaijan and its new Baku International Sea Trade Port (aka Port of Baku) is poised to become the biggest trade and logistics hub of Eurasia. The upcoming completion of the Baku-Tbilisi-Kars railway project that will link railways of Azerbaijan, Georgia and Turkey with the European Union will offer new opportunities for traders in China and the Far East to transport their cargo via a shorter and faster land-based route.

Already on 3 August 2015, the first block train carrying 82 twenty-foot containers from Northwest China arrived in the new Port of Baku. It covered more than 4,000 kilometers in just six days, passing via Kazakhstan before boarding a Caspian ferry ship to Baku. An alterative ocean route would have taken 30-35 days.

Leading in introduction of new cutting-edge and green technologies such as self-driving buses, the Port of Baku plays a critical role in the improved connectivity between China and Europe. In 2007, anticipating the need for expansion, the government of Azerbaijan decided to move the Port from its current home in the busy downtown to a new location in Alat, a township of Baku 70 km south of the city centre. The new state-of-the-art Port of Baku in Alat is being developed over 400 hectares (ha) in three phases.

The government-funded first phase includes a rail ferry terminal, inaugurated in September 2014, a seven-berth general cargo quay, two Ro-Ro quays and a service berth. Two further phases, which are likely to be developed under a public-private partnership (PPP) and build-operate-transfer (BOT) schemes, will raise the Port's capacity to 25 million tonnes of general cargo and up to 1 million TEUs per year.

Introducing the Free Trade Zone

In addition, Azerbaijan's President Ilham Aliyev has recently announced the development of Jebel Ali-style Free Trade Zone (FTZ) in and around the new Port of Baku. The 2,000 ha FTZ envisages tailored solutions for transport and logistics industry, the pharmaceutical cluster, common-use oil supply base facilities, manufacturing, packaging, labelling and consolidation areas.

The new Port and FTZ is positioned as a hub where international companies can use locally produced and imported materials to add value before shipping them on to destinations in Europe, Russia, Turkey, Iran and Central Asia. This is a part of a larger strategy of Azerbaijan's president, Ilham Aliyev, to strengthen the country's non-oil economy and diversify it away from hydrocarbons.

The new state-of-the-art Port of Baku in Alat plays a pivotal role in the government plans for port oil in Azerbaijan

Baku International Sea Trade Port CJSC
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ZHUDIFENG/ISTOCK IMAGES

SPOTLIGHT ON CHINA

Hangzhou: embracing the world with a renewed vision

The G20 summit's host city is making big strides towards becoming a world-famous city, writes ***Zhang Hongming***

The forthcoming G20 Hangzhou Summit has made the city the focus of the world. It is both an honour and an opportunity for us to receive friends from home and abroad. President Xi Jinping's announcement of Hangzhou as the host city is echoed by the people here, who have put all their effort into preparing for a successful summit. They are envisioning a better city for a better life and future.

Paradise on Earth with unique charm

Hangzhou is the Chinese answer to what Paradise on Earth is all about. As a world-famous tourist destination, Hangzhou owns a picturesque landscape, 65 per cent of which is forest where misty mountains and green hills come alive reflected in clear water and murmuring streams. Sunny or rainy, the West Lake is just like a postcard; the Qiantang River Tidal Bore is a spectacular natural wonder; looking at the thousand islets scattered about, one finds peace of mind in the midst of the vast expanse of sky and water at Qiandao Lake; the ranges of Tianmu Mountain amaze the most experienced mountaineers. Hangzhou is a famous cultural city whose rich history is alive in a spectrum of cultural attractions – say, Liangzhu Culture, a living monument to the 5,000-year-long Chinese civilization. Its cultural splendour is most visible in two UNESCO Heritage Sites – the West Lake Cultural Landscape of Hangzhou and the Grand Canal. It is also touchable in

Zhang Hongming

Mayor of Hangzhou, People's Republic of China

> *Hangzhou is not only a city renowned for history and culture, but it is also a leader in innovation. I trust that the 2016 summit will offer a unique experience of history meeting modernity.*
> ***- Xi Jinping, President, People's Republic of China***

its various national museums – the China National Silk Museum, the China National Tea Museum, the Museum of Traditional Chinese Medicine (Huqingyutang), the China National Museum of Seal Engraving Art, the Southern Song Dynasty Guan Kiln Museum – the list goes on. Shortlisted by the *New York Times* in 2016 as one of the "52 Places to Go", Hangzhou is a popular destination for more than three million international visitors every year. To ensure visitors have easy access to the unique charm of Hangzhou, more than 4,000 volunteers together with 96,020 for the newly launched multi-language hotline will provide 14 language services in English, Russian, Japanese, French, German and Korean during the summit month.

Innovation for distinctive excellence

The theme of the G20 Hangzhou summit – "Towards an Innovative, Invigorated, Interconnected and Inclusive World Economy" – says it all about Hangzhou as a leader of vigorous innovation. The city is virtually speeding along the rail of robust development driven by innovation. More specifically, Hangzhou was China's first cross-boarder e-commerce pilot zone in 2015. It is also a member of the UNESCO Creative Cities Network (UCCN). It is at the forefront of next-generation information technology, especially in the areas of e-commerce, digital security, cloud computing and big data. Hangzhou has given birth to legions of world-famous Chinese companies. Among others, they are Alibaba, Wanxiang Group, Geely Automobile and Hikvision. Hangzhou is also home to multinational companies: 107 Fortune 500 companies operate here.

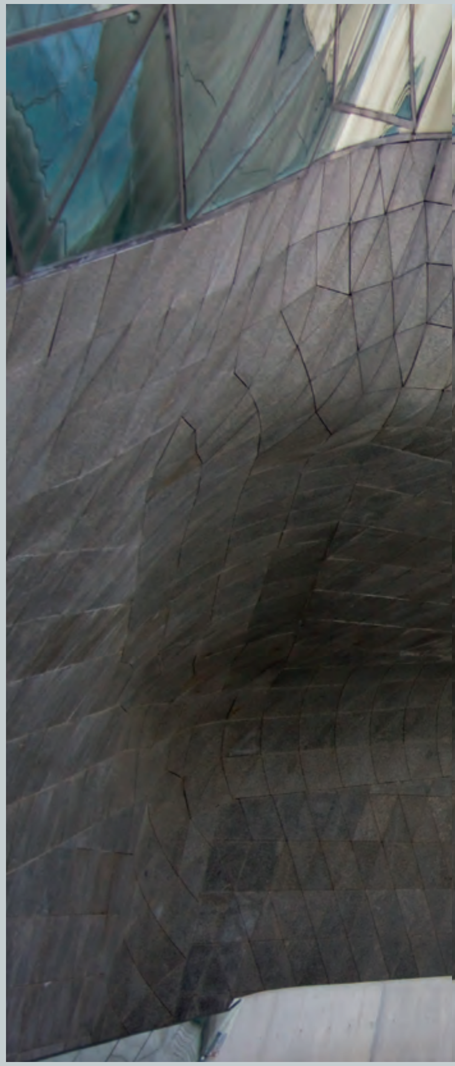
Recognised by the World Bank as having China's best investment environment, Hangzhou invested about three per cent of its gross domestic product in research and development in 2015. On average, 172 new companies and 22 patents are born on a daily basis. Legions of passionate makers from all over the world follow their dreams here, fuelling the city's innovative drive.

The world's launch pad for a new future

The logo of the G20 Hangzhou Summit is a bridge outlined by 20 curves, a metaphor that the G20 summit is a bridge for global economic growth and international cooperation; it is a bridge of win-win partnerships leading us all to the future. Hangzhou as the host city will witness and serve this greatest event in global economic governance when world leaders gather here to seek answers to global challenges. This role also makes a broad bridge that makes it faster for Hangzhou to go global. From this global perspective, we have set in motion a long-term action plan, determined to build Hangzhou into a world metropolis, which suggests by 2050 Hangzhou is to become the most influential 'internet plus' hub of innovation and start-ups, a top destination for meetings, incentive travel, conventions and exhibitions, a leading capital of leisure and tourism, and a mecca for international exchange in oriental culture. It is fair to say that Hangzhou is making big strides towards becoming a world-famous city that beckons with its incomparable charm and excellence.

To quote Confucius, "is it not a delight to have friends coming from afar?" We look forward to meeting you beside the lovely West Lake. Either for business or pleasure, you are welcome to visit Hangzhou, to visit us! **G20**

SPOTLIGHT ON CHINA



Guangzhou: a network hub

The city is entering a new journey of openness and development, writes ***Wen Guohui***

Wen Guohui

Mayor of Guangzhou, People's Republic of China

I would like to congratulate Hangzhou on hosting the 2016 G20 summit. Just like Hangzhou, Guangzhou is both a historical and cultural city and a vibrant and innovative city. It has ranked third, in terms of the economy, among the cities in mainland China for 27 consecutive years. At the core of the Pearl River Delta city cluster, the city acts as a growth engine. Now, at the start of our new journey, Guangzhou is building itself into a network-hub city.

Building a historical and cultural city

On a food security system, the meeting agreed that it is Guangzhou enjoys a history of 2,230 years. It is the centre of Lingnan culture, the birthplace of revolution in China's modern history, a pioneer in China's reform and opening-up policies, and the origin of the Ancient Maritime Silk Road. Guangzhou is the only port that has been thriving and busy for more than 2,000 years in global maritime history. It is an important spot along the 21st-century Maritime Silk Road.

Guangzhou's airport, Baiyun International, is one of the three principal airports in China. It has opened 136 international routes to Asia, Europe, Africa, America and Oceania. Guangzhou's port has opened 150 container liner routes and conducts trade with more than 100 countries and regions around the world. In addition, Guangzhou is one of China's four major railway hubs, one of China's top three communication hubs, an internet exchange point and one of the China's three connection points to the global internet.

Building a centre of industry clusters

Guangzhou has the widest range of manufacturing and service industries and the highest concentration of science and technology labour pool and resources in the country. Each year, foreign trade goods worth $13 million and domestic trade of around RMB 80 billion are distributed in Guangzhou. Today, 320 companies have their regional headquarters in Guangzhou and 283 Fortune Global 500 companies operate here. The city also has 1,919 high- and new-tech companies.

Guangzhou has the highest level of market openness and the easiest environment for investment and trade in China. It has topped the Forbes list of the best Chinese mainland cities for business five times over the past six years. The city is a model city

KEREN SU/GETTY IMAGES

The Opera House in New City, Guangzhou

for independent innovation, and a pilot city for trade circulation system reform, cross-border e-commerce and trade service innovation. It has trade ties with more than 220 countries and regions.

Building an easy and commercial city

Guangzhou has mountains, rivers, lakes, sea, urban areas and farmlands. In 2015, the number of days with standard air quality reached 312 days, the greening rate of the built-up areas was 41.5 per cent and the forest coverage rate was 42 per cent. Moreover, the city is reputed to be a pearl in the Tropic of Cancer. A number of health indicators, such as average life expectancy, are almost at the same level as developed countries. Guangzhou has claimed first place among Chinese cities according to livelihood development indices for two years in a row.

Our work at present is guided by the State Council's positioning and requirement of Guangzhou as "a national historical and cultural city, a major central city of China, an international commercial and trade centre and an integrated transport hub". We are accelerating the development of Guangzhou as an international shipping hub, an international aviation hub, and an international science and technology innovation hub. We will build a new and modern industry system providing high-end, quality and high and new technologies in a high-quality and open economic landscape. It is also our goal to build a market-oriented, law-based and international business environment and a clean, tidy, peaceful and orderly urban environment. We aim to turn Guangzhou into a prosperous, liveable, eco-friendly, vibrant, unique and modern city. With the vision and consensus of the G20 Hangzhou Summit in mind, we will make greater efforts to promote urban innovation. We sincerely invite friends from home and abroad to visit our city and to create a blueprint for seeking common development with us. **G20**

> *Guangzhou has claimed first place among Chinese cities according to livelihood development indices*

REPUBLIC OF TURKEY PRIME MINISTRY
INVESTMENT SUPPORT AND PROMOTION AGENCY

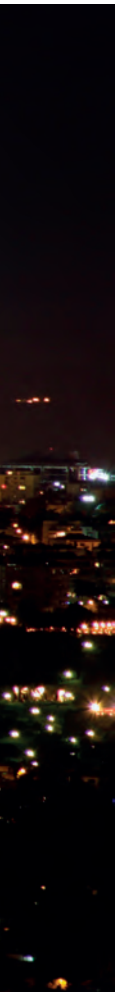
Turkey, as a gateway between Europe, the Middle East, and Central Asia, offers unique opportunities for foreign investors

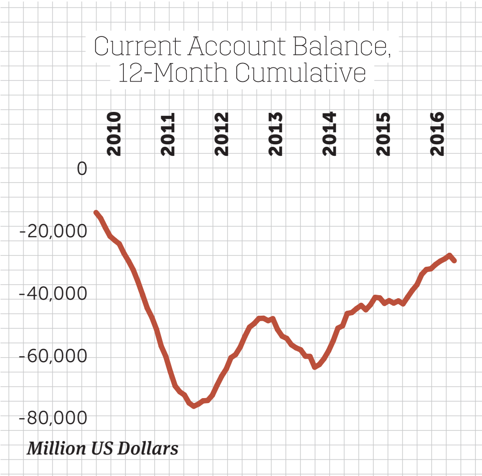
Turkey welcomes investors to its stable economy

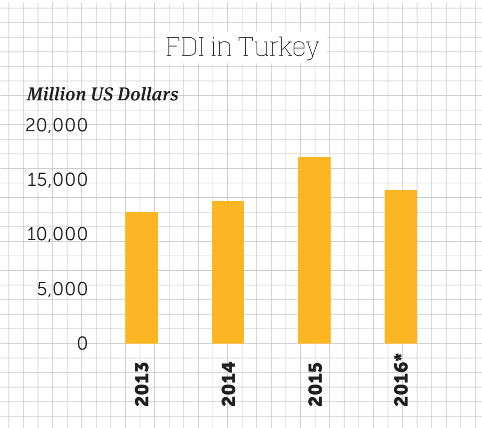
Despite the weak global growth performance due to uncertainties in global economic conditions, Turkey has been able to retain sound macroeconomic fundamentals thanks to reforms and supportive fiscal and monetary policies during the last decade. Key targets such as a higher growth rate, strong domestic demand, a more moderate current account deficit, lower interest rates, and a higher amount of foreign direct investments (FDI) have been achieved.

Strong growth rate

Driven by a robust domestic market, lucrative export
Driven by a robust domestic market, lucrative export
opportunities and entrepreneurial spirit of Turkish private sector, the Turkish economy has been growing dynamically over the past 14 years. The economy has posted an annual average real GDP growth rate of 4.7 per cent, while GDP per capita has more than tripled. Turkey stands out as one of the fastest growing economies in the world. Turkey's GDP







*annualised data, July 2015-June 2016
Source: CBRT

growth rate of 4.8 per cent in the first quarter of 2016 has outperformed many emerging and developed countries, leading Turkey to become the 2nd fastest growing OECD country after Malta and 4th in G20 after India, China, and Indonesia. The Medium Term Program (MTP) announced by the Ministry of Development in January 2016 anticipates growth rates of 4.5 per cent for 2016 and 5.0 per cent for 2017.

Strong domestic demand

Private consumption is the main source of growth in Turkey, accounting for a 70 per cent share in Turkey's GDP as of the first quarter of 2016. When compared to its peers in the EU, Turkey is well ahead in private consumption. Concerns that the recent failed coup attempt will affect the rising momentum in household consumption are without merit. For instance, household consumption did not lose momentum during the elections in the past two years; rather, it increased by 4.5 per cent in 2015 and 6.9 per cent in the first quarter of 2016. There are various factors in play that will stimulate

Turkey outperforms both developed and emerging countries with regard to growth rates

domestic demand and accelerate growth in Turkey over the coming years. Some of those factors include the implementation of new structural reforms, the effect of low oil prices on inflation, the expectation of a delay in FED rate hikes, the low probability of elections in Turkey until 2019, and the rising consumption of Syrian refugees.

Current account deficit caught 2010 levels

A visible narrowing in the current account deficit and sound improvement in external balances have been observed so far in 2016. Turkey's year-on-year current account deficit was USD 29.4 billion in June. The external balance benefitted from low oil prices and high export volumes to the EU.

FDI boosted since 2003

Thanks to various structural reforms that have been implemented over more than a decade of successive governments, the amount of FDI, which totaled around USD 15 billion until 2003, increased to more than USD 168 billion between 2003 and 2016. Moreover, during this period, the number of foreign-owned companies rose from 5,600 to more than 50,000.

Monetary policy to support Turkish economy

A series of policy measures, such as easing liquidity conditions, were taken by the Central Bank of the Republic of Turkey to encourage financial markets and prevent the banking system from exposure to the negative effects of the coup attempt. The Central Bank cut the overnight lending rate, the top of the interest rate corridor, by 200 bps in 2016 to 8.75 per cent and kept the one-week repo rate at 7.5 per cent and the overnight borrowing rate at 7.25 per cent.

Confident banking system

The banking system in Turkey recovered quickly in the aftermath of the 2001 and 2008 crises and has proven resilient during temporary shocks in the past. Turkish banks have higher capital adequacy (CAR) and lower non-performing loans (NPL) ratios when compared to their peers. As of June 2016, the sector had a CAR of 15.8 per cent (2015: 15.3 per cent) where the legal minimum limit is eight per cent and an NPL ratio of 3.4 per cent. The year-on-year return on average equity (ROE) ratio of the sector as of June 2016 was realised as 11.9 per cent.

KEY TAKEAWAYS

President Xi Jinping can showcase his vision for global governance

The G20 can expand its influence, decision-making and implementation

10 SIGNS OF PROGRESS

1 *Innovative growth*
Action plans for the new industrial revolution and the digital economy

2 *The United Nations 2030 Agenda for Sustainable Development*
Prioritising development and inviting developing country leaders to the summit

3 *Structural reform*
Guiding principles and an index system to measure results

4 *Trade*
Strategies for facilitation, financing and policy coordination

5 *Investment*
Guiding principles for multilateral global investment

6 *The International Monetary Fund*
Finishing its quota review and building the global financial security network

7 *Anti-corruption*
Creating a research centre and action plan for fugitive repatriation and asset recovery

8 *Industrialising Africa and the least-developed countries*
Investment to help meet the 2030 Agenda's Sustainable Development Goals

9 *Entrepreneurship*
An action plan, policy proposals and exchange of experiences

10 *Climate change*
Early entry into force of the 2015 Paris Agreement and more international cooperation

Prospects for Hangzhou

Chinese President Xi Jinping has set the stage for the G20 summit in Hangzhou to be of both historical and political importance, writes ***John Kirton***

The G20's 11th summit, in Hangzhou, China, is the first time the world's second-ranked economic power will be the summit's host. It is also the first time the summit will have been hosted consecutively by two emerging countries, following Turkey in 2015. It is the first summit hosted by a country not a member of the Organisation for Economic Co-operation and Development. It is the second time the host is a member of the BRICS group of Brazil, Russia, India, China and South Africa. The choice of China for 2016 shows it is the leading power in the rapidly rising Asian region.

Hosting will enable President Xi Jinping to showcase his vision for global governance. He brings formidable assets to this task. They include great domestic political solidarity, substantial international and G20 summit experience, and a foreign policy that treats the G20 as a priority.

Xi faces several challenges. China's rapidly and reliably rising relative capabilities previously led it to contribute, through the G20, to a crisis-afflicted world. In 2016, China's compounding relative vulnerabilities now require its more ambitious leadership, in the interests of both China and an intensely interconnected world.

The challenges start with several successive global shocks. These include terrorist attacks in France and Germany, an attempted coup in Turkey, the ongoing war against so-called Islamic State in Syria and Iraq, the surging flows of migrants into Europe and Britain's surprising decision to leave the European Union. Financial fragility afflicts an indebted Greece, Italian banks and several oil-exporting states. Global economic growth is low. This concerns China as it makes its challenging transition to a new growth model, in part through financial market and exchange rate opening with stability in a successful way.

G20 leadership

With the major multilateral organisations struggling with these challenges, the world looks for leadership from the G20, backed by the new Chinese-led institutions of the New Development Bank, the Asian Infrastructure Investment Bank and the Silk Road Fund. It also looks to China, whose recent fiscal stimulus, stable exchange rate and more market-oriented economy makes it an important part of global growth.

Xi has responded with a vision for his summit that is bold and broad. When China assumed the G20 chair in December 2015, he called for the G20 to seize the opportunities offered by technological breakthroughs and the new industrial revolution currently underway. His goals were to build an "innovative, invigorated, interconnected and inclusive global economy", to improve G20 decision-making and implementation and to expand its influence.

Innovation is the summit's first and potentially most transformative priority

Leaders need to adopt President Xi's vision of an ecological civilisation

John Kirton

Co-director
G20 Research Group

John Kirton is Co-director of the G20 Research Group, Director of the G7 Research Group, and Co-director of the BRICS Research Group and the Global Health Diplomacy Program, all based at Trinity College and the Munk School of Global Affairs at the University of Toronto, where he is a professor of political science. He is also a Non-Resident Senior Fellow at the Chongyang Institute for Financial Studies at Renmin University of China and author of China's G20 Leadership.

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"China's G20 leadership promises to make Hangzhou a summit of substantial success"

Xi's preface in the December document called on the G20 to play a key role as a leader in international economic cooperation. Innovation – the first, most novel and potentially transformative priority – focused on new growth engines, innovation-driven development and comprehensive innovation in science and technology, development concepts, institutions and mechanisms, and business models. Invigorating the global economy, the second priority, contained, as usual, structural reforms, international economic cooperation, global economic governance and endogenous sources of high-quality growth. Interconnectivity, the third priority, highlighted China's traditional link between growth and development, openness and cooperation, and connectivity across all dimensions. Inclusiveness, the fourth priority, included development and the need to close the gap, share benefits, and reduce inequalities.

China's priorities

In addition, Hangzhou was due to address those items identified by the leaders at their previous summit. These were, above all, future summits, sustainable development and tax. Then came macroeconomic policy, labour, ageing and the mobility of the labour force, investment, corruption, energy, infrastructure, terrorist finance, international financial architecture and health. This comprehensive list strongly suggested that China would mount a full-strength summit. Anti-corruption reflected Xi's domestic priority. Terrorist finance proved to be a particularly prescient item. The newer item of ageing and workforce mobility responded to the demographic needs of China, Germany, Japan and Russia and the influx into Europe of migrants. Health contained acute outbreak events such as Ebola and Zika, general global health risks, antimicrobial resistance, weak health systems, and occupational health and safety.

Considerable progress has been made in 10 key areas (see box). The level of China's G20 leadership promises to make Hangzhou a summit of substantial success. However, to realise Xi's bold ambitions leaders must do more to address the immediate needs on fiscal stimulus, climate, energy, health and food security, gender equality, migration and terrorism. Above all, they need to take his vision of an ecological civilisation for China as their blueprint for the world. Then they can make Hangzhou the most successful G20 summit ever. **G20**

KEY TAKEAWAYS

- China's economy influences the entire global industrial chain
- The G20 is under pressure to address global risks and explore growth

Wang Wen

Executive Dean
Chongyang Institute for Financial Studies

Wang Wen is the Executive Dean of the Chongyang Institute for Financial Studies, which was founded in 2013 at the Renmin University of China. He is also Standing Director of World Socialism Research at the Chinese Academy of Social Sciences and a Visiting Professor at the Liberal Arts School at the Capital University of Economics and Business in Beijing.

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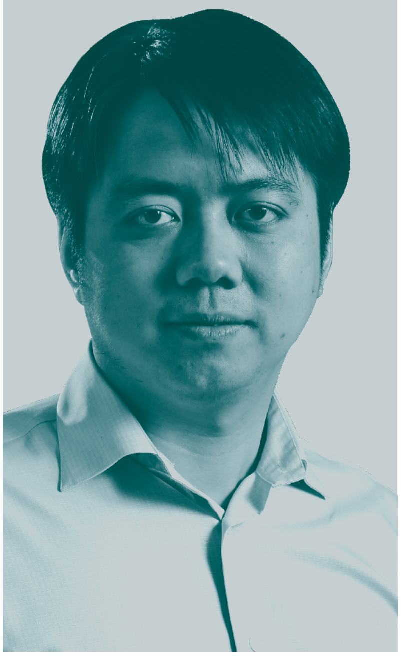

Introducing China to the world

*The combination of China's economic growth and the G20's global inclusiveness can inspire a more open world economy, write **Wang Wen and Jia Jinjing***

After 10 summits, the G20 has become a "commitment system" for continuously promoting global economic governance. China, holding the presidency of the 2016 G20 summit, is expected to integrate continuity and innovation, implement the outcomes of previous summits, and propose new initiatives for cooperation. In particular, it is expected to formulate ideas for giving new impetus for economic growth through reform and innovation for a sluggish world economy.

China's status as the locomotive of global economic growth requires it to advocate the innovative, invigorated, interconnected and inclusive development of the global economy. From 2008 to 2014, China contributed more than 30 per cent of the world's economic increase. Its contribution from 2012 to 2014 was a staggering 44 per cent. Even with the current growth rate of about seven per cent, its annual growth reaches $800 billion, exceeding that before the financial crisis.

China's economy influences the entire global industrial chain. Its hosting of the 2016 G20 summit will have far-reaching significance for medium- and long-run global growth.

At the Antalya summit in November 2015, Chinese President Xi Jinping declared the theme for the 2016 Summit to be "jointly striving for an innovative, invigorated, interconnected and inclusive world economy." Four priorities promote this goal. First, growth will be spurred by innovation and reform and by seizing new opportunities. Second, global economic and financial governance will enhance the representativeness of emerging markets and developing countries and the ability of the global economy to counter risks. Third, efforts will be made to build an open world economy and promote international trade and investment. Fourth, inclusive and interconnected development will be promoted, the United Nations 2030 Agenda implemented and poverty eradicated.

Revolution and transformation

On innovative growth, a new normal exists, with old and new issues intertwined in increasingly complicated ways. The financial turmoil of 2015 indicated that addressing systematic problems of global concern remains a tough task. A new round of technological revolution and industrial transformation is beginning. Emerging markets and developing countries are accelerating their industrialisation.

The G20 is under pressure to address global risks and explore new engines for growth. The international community should establish a global innovation system, step up global governance and transform global development to facilitate production on a global scale. It should also strengthen international cooperation on production capacity and forge an inclusive

The G20 can create new momentum for economic development

China can share its approach with the world at the G20 Hangzhou Summit

global industrial chain.

On global economic and financial governance, the deep-seated influence of the financial crisis continues, even seven years later. With sluggish global growth, quantitative easing in monetary policy can only bring about a false economic boom. The future trend of global governance is developed and developing countries participating equally in decision-making within the G20.

The G20 will continue to provide political support, promote global economic governance reform, ensure greater fairness and equitability, and increase the voice of emerging markets and developing countries. Boosted by the G20, existing international financial institutions are being reformed, and resources and crisis-response capabilities are strengthening. The innovative Asian Infrastructure Investment Bank, established at China's initiative, supplements the existing international financial system. It emphasises win-win cooperation, openness, inclusiveness and constructiveness. It will inspire the G20.

International cooperation

An open world economy is key for upgraded global governance. More openness and international cooperation in production capacity can match the supply and demand of countries at different stages of development. Developing countries' needs for urbanisation and industrialisation are currently restricted by technology, equipment and infrastructure, and in developed countries, upgrading equipment and infrastructure is complicated by inadequate funds and high costs.

China can fully use its advantages in cost-effective mid-range equipment, engineering construction and large foreign exchange reserves in helping balance production capacity. Tripartite cooperation will enable all parties to use their respective advantages, lower construction costs, help break bottlenecks, enhance industrial upgrading and promote the integration of the global industrial chain.

As the G20 consists of both developed and developing countries, it can create new momentum for economic development. China's Belt and Road Initiative, unlike previous free trade zones, aims at matching the development strategies of voluntarily participating countries for inclusive and sustainable development through mutual consultation, construction and sharing. Globalisation intimately and inextricably interconnects the interests of all countries. Global economic stability and development are only possible by opposing trade protectionism, strengthening multilateral trading systems, enabling the development of different countries, ensuring that regional free trade arrangements support the multilateral system, strengthening international cooperation in production and forming new global value chains.

Connected development

Inclusive and interconnected development is needed in this era of global value chains. Each country's development should be connected to global economic growth, for an optimised allocation of global economic resources and the integration and mutual reinforcement of the economy, society, environment and governance. The current profound economic adjustment after the global financial crisis shows that the original model of economic development cannot solve the problems of economic restructuring and sustainable development. More fair, open, comprehensive and innovative development is both a moral responsibility and the necessary step to economic development.

The 2030 Agenda and the Sustainable Development Goals have established a new framework for global development. All countries are now expected to examine development paths from this new perspective and properly relate sustainable development, equality and justice to economic transformation and growth. They are expected to respond to climate change, environmental protection and other challenges in a coordinated manner. The G20 will incorporate a new partnership in global economic governance, which will contribute to a global community of interests and a community of destiny. Through interconnected macroeconomic policies, the G20 will become a platform for long-term international economic cooperation and development.

Since 2008, the slow economic recovery flows from the exhaustion of the previous technological and industrial revolution. Uneven development remains, and existing economic governance mechanisms are defective. Yet China has maintained a high growth rate, while consolidating the foundation of its real economy. Its long-term sustainable economic growth shows its unique experience in promoting development. In hosting the G20 Hangzhou Summit, China can share its approach with the world to ensure sustainable development. **G20**

Jia Jinjing

Director

Macroeconomic Research Department

Jia Jinjing is the Director of the Macroeconomic Research Department at the Chongyang Institute for Financial Studies at Renmin University of China. Previously, he was responsible for policy analysis and investment practice at the Ministry of Land Resources of China, and at CAS Holdings, among other public and private sector institutions.

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$430BN IMF firewall fund mobilised by the G20 at its 2012 summit

2% Growth above trend targeted by the G20's 2014 Brisbane Action Plan

What is the G20?

The G20 is an informal group of 19 countries and the European Union, with representatives of the International Monetary Fund (IMF) and the World Bank.

WHAT IS THE G20?

The finance ministers and central bank governors of 19 systemically significant countries and the EU began meeting in 1999, at the suggestion of the G7 finance ministers in response to the global financial crisis of 1997–99. Since then, there has been a finance ministerial meeting every year.

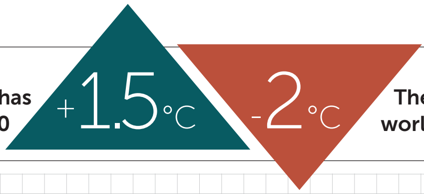
WHY WAS THE G20 FORMED?

The G20 was created "as a new mechanism for informal dialogue in the framework of the Bretton Woods institutional system, to broaden the dialogue on key economic and financial policy issues among systemically significant economies and to promote cooperation to achieve stable and sustainable world growth that benefits all".

WHAT DOES THE G20 DO?

The G20 was created as a deliberative rather than decisional body, but one designed to encourage "the formation of consensus" on "international issues". It focuses on policy and has a mandate to promote international financial stability.

World's temperature has increased since 1880

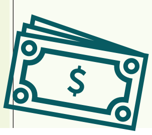


The goal to decrease the world's overall temperature

A BRIEF HISTORY OF THE G20

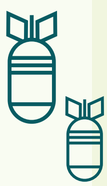
2008
At the first G20 summit, leaders respond to the global financial crisis

2009
Leaders approve a $1.1 trillion package of financial support

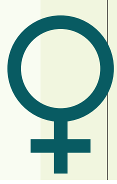


2010
In Seoul, leaders agree on IMF voice and vote reform

2011
Efforts are made to contain the financial crisis erupting in Greece and Italy



2013
Leaders discuss removing chemical weapons from Syria



2014
Leaders aim to reduce the gender gap in labour force participation by 25 per cent by 2025

2015
Leaders focus on terrorism, migration and agree to increase jobs for the youth

The BRICS Research Group

The concept of the "BRICS" refers to the large emerging countries of Brazil, Russia, India, China and South Africa. Today, the annual stand-alone summits of their leaders, which started in 2009, embrace a broad range of high-level issues requiring global governance, such as economics and finance, trade and investment, health, food and agriculture, development, energy, environment, climate change, social progress, peace, security and international institutional reform.

Led by Marina Larionova of Russia's Center for International Institutions Research at the Russian Presidential Academy of National Economy and Public Administration and John Kirton of Canada's University of Toronto, the BRICS Research Group aims to serve as a leading independent source of information and analysis on the BRICS institutions, issues and its members' underlying interactions.

Together with international partners from the BRICS countries, the BRICS Research Group focuses on the work of the BRICS and diplomacy within the group as a plurilateral international institution operating at the summit level. Particular attention is paid to the relationship and reciprocal influence of the BRICS with other leading global governance institutions such as the G7, the G20 and those of the United Nations galaxy.

Documentation from the BRICS and relevant research and reports are published on the BRICS Information Centre website at www.brics.utoronto.ca. The BRICS Research Group also conducts analyses of the compliance of the BRICS members with their summit commitments. It also publishes relevant scholarly works and books.

Selected Publications

BRICS and Global Governance
edited by Marina Larionova and John Kirton (Routledge, forthcoming)

BRICS: A Very Short Introduction
Andrew F. Cooper (Oxford University Press, 2016)

BRICS: The 2012 New Delhi Summit
edited by Marina Larionova and John Kirton, with Yoginder K. Alagh (Newsdesk Media, 2012)
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Innovative technologies

"The power of AI and robotics needs to be leveraged for the benefit of society"

Martin Ford

Author of The New York Times bestselling Rise of the Robots: Technology and the Threat of a Jobless Future

KEY TAKEAWAYS

- The arrival of new technologies can be rapid or slow
- Disruptive technologies can blend with or replace incumbent offerings

Disruptive innovation: opportunities and threats

We are in our fourth industrial revolution, which is being driven by information technology and the internet, writes ***Henry C Lucas***

Research robot Baxter at the International Robot Exhibition in Tokyo

A technology becomes disruptive when it offers a new product or a service that leads to individuals abandoning incumbents' offerings and embracing the innovation. The movement from the old to the new may be rapid, for example the expansion of Uber and Airbnb, or it may take longer, as has been the case with higher education. We are now in a fourth industrial revolution, which focuses on technology in general and most often involves information technology and the internet. Evidence of this upheaval in the traditional way of business comes from firms such as General Electric (GE), which is investing $1 billion to become a 'software company'. GE is adding sensors and data analysis services to all its products so customers can monitor the performance of their equipment.

Higher education is a case where opportunities and threats are well defined. Opportunities come in the form of blended and online classes and massive open online courses (MOOCs). Blending a class creates a more active learning environment than the lecture because a blended class presents class materials on the internet using a learning management system. Classes are devoted to discussions and team exercises, involving students actively in their education. Online classes with interaction with a faculty member via a video conference system also encourage active learning.

MOOCs provide instructional materials from hundreds of instructors on a wide variety of topics. All of these technology-enabled approaches to teaching and learning provide new opportunities for colleges and for students. They also present threats to schools that do not have the skills, talent and resources to create content for their own use and to make it available to other institutions. A number of US colleges are likely to fail in the next decade, especially smaller private schools with high tuition and limited reputations.

From Baxter to drones

There has been progress in robotics in the past few years, affecting many industries. Baxter, a simple robot, is programmed by walking it through motions rather than by writing a program.

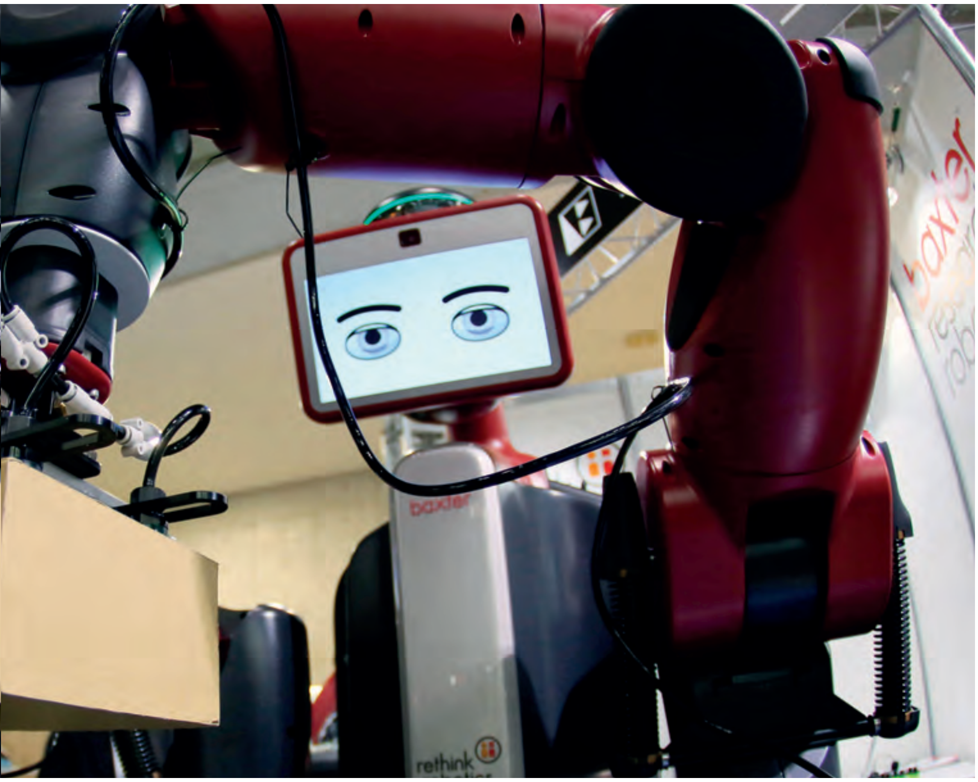
If we consider a drone as a type of robot, it is clear that robotics will expand at a

HOW SHOULD GOVERNMENTS EMBRACE NEW TECHNOLOGY AND DISRUPTION?

- **Encourage and support innovation in all its forms until they become available for profit-making ventures, as the US government did with the internet**
- **Prepare for a massive impact on employment, including job losses and people movement**
- **Invest in education and worker retraining, targeting jobs creation in sectors where workers are scarce**
- **Develop regulatory frameworks to respond quickly to new innovations, such as drones**
- **Encourage the growth of disruptive technologies. Long term, they are key to improving the quality of life**

Robotics is an important component of the new industrial revolution

New technologies will offer automated advice, products and services



HARUYOSHI YAMAGUCHI/AFLO/ALAMY

$1BN

The investment US multinational conglomerate General Electric is making in becoming a software company

staggering pace as new applications are found for aerial technologies.

Autonomous vehicle technology has progressed more rapidly than forecast. Tesla downloaded new code to its vehicles that enables them to drive in a semi-automated mode, which means the driver is still in charge. At some point in the future, most individuals may not own cars and wouldinstead summon an electric, self-driving vehicle through an Uber-like app. The vehicle will operate like a public taxi and dramatically reduce accidents and injuries from motor vehicles. Automobile manufacturers are concerned enough about this scenario to be investing in Uber and.

Financial services have already been revolutionised by technology. High frequency trading is responsible for more than half of the trades on the New York Stock Exchange, although this approach has generated extensive controversy regarding its fairness. Investment firms are offering automated financial advisers that replace an individual who offers advice to a client. Start-ups are trying to disintermediate traditional financial institutions such as banks through crowdfunding and peer-to-peer lending. **G20**

Henry Lucas

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Robert H School of Business University of Maryland

Henry Lucas is the Robert H Smith Professor of Information at the Robert H Smith School of Business at the University of Maryland. His most recent bok is* Technology and the Disruption of HIgher Education. *His research interests include information technology–enabled transformations, disruptive technologies, the impact of information technology on organizations, information technology in organisation design and the value of information technology.

HIVE TECHNOLOGY

Single Identification Technology

The developments in digital technology with the advent of the Internet of Things (IoT), smart machines, artificial intelligence, the trend to embed microprocessors in everyday objects, controlled by a new breed of algorithms, will make technology more and more pervasive. These developments will have dramatic and far-reaching implications for individuals, businesses, governmental leaders and society as a whole, whose citizens are largely ignorant and ill prepared for the expected changes. In the digital realm, the lack of trusted identification has been identified as a root cause of spam, scams and viruses. According to Javelin Strategy & Research identity fraudsters stole $16 billion from 12.7 million US consumers in 2014 and this only accounts for 47 per cent of global losses. People are affected, as there is currently no such thing as a global digital identity for individuals. Let alone an identity that connect the physical, digital and virtual realms; that work with everything and provides privacy for the person it identifies. This leads to people having multiple, disparate accounts, usernames and passwords and identification devices, resulting in their identity being stolen and their privacy being eroded. All these diverse identification and interaction methods just complicate our world and instead of providing a seamless integrated experience further divide interactions into silos.

The root-cause of these problems is the inability to identify and have trust in who or what you are interacting with while understanding the context of all the entities in the transaction chain. Single unified identification of people and objects is one of the key challenges that will have to be dealt with as the world becomes more digitised.

Innovative integration

Integrating people and things securely into the IoT brings into focus two key areas where identity is needed: the need for the identity of users of IoT systems; and the need of a definite identity "identity" for devices or things. Existing technologies are targeted at one or the other of these needs because of their strengths but also because of their limitations. Hive Technology's One ID technology is an innovative approach that has the capabilities that are required for both application areas. For personal identity applications the Hive One ID technology is configurable and can adjust to different application requirements depending on how the environment is configured. The same identity can deal with any identification requirement. The important advanced applications of this technology is the ability to establish ownership and exclusive personal control of owned IoT devices.

Another important differentiator is that the Hive One ID technology can be applied to all possible levels of integration where competing technologies are only available if integrated into highly specialised chips. These capabilities are already available at chip level and can be easily added onto an existing board. Hive One ID can also integrate into multi-chip packages while integration within a single IoT device custom chip will be possible in the future.

Authentication mechanisms

The unique identifiers that are generated by the One ID Technology provide an immutable identity that is required to enable a deep root of trust for all personal internet connections as well as for IoT devices. This enables "truly" random cryptographic key sequences that can be used to implement the hardware based authentication mechanisms needed in new and future technology solutions. The threat landscape is too severe to implement IoT devices and IoT solutions with less-complete defences.

Hive One ID can adjust to different application requirements

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Hive
Single Identification Technology

Also, given that all IoT edge device defenses will be broken during typical product lifetimes, this core identity is essential to enable highly secure remediation of compromised edge devices through over the air updates.

The One ID technology can further be differentiated by its ability to not only transmit identification data but also providing the address where the data need to be updated to. Each ID can be configured to transmit the data to a IP address stored on the single identification regardless of which reader the data is read by or where, enabling global identity. The single identification has a number of pages of data that can be made available under different rule based conditions to different IP addresses.

Trusted data sets

Unique secure single identification of objects and people provides the opportunity to create a trusted data set about the object and person greatly alleviating some of the horizontal integration and data duplication problems currently experienced.

This trusted data set can be maintained by various role players for example national identification data can be maintained by government, while medical data can be maintained by medical service providers and financial data by banks but the person can make this data available when appropriate using the permission and or context based security possible with Hive One ID technology.

One example relates to when a person gets admitted to a medical facility: when the person is present with the single identification at a specific location, the admissions counter in this case, the person will automatically get a message on their mobile phone to authorise that the data required can be made available and choose, if not previously defined, on what basis the data could be used.

In other cases, the data can automatically be made available according to predefined rules purely based on presence. Similarly, payments can be made using the same identification or data can be made available from this trusted source for compliance purposes and more.

Single identification technology without exposing private data provides governments and cities with data that can be used to greatly enhance energy efficiency, public safety, disaster management and more. Similarly, the single identification technology can be manufactured into virtually any product with existing electronics giving the product a unique identification and the ability to communicate with manufacturers across its entire life cycle wherever readers are available.

Impending SMART solutions that touch every aspect of our world clearly require a secure single wireless or ambient identification system that will identify objects and people in both the digital and physical world, thereby integrating all technology interactions into a seamless experience.

KEY TAKEAWAYS

The third wave of the internet will transform industries

Partnerships, perseverance and policy will be critical to success

Steve Case

Chair
Revolution

Steve Case co-founded America Online in 1985. Under his leadership, it became the largest, most valuable internet company, driving the worldwide adoption of a medium that has transformed business and society. Case is Chair of Revolution, which he co-founded in 2005, and Chair of the Case Foundation. He is also author of The New York Times bestselling The Third Wave: An Entrepreneur's Vision of the Future.

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The internet of everything

The third wave of the internet will change our lives more than ever before. ***Steve Case*** *explains why policymakers and entrepreneurs must work together*

Over the past three decades, the internet has morphed from something few knew or cared about to a capability most of us now cannot live without. This transformation started with the first wave: building the infrastructure and onramps to the internet, and educating the public on why people needed it.

America Online, AT&T and Cisco were a few of the first wave companies laying the foundation for people to get online. The second wave consisted of companies such as Google, Facebook and Snapchat building apps and software.

We are on the cusp of a new era – the third wave – where the internet will be integrated into everyone's lives in more seamless and pervasive ways. It will be more than the internet of things. It will be the internet of everything. It will transform big industries such as healthcare, transportation, education, energy, financial services and food, ultimately changing the way we live our lives in big ways.

It will take a new mindset and skills to be successful in this approaching era, not only for entrepreneurs, but also for governments.

In the second wave, entrepreneurs were focused on getting the application and software right so they could drop it in an app store and hope for an overnight success.

In the third wave, people, products and platforms will still be important, but partnerships, perseverance and policy (the three Ps) will be critical to its success.

Governments will stifle innovation if they are slow to react

Entrepreneurs and policymakers must work together to harness potential

One of Google's autonomous vehicles

Governments must rethink how policies address the evolving role of the internet and how they work with the companies that create these new technologies. If governments continue to be slow and reactionary, we risk stifling innovation and slowing entrepreneurial activity.

Benefits and risks

The process of rulemaking relating to crowdfunding illustrates the negative impact of government hindering progress.

The US Congress passed the Jumpstart Our Business Startups (JOBS) Act in April 2011, but the crowdfunding rules for non-accredited investors were only finalised in October 2015, three years later. The intention – to protect people from losing money – was honourable, but it deprived people of the opportunity to make money. It also deprived entrepreneurs with great ideas who lacked access to capital of the opportunity to build their businesses.

With new technologies there will always be a mix of benefits and risks. The challenge is to maximise the benefits and minimise the risks. This will become even more important during the third wave.

Similarly, entrepreneurs cannot ignore policymakers. Government will always play a role in making sure its citizens are safe. The food we eat, the skies we travel in and the medicine we take will always be monitored and regulated.

The entrepreneurs who lean into the future and engage with their local leaders and government on policy will be ahead of the game. For example, big companies such as Google, Tesla and BMW and startups such as Zoox are all racing to create and perfect technology to get autonomous vehicles on the road.

Along the way they are going to have to work with federal transportation departments and state and local governments to ensure that vehicles cannot be hacked. They will have to craft driver-training requirements and create procedures and policies for dealing with accidents and malfunctions. None of them will have a chance at getting their product on the road without engaging and working with regulators. Companies such as Uber, which cannot operate in Austin, Texas, and is dealing with regulatory issues in Germany and Korea, are dealing with the consequences of not paying enough attention to governments.

There is no question that the third wave of the internet – a new era of digital transformation – is upon us. It is critical that entrepreneurs and policymakers work together so that entrepreneurs and society can harness its enormous potential. **G20**

PROVISIONS OF THE JOBS ACT

1 Increase the number of shareholders a company may have before being required to register its common stock with the Securities and Exchange Commission (SEC)

2 A new exemption from the requirement to register public offerings with the SEC, for certain types of small offerings

3 Define "emerging growth companies" as those with less than $1 billion total annual gross revenues in their most recent fiscal year

4 Relieve emerging growth companies from certain regulatory and disclosure requirements

5 Lift the ban on "general solicitation" and advertising in specific kinds of private placements of securities

6 Raise the limit for securities offerings exempted under Regulation A from $5 million to $50 million

7 Raise the number of permitted shareholders in community banks from 500 to 2,000

8 Prohibit the crowdfunding of investment funds

"Entrepreneurs who engage with their local leaders and government on policy will be ahead of the game"

KEY TAKEAWAYS

Advances in artificial intelligence (AI) and robotics can help everyone

However, more automation in the workplace will lead to job losses

REINFORCING THE REWARDS FROM ROBOTS

Artificial intelligence and robotics will change societies forever. ***Martin Ford*** *writes about how governments can update their policies to embrace new technology and make life better for everyone*

Recent progress in artificial intelligence (AI) and robotics suggests that we are likely to see astonishing advances during the coming decades. Fields such as medicine and online education will be transformed in ways that will likely result in dramatic benefits for all humanity.

The rise of machine learning

There is, however, a dark side. A great many workers will likely face displacement by machines. A large percentage of jobs are, on some level, routine and repetitive. They can be broken down into discrete tasks that are repeated on a predictable basis. As machine learning and robotics technologies advance, a large fraction of these job types will be at risk of being automated away.

This concern is not far-fetched science fiction. It is based on a simple extrapolation of the expert systems and sophisticated algorithms that can already land jet airplanes, trade autonomously on Wall Street, or – as demonstrated by Google's DeepMind technology – beat nearly any human at the ancient game of Go. As technology progresses, these systems will match or exceed the capability of human workers in many routine jobs, including workers with college degrees or other significant training. Many workers will also be threatened by the continuing trend towards self-service technologies that push tasks onto consumers.

Those who dismiss the potential for significant technological unemployment often point to the extreme historical example of the mechanisation of agriculture. In the late 1800s, about three-quarters of workers in the United States were employed in agriculture. Today, the number is around two per cent. Advancing technology irreversibly eliminated millions of jobs. →

FIVE RECENT INNOVATIONS

Self-driving vehicles
Tesla and Google are pioneering the two most high-profile self-driving car schemes.

Self-training robots
OpenAI recently unveiled robots who have mastered household chores via self-learning AI technology.

Beer
IntelligentX brews four beers created by AI, which are updated via a customer feedback algorithm.

Shape-shifting apartments
MIT Media Lab spin-off Ori uses robotic furniture to transform a living space for different uses.

Delivery drones
Amazon and Starship are among the companies testing air- and land-based delivery drones in the UK.

Businesses will increase production by employing machines

Governments need new policies to maintain consumer demand

ISTOCK IAMGES

> *Governments must consider innovative policies, such as guaranteed income*

Martin Ford

Futurist

Martin Ford is a futurist and the author of The New York Times bestselling Rise of the Robots: Technology and the Threat of a Jobless Future *and* The Lights in the Tunnel: Automation, Accelerating Technology and the Economy of the Future, *as well as the founder of a Silicon Valley-based software development firm. He has more than 25 years' experience in computer design and software development.*

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→ However, when agriculture mechanised, long-term structural unemployment did not arrive. Workers were eventually absorbed by other industries. Average wages and overall prosperity actually increased dramatically. This clearly shows what economists call the Luddite fallacy – that technological progress will never lead to broad-based, long-term unemployment.

The Luddite fallacy holds that as labour-saving technologies improve, some workers lose their jobs in the short run but production also becomes more efficient. That leads to lower prices for the goods and services produced, which in turn leaves consumers with more money to spend. So demand increases across nearly all industries, creating more jobs. That seems to be exactly what happened with agriculture. Food prices fell as efficiency increased and consumers spent their extra money elsewhere, driving increased employment in manufacturing and services.

Reaching a tipping point

AI and robotics are general-purpose technologies. When agriculture mechanised, other labour-intensive sectors remained capable of absorbing workers. There is little evidence to suggest that will be the case this time around.

As automation penetrates nearly everywhere, work will disappear. There must come a tipping point beyond which the overall economy is not labour intensive enough to continue absorbing workers who lose their jobs because of automation and globalisation. Businesses will then be able to ramp up production by employing machines and software. Structural unemployment becomes inevitable.

50%
of US jobs might be performed by machines by 2033

Automation also creates a serious problem with consumer demand. If automation is relentless, the basic mechanism that gets purchasing power into the hands of consumers breaks down. That creates a potential economic scenario of too few viable consumers to drive economic growth. Economies would then risk stagnation or even a deflationary spiral.

Policy reform

In the coming decades, the world will face the challenge of adapting to this new reality. The power of AI and robotics needs to be leveraged for the benefit of society, finding a way to mitigate the potential impact on employment, economic security and consumer confidence.

AI is adept at climbing the skills ladder. Tasks performed by highly educated workers such as journalists, lawyers and radiologists are already affected. Relying on the traditional policy of ever more training and education is unlikely to be a sustainable solution.

Governments must consider genuinely innovative policies. One promising idea is to implement some form of guaranteed income or universal basic income. All members of society would have financial security and the means to contribute to the consumer demand necessary to sustain economic growth.

Information technology continues to advance exponentially and its impact on job markets could materialise rapidly.

It is important for governments to initiate research and pilot programmes designed to test policies that could be scaled up to enable their economies and societies to thrive in the event of a major technological disruption. **G20**

Growing the global economy

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority macroeconomic policy commitments from 2008 to 2014

+1.00 **100%**

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

ICON MADE BY YANNICK FROM FLAT ICON

Thomas A Bernes
Former director, IMF's Independent Evaluation Office

IN CONVERSATION

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Structural reforms are necessary, but are politically very difficult

Q How fragile is global economic growth at present?
Thomas A Bernes Once again, the International Monetary Fund (IMF) is expected to downgrade its growth forecasts. Europe has many problems, compounded by the Brexit vote in the United Kingdom and banking sector issues in Italy. There are concerns about the slowdown in China and the fragility of its financial sector. The risks seem to be predominantly on the down side and starting from a very weak base of growth.

Robert Fauver The Organisation for Economic Co-operation and Development (OECD) will probably downgrade its view, too. We have hoped-for growth that is more on the hope side than the reality side.

Q Is secular stagnation the new normal for the years ahead?
TB The evidence seems to point in that direction. Since the 2008 global financial crisis we have not been able to return to the growth rates we had before, even in the United States, which has performed better than other countries. Labour participation is still significantly below pre-crisis levels. There is a risk that the uncertainty being created by the Trump candidacy affects business decisions, particularly added to other uncertainties. We are facing declining productivity growth, which predates 2008.

RF I am more concerned that we have tried using all of our macroeconomic policy tools and are coming up short on implementing policies that bring new growth. We need new solutions. The global economy, especially the G7 economies, needs a new shock, which will come from the microeconomic side, namely structural reform. Structural rigidities in the underlying rules and regulatory approaches seem to be hamstringing all our economies these days.

Q Can global growth be stimulated through coordinated fiscal measures?
TB The G20 responded to the financial crisis with massive fiscal stimulus, which proved very helpful. In retrospect, the G20 was premature in declaring victory at the 2010 Toronto Summit. Fiscal stimulus, while not appropriate for everyone, was the right thing to do. Where it was working, it was turned off too soon. Monetary policy is asked to do too much. Structural reforms are necessary, but are politically very difficult, and the payoff is not immediate.

In the 2014 Brisbane Action Plan, the G20 agreed on implementing structural measures, so that leaves fiscal stimulus. Several countries, such as Canada, have space to carry a deficit and invest in infrastructure, which both increases demand immediately and strengthens the economy's underlying capacity for the future. Germany

“Negative or low real interest rates have done all they can

Robert Fauver

Former G7 sherpa for the United States

is not taking advantage of its fiscal space. Monetary policy has probably gone as far as it can and structural measures take too long.

RF The United States shows the problems of trying to change monetary policy. The Federal Reserve was too slow to move away from its zero interest rate policy. It is now caught continually announcing that it wants to raise interest rates, but the global economy looks weak and it has to back away.

Changing the quantitative easing policies in the United States, Japan and Europe is more difficult than people think. Negative or low real interest rates have done all they can. Once you have monetary and fiscal policies supporting economies for close to a decade, confidence in their effectiveness is weakened.

$1TN
Stimulus at the beginning of the Obama administration

The $1 trillion stimulus at the beginning of the Obama administration was ineffective in promoting growth in the United States. It may have helped set the bottom of the trough of the recession, but did little to stimulate long-term growth. Structural rigidities are a long-term problem recognised by the OECD, the IMF and the G20. Yes, the direct effects of structural reform are medium term, but if we could find the political will to implement serious structural reforms, we could get short-term effects through business confidence.

The regulatory approaches used by the current US administration have constrained the desire to invest and weakened domestic investment policies. Changing or removing regulations will have an immediate effect. The United States has virtually doubled its federal debt in the past eight years. There has been little real long-term growth effect above two per cent growth. It is hard to see any scope for further fiscal stimulus.

Q Is China doing the right thing regarding its fiscal situation?

TB The actual level of China’s debt is opaque. Its federal debt burden remains relatively low and offers some room for additional fiscal stimulus. There is concern about state and city debt levels. You do not have to have a balanced budget. You can still run deficits and lower the debt burden as a share of gross domestic product, if you have growth.

In some countries, as in the United States, increased budgetary expenditures in the future are a concern because of demographics. An aging society has implications for healthcare costs and income support, so countries need a plan to manage medium-term debt. That is a much bigger challenge for most G20 members.

RF I agree. It is the growth of welfare state entitlements. Long-term projections for the United States show them taking a large uncontrollable share of total government spending. The opaqueness of the Chinese system at state, local and federal levels adds confusion. China’s bidding and procurement approaches are also opaque, so the effectiveness of fiscal stimulus on infrastructure spending can be diffuse →

ILLUSTRATION: STUDIO NIPPOLDT

→ as contracts get awarded to friends or family, not to the most efficient and the most competitive bidder.

Private-sourced infrastructure investment has sometimes been more effective in China than some government-sourced spending. Both India and China, where there are huge demands for infrastructure, need more private-sector, private-run approaches, in addition to government-financed ones.

Q If the stimulus is part of the solution, what form should it take?

TB Many studies have looked at the deficit in infrastructure investment globally. The numbers are huge – obviously, in emerging markets such as India and perhaps China, but also in North America. A lot of crumbling infrastructure needs to be rebuilt. If there is immediate need, it will serve the economy well in the future, as well as giving that short-term boost.

RF Look at the Detroit-Windsor bridge and how much truck traffic takes place between Canada and the United States. A large share of trade passes over that one bridge. Even on a bilateral basis does crumbling infrastructure play a significant role.

In the long term, we need to improve the educational system and adequately prepare young people for the future. We may need to return to vocational training as opposed to every child going to college. It is hard to have a one-size-fits-all approach to fiscal stimulus everywhere. It needs to be country by country. One can talk about infrastructure spending and then leave it to the 'local' level to decide how to define infrastructure.

Q How could fiscal stimulus be coordinated with monetary policy for maximum effect?

TB Fiscal and monetary policies are opposite sides of the same coin. The governor of the Bank of Canada said fiscal policy has relieved pressure on monetary policy because the policies are working together effectively. Mario Draghi told European political leaders that there are limits to what the European Central Bank can do.

In several countries, such as Germany, political authorities are not addressing the task. On the structural side, these are very difficult political issues. At Brisbane, governments committed to add two per cent growth to the trend line of 2013. Implementation has been very weak. The hope was that announcing measures together would give some cover for addressing politically difficult issues such as immigration. But countries have, sadly, become silent.

RF Timing makes a huge difference. Some reforms have some short-term and short-to-medium-term effects and those are all positive. Some labour market changes, unless accompanied by other policies on the fiscal or tax side, particularly focused on industries or labour market conditions, can have short-term negative effects.

In the post-war period there was a considerable focus on the role of monetary authorities. Central banks need independence from governments. There was a long, slow battle to break the Bank of Japan away from the finance ministry. It has gone backwards under Shinzo Abe. Coordinated fiscal and monetary policies that are announced jointly and draw central bank governors and finance ministers together to agree on policies weaken the banks' independence.

Central bank governors could coordinate their own statements. That said, on the structural and fiscal side, we need coordination. Realistic discussions on implementable fiscal or structural policies can positively affect business and consumer expectations.

We are failing to focus on the current weak consumption effects. People are saving more than spending, because they lack confidence in the job markets and outlook. We need to look at business investment and consumer behaviour.

2%
Added growth G20 members committed to at the 2014 Brisbane Summit

Q What should the G20 leaders do at their Hangzhou Summit?

TB Bob's point about confidence also applies in Europe and Canada and elsewhere, especially in the context of the broad disenchantment with political institutions in many countries. The lack of credibility in institutions and political leaders contributes to the growing rejection of the elite. The G20 risks falling into the same trap. It is the same people, after all.

The Brisbane Action Plan was an attempt to be more specific. Perhaps it could have worked had governments been prepared to follow through, but they have not. They will make their usual statements, which of course are right: we need to buttress world growth through appropriate monetary, fiscal and structural measures. They need short-term wins to create credibility in their commitments, which would instil confidence and promote growth. It may be something about infrastructure, perhaps building on China's Silk Road initiative.

RF The effectiveness of a communiqué is inversely proportional to the number of pages. Keep it simple, stupid. We need something that is results oriented and visible. Something they can point to and say: "We did this." They need to focus on something they have done jointly, and say "here is the value from it". It can be something very small but it needs to be concrete. Rebuilding confidence is very important. **G20**

Taking payments system transformation in Nigeria to the next level

Payments system in Nigeria is pivotal to its financial system, economic growth and development. The leap-frogging advantage had placed Nigeria's payments system among the most modernised in the world, leveraging on innovation and risk management practices. With effective strategic planning and collaboration with stakeholders in the industry, the payments system in Nigeria is position for facilitation of commerce, financial inclusion and inclusive economic growth. The Bank started on a programme to transform its payments system in 2010. Tremendous growth has recorded since then. In order to sustain the momentum, the Bank launched the second phase of the national payments strategy in 2013 to further improve safety, improve efficiency and effectively integrate into the global system by improving compliance with international standards.

Redefining the National Payments System landscape became crucial for the Bank, to respond to industry imperatives, such as efficiency, innovation as well as to deepen the National Financial Inclusion Strategy.

The Payments System landscape transformation is three-pronged: a) Infrastructure Enhancement, b) Policy Enhancement and c) Incentives.

Managing risks: spotlight on fraud management

Inherent in the rapid adoption of electronic payment system is its exploitation by cyber criminals within and outside the system, especially for new adopters. In response to the emerging threats, the Bank embarked on a multi-faceted approach to fighting fraud in the payment system by working to improve regulations and strengthen the existing infrastructure. Through collaboration, the Nigeria electronic Fraud Forum (NeFF) was established in 2011, to serve as an industry focal point for sharing of information and collaboration in the fight against fraud. In 2015 the Bank issued various regulations to combat fraud in addition to the enactment of the Cybercrime (Prevention, Prohibition, etc) Act. The Bank also implemented a user identification number, the Bank Verification Number (BVN), which has greatly curtailed account-to-account transfer frauds. In addition, the Bank is leading industry efforts to educate and sensitise users on precautions and secure usage of electronic payments platforms and systems.

Challenges and prospects

The peculiarities of our environment and previous episodes of financial instability in Nigeria, dictate that payments system risk is effectively managed to instill confidence in the public.

In line with the national payments system strategy, the Bank is addressing settlement risks in the payments system.

The speed of payments system innovations and innovators is challenging. The country will have to manage the trade-off between innovation and risks to engender disruptive innovation with positive benefits of inclusiveness. This is the task that the Bank is taking very seriously, to ensure that we have an innovative, efficient, reliable but secure payment system that will serve the purpose of financial inclusion and enhancing economic growth.

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KEY TAKEAWAYS

Policymakers need new solutions to harness innovation

Industries can benefit from being disrupted by new technologies

An internet cafe in Guilin, China

Growth through innovation

Policymakers can utilise the new industrial revolution to promote entrepreneurialism and new ecosystems, writes ***Angel Gurría***

Our global economy is beset by financial vulnerability, slowing productivity, environmental degradation and rising inequalities. Many countries have stagnating or declining populations and face diminishing returns from labour inputs and investment in physical capital. Policymakers need new solutions that harness opportunities through innovation.

Boosting productivity

Innovation takes many forms, such as new and better products and production processes, new marketing methods and changes in business practices and better workplace organisation. It underpinned about one-third of total growth in gross domestic product between 1995 and 2013 by boosting productivity and it will be tomorrow's driving force behind economic growth and societal progress.

The OECD will bring hard data, evidence and analysis to the G20 debates

DBIMAGES/ALAMY

This will not happen without decisive action, though. The current productivity slowdown reflects a breakdown in the 'innovation diffusion machine'. We are not running out of ideas. Rather, ideas are not spreading more widely enough within and across countries. Science and technology are highly concentrated. Only 2,000 companies account for more than 90% of global spending on business research and development, while a handful of countries dominate patent filings in emerging technologies. Start-up rates have fallen in many countries, but young firms are crucial for introducing game-changing innovations.

Advancing through disruption

Digitalisation and the internet underpin the current buzz about innovation and highlight the challenges faced by policymakers. Data and its analysis are driving advances in automation, robotics and artificial intelligence, which are at the core of the next industrial revolution. The use of digital technologies is becoming ubiquitous – 80% of citizens in the members of the OECD have broadband subscriptions and more than three billion people now use the internet. Self-driving vehicles are already on our roads and digital innovation is revolutionising health, education and other public systems.

These benefits go hand in hand with disruptions. Digitalisation transforms how we interact with one another and with society more broadly. It changes the nature and structure of organisations and the profile of jobs, evidenced by the rise of platforms for online services and asset sharing. There are also concerns about digital divides. Almost 90% of adults aged 16 to 74 in Norway use the internet every day. In China it is less than 50%. We have to tackle important issues relating to privacy, security, social protection and skills, and inclusion.

Policymakers have good options for creating eco-systems for innovation that encourage entrepreneurialism, while also dealing with the social consequences. Recent OECD work highlights the 'Productivity-Inclusiveness Nexus' and the related importance of combining policy reforms – aimed at strengthening regulation, competition and innovation – with policies that provide the opportunity for everyone to share in their benefits.

Countries need to invest in health, education, skills and social protection, measures that help the most vulnerable in our societies. Effective skills strategies, open and competitive business environments, efficient systems of knowledge creation and diffusion and sound governance are all essential. They must keep pace with the changes in our economies, so that growth is inclusive.

Promoting the innovation agenda

The G20 has taken up this challenge under the leadership and vision of China's 2016 presidency promoting the leitmotiv of an 'Innovative, Invigorated, Interconnected and Inclusive World Economy'. It is designing a 'Blueprint for Innovative Long-Term Growth' to unleash the potential of innovation, grasp the opportunities offered by the digital economy and reap the benefits of the next industrial revolution. The OECD has been honoured to support the Chinese innovation agenda by bringing hard data, evidence and analysis to the debates, especially on defining innovation and measuring the extent of the digital economy.

The OECD has a clear mandate to continue our work to help policymakers harness innovation for the benefit of all society. The Daejeon and Cancun declarations resulting from our 2015 and 2016 ministerial-level meetings on science, technology, innovation and the digital economy provide our vision. The OECD, in promoting better policies for better lives, will continue to support the G20 as it strives to realise new sources of innovation, growth and well-being. **G20**

Angel Gurría

Secretary General
OECD

Angel Gurría has been Secretary General of the Organisation for Economic Co-operation and Development (OECD) since 2006, having been reappointed in 2010. He served as Mexico's Minister of Foreign Affairs from 1994 to 1998 and Minister of Finance and Public Credit from 1998 to 2000. Gurría has participated in various international organisations, including the Population Council and the Center for Global Development. He chaired the International Task Force on Financing Water for All and was a member of the United Nations Secretary General's Advisory Board on Water and Sanitation.

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Adult populations who use the internet every day...

BNY MELLON

A tectonic shift in international tax

Tax remains in the headlines for this year's G20 Summit in China with "Improving the International Tax Regime" highlighted as a top priority by President Xi Jinping when he shared the Key Agenda items for the summit in December 2015.

The world economy continues to evolve and nations become increasingly interconnected but tax laws have not always kept pace with the changes in global business. While international organisations and governments have introduced some new legislation and regimes that align the tax laws with today's interconnected world, these individual changes may not be far-reaching enough. There is a need for an overarching and coordinated approach to international tax.

The Organisation of Economic Co-operation and Development's (OECD) Base Erosion and Profit Shifting (BEPS) project represents a move in this direction. It is by far the most evolutionary and ambitious of all tax changes to date with its aims to provide the international tax system with greater transparency, fairness and integrity.

> *It is expected that many more countries will adopt BEPS-like measures into their tax systems*

Base Erosion and Profit Shifting (BEPS) project

In 2013, the governments that comprise the G20 mandated the OECD to tackle Base Erosion and Profit Shifting.

To achieve this, the OECD considered the many features that exist in the current Model Tax Treaty and identified 15 areas of focus published in the OECD's Action Plan in July 2013.

The recommendations arising from the 15 BEPS Actions are designed to counter tax avoidance by multinational enterprises and ensure that profits are taxed where the economic activities generating these profits are carried out. The aim is to realign taxation with economic substance and value creation, while preventing double taxation. Furthermore, the Action Plan will lead to tax treaty and domestic tax law changes by jurisdictions, potentially having wide-ranging implications for Multi-National Enterprise.

The BEPS project extends beyond OECD member countries and brings in a number of non OECD countries, some of which do not currently follow the OECD model standard for double taxation agreements and may not even have an established corporate tax system. It is expected that many more countries will adopt BEPS or BEPS-like measures into their existing tax systems. This will create a truly international, co-operative tax system and represent the first substantial renovation of international tax rules in more than 75 years.

Consistency in implementing the BEPS measures will be key to its success. However, as the BEPS measures are soft law legal instruments, countries may take different approaches in their implementation, amending general tax policy or negotiating specific treaty provisions. It is hoped we will see consistent implementation in the areas of preventing treaty shopping, hybrid mismatch arrangements, country-by-country reporting, and improving dispute resolution.

The OECD's role in tackling global tax systems is not new. The OECD published the 'final' reports in relation to all 15 BEPS Actions in October 2015, but BEPS is already in force, influencing a behavioural shift by tax authorities in many areas of taxation.

The Common Reporting Standard (CRS), which was developed in response to a G20 request, was approved by the OECD Council in July 2014. The CRS calls on jurisdictions to obtain information from their financial institutions and automatically exchange that information with other jurisdictions annually.

Mariano Giralt, Global Head of Tax Services, BNY Mellon

Lorraine White, Head of Global Securities Tax Research, Global Tax Services, BNY Mellon

The CRS is now real – Automatic Exchange of Financial Account Information has begun with more than 80 countries agreeing to exchange information by September 2017.

Is Anything Missing?

While the focus of the global tax system has historically been on the elimination of double taxation, the focus of the BEPS work has shifted to preventing instances of double non-taxation and source country taxation.

One of the main purposes of tax treaties is to reduce tax barriers to cross-border trade and investment. As such it will be critical that any of the work carried out in BEPS does not hamper cross border portfolio investment. Furthermore, it will be crucial that investments made by Pension Funds and Collective Investment Vehicles, that have a legitimate tax treaty entitlement are not obstructed as tax authorities redesign their review and approval systems to deal with the fast paced changes.

The OECD understands this and is well advanced in this area with its Tax Relief and Compliance Enhancement (TRACE) project. The TRACE project was approved by the OECD's WP10 in 2009, but has yet to be implemented by governments.

With financial institutions playing a key role as tax intermediaries globally, governments would have much to gain by revisiting the TRACE project and encouraging its wide adoption.

BNY Mellon supports these core tax compliance objectives and believes cross-border information gathering and exchange of information is an essential aspect of global financial markets. As a leading provider of financial services with operations located in multiple jurisdictions worldwide, we strongly encourage the development of a common framework for reporting and due diligence to minimise inconsistencies. Otherwise, financial institutions will continue to be challenged with the complex task of interpreting different legislation and local country guidance. This will result in contrasting rules and practices which will vary in interpretations; exacerbating the already high cost of implementation and ongoing compliance.

Are We There Yet?

As with most projects, measuring success is vital and the OECD has outlined its plans here. But, we can perhaps expect more change and further structural reform as evidence gathering continues. Specifically around unique challenges in the EU where member states enjoy Treaty freedoms and certain EU Tax Directives. We may also see more in the area of information gathering and reporting as we are already experiencing with some tax systems. Moreover, if governments cannot agree to single standards and general tax policy direction, we may expect country by country modifications or even a move away from in-country tax systems to one that is more centralised.

The G20 has provided an important springboard for action and further collaboration. Coordination is critical and we welcome the opportunity to cooperate with governments to help develop and implement a truly global standardised tax regime.

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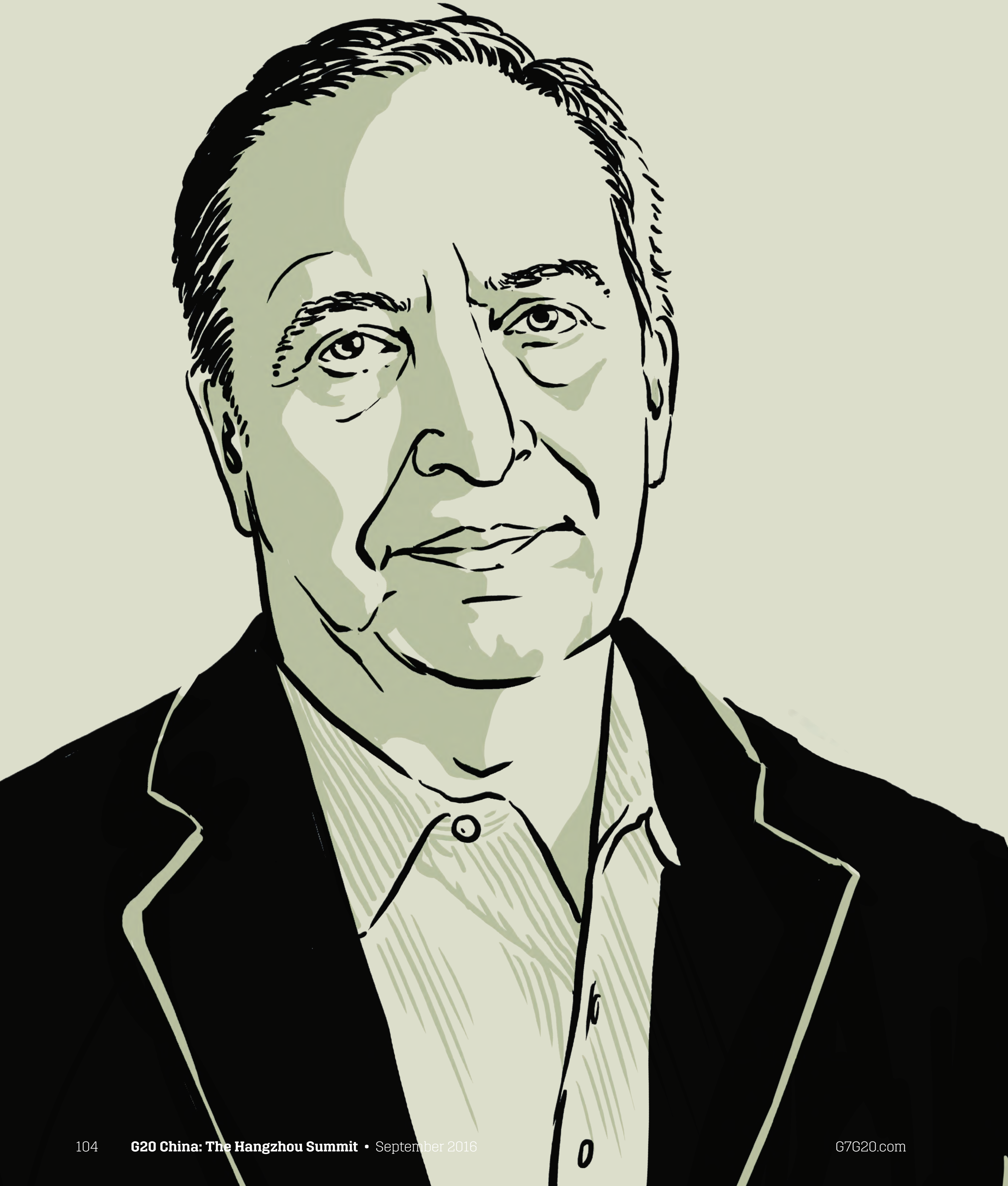


IN CONVERSATION

"There has been a recent tendency for global integration to be pursued for its own sake"

Larry Summers

Charles W Eliot University Professor and President Emeritus, Harvard University

> *I would like to see a commitment to ensuring global demand in a global economy that is still short of its potential*

Q Why does the global economy seem to be locked into a pattern of low and slowing growth?

A No one fully understands. Among the factors are the hangover from the financial crisis and hysteresis effects associated with low levels of investment both in capital and in research and development.

We appear to have an emerging excess of savings over investment. Because of rising inequality, rising desire to pay down debt, demographic factors and increased uncertainty, households have a growing propensity to save.

However, businesses are less desirous of investing because of a more slowly growing labour force, reductions in the price of capital goods and an ongoing demassification of the economy. That tendency for savings to exceed investment makes growth sluggish, puts downward pressure on inflation and also, because of the supply-demand balance for funds, puts downward pressure on real interest rates. That's the secular stagnation idea.

Q How has Britain's Brexit vote to leave the European Union harmed growth prospects?

A It has raised uncertainty in Britain, which will reduce investment. It has also driven down the value of the British pound, which will suck demand towards Britain from the rest of the world.

It has also raised uncertainty about populist threats in other countries and doubts about the euro area, which is the world's largest economy, if you think of it as one economy. None of this can be good.

It would make a mistake to confuse the strong stock market post-Brexit, which reflects expectations of easier monetary policies, with a judgement that Brexit is not economically significant.

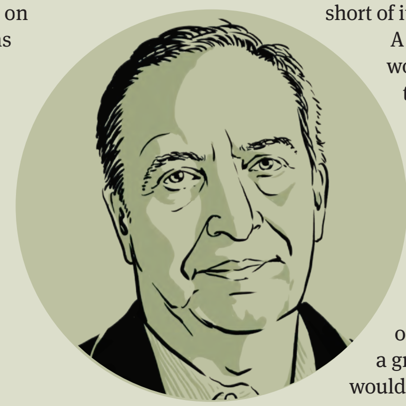
Q What is your concept of 'responsible nationalism' and the new principles of economic policy needed to counter the challenges that low growth, Brexit and the rise of Donald Trump bring?

A Trump represents a serious threat to the liberal economic order. That has to raise uncertainty and slow down business investment across a swath of industries.

The establishment of a more integrated, more managed global economy since the Second World War has brought immense benefits for people both in developing countries and in the industrial world.

Yet there has been a recent tendency for global integration to be pursued for its own sake rather than for the benefit of workers and the middle class. Too much of the political agenda involves issues of primary concern to multinational corporations and their shareholders rather than the workers.

We have had more emphasis on intellectual property relative to cooperation in collecting corporate taxes, more emphasis on investment protections and less emphasis on environmental protection, more emphasis on harmonising rules for service providers and less emphasis on protecting financial stability.



We are seeing the price of that in the backlash against globalisation.

Q Are there policies most likely to return the global economy to strong, sustainable and balanced growth?

A I've emphasised large increase in public investment almost everywhere where infrastructure needs to be strengthened.

I have also emphasised greater collaboration regarding highly mobile capital. There is also the question of international tax cooperation.

I think we have to pay attention to issues relating to beggar-thy-neighbour exchange rate policies in a world that will likely be chronically short of demand.

My hope would be that the G20 will provide an opportunity for strengthening a vision that emphasises the twin pillars of growth and fairness in the long run.

Q China has put innovation as its first priority for the Hangzhou Summit. What components of innovation should be highlighted?

A I am not sure that innovation as a theme is likely to be particularly fruitful, rather than addressing specific issues, such as public investment, the distribution of returns or global cooperation on regulating mobile capital. Focusing on the long run is a good idea.

Q What actions can the G20 at Hangzhou best agree on to restore growth that benefits everyone?

A I would like to see a commitment to ensuring adequate global demand in a global economy that is still significantly short of its potential.

A firmer commitment would follow policies to promote public investment, assure a continuing flow of trade and support getting income to those who most need it in order to spend it.

In a world where inflation is not much of a problem anywhere, a greater focus on demand would be very desirable.

Q Is the G20 still our best hope for getting this kind of international cooperation?

A The G20's efficacy goes up and down. It made an enormous difference in 2009.

It lost its way somewhat with its embrace of austerity and public debt as a central problem. That reflected misjudgements of the economic situation more than the failures of the G20 as an institution. Strength and weakness are opposite sides of the same coin.

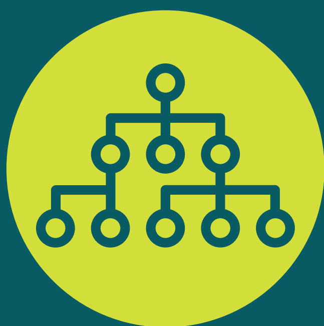
The G20 is a representative global body. Consequently it is very heterogeneous, including countries as different as Saudi Arabia and Argentina, as China and the UK. Because of that diversity, when consensus can be found it is important.

It is not surprising that the G20 comes to substantial consensus less frequently than might seem ideal. That's the price of universality, which makes its consensus that much more important. **G20**

Structural reform and SMEs

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority labour and employment and gender commitments from 2008 to 2014



+0.59 80%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

ICON MADE BY GREGOR CRESNAR FROM FLAT ICON

REVERSING SLOW GROWTH

Labour market policies need support, writes ***Guy Ryder****. G20 leaders can play their part by expanding the coverage of minimum wage legislation and promoting collective bargaining*

0.9% Average wage increase in developed countries between 2007 and 2013

3 Factor by which American workers earned more than Chinese workers in 2013

INTERNATIONAL LABOUR ORGANIZATION

A young man doing hard work in bad working conditions in Serbia

A child at work in Transylvania

Weakness in employment growth, falling labour incomes and stagnant real wages for the bulk of the workforce in most countries has reduced global aggregate demand. It has also created a self-reinforcing cycle of diminished business expectations and low investment, further weakness in demand and insufficient labour market recovery.

Reversing this slide into a slow-growth trap is the challenge facing G20 leaders at their Hangzhou Summit. Medium- and long-term challenges are also daunting. These include eradicating extreme poverty and reducing inequality; adapting to climate change and ageing; responding to growing numbers of young job seekers in Africa and South Asia; and shaping the future of work during rapid technological change.

Labour market policies need to support the recovery by boosting incomes and household consumption. They also need to ease workers' mobility from low-productivity to higher-productivity jobs as part of significant structural change.

Creating confidence

Labour market adjustment is difficult to manage amid slow growth. It involves workers changing jobs, changing employers, learning new skills and sometimes moving home. It can lead to unemployment or lower earnings. These changes are much easier for individuals, families and communities if there is reasonable confidence that the new jobs will be better and support the same or a higher living standard.

The prospect of unemployment or reduced wages brings resistance, though. Such employment adjustment may reduce aggregate demand, slow growth and recovery. The timing and design of labour market reforms must take this into account.

Social and economic priorities

The medium- and long-term challenges must be addressed simultaneously. The political consequences of communities that now have a high risk of being left behind are increasingly evident around the world. Maintaining and increasing the purchasing power of wages – especially minimum wages – and of social benefits are priorities for economic as well as social reasons.

These two policy fields are highly relevant to strengthening demand and recovery and also to ensuring that structural changes lead to much more inclusive growth and development.

Wages make up around two-thirds of national income in most economies and are the main source of household consumption, which drives investment and growth.

Income inequality has widened for several decades as the gap in wages has grown and an increasingly larger share has gone to capital. This has undermined growth. It was a trigger of the financial crisis and resulted in a sluggish recovery.

The level of wages, and their distribution and share in national income, is the outcome of generally decentralised processes between employers and workers and their organisations. Broad coverage of collective bargaining contributes to a narrower distribution of income and more stable growth. However, coverage has

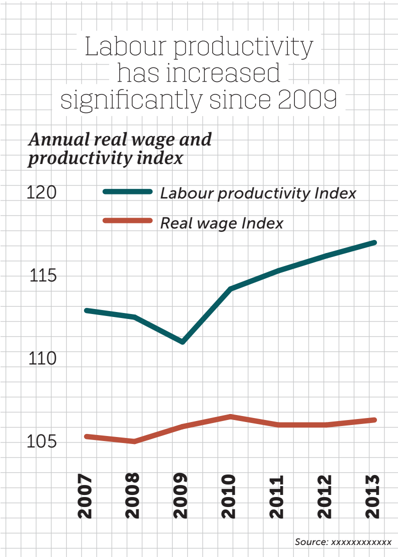
KEY TAKEAWAYS

Labour market policies need to support recovery

The purchasing power of wages must be maintained

Promoting decent work maximises the benefits of globalisation

39% Average wage increase in China between 2007-13



decreased in many countries. Declining employment in large-scale industry has probably been the greatest cause. Concerns about low pay and wages lagging productivity have led to more minimum wage-setting mechanisms.

I am delighted that the G20 labour and employment ministers in Beijing on 12–13 July 2016 issued the Sustainable Wage Policy Principles. They encourage the G20 to expand the coverage of, and compliance with, minimum wage legislation and to take measures, adapted to national conditions, to promote collective bargaining. Requests for advice from the International Labour Organization (ILO) on setting and enforcing minimum wages are at a high level, so we have launched a new online policy guide. A key topic is how collective bargaining adapts to economic pressures and changes in the structure of production in order to remain a viable wage-setting mechanism.

I equally welcome the ministers' focus on social protection. It remains a powerful policy tool in eradicating poverty and rebalancing the inequalities that arise in market economies.

The ministers' Policy Recommendations for Promoting More Equitable and Sustainable Social Protection Systems highlight the roles played by such systems and the need to align them with wage policies to promote sustainable growth in incomes, employment and labour force participation.

There is concern about cost, but social protection is an investment. It supports individuals throughout the life cycle, from birth through childhood into productive employment and then retirement.

Conversely, a lack of access to social protection obstructs economic and social development. It is also associated with high and persistent levels of poverty, economic insecurity and growing inequality. Poverty destroys individuals and communities and creates economic waste. Women and men who are hungry, ill and poorly educated are unproductive. Their children will likely be, too.

Expanding protection

Building social protection systems takes time. It depends on the state's capacity to distribute benefits and tax incomes adequately and fairly. Many developing countries are now expanding their social protection systems. The G20 can play an important role in supporting them by building social protection floors, as called for in Sustainable Development Goal 1 and ILO Recommendation 202. Promoting decent work in all its dimensions is vital to maximising the benefits of globalisation, technological changes and transitions to greener economies.

Social and political tensions rooted in rising inequality and a shortage of decent jobs could threaten open economies and societies that respect and value diversity. The G20 leaders in Hangzhou may well have such concerns on their mind. They will find their labour and employment ministers' declaration very useful. Its balanced approach is integral to reversing a slide into a global slow-growth trap. **G20**

"Social and political tensions rooted in rising inequality could threaten open economies"

Guy Ryder

Director General
International Labour Organization

Guy Ryder has been Director General of the International Labour Organization (ILO) since 2012, having held various senior positions in the ILO from 1999 to 2002 and again since 2010. He leads the organisation's action to promote job-rich growth and to make decent work for all – a keystone of strategies for sustainable development. He has a background in the trade union movement and is the former General Secretary of the International Trade Union Confederation.

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SUDAN HIGHER COUNCIL FOR ENVIRONMENT AND NATURAL RESOURCES

Sudan: promoting sustainability

After Sudan become committed to the United Nations' Agenda 21, it established number of institutions and put in place strategies, policies and programmes that may be considered building blocks to sustainable development. These are:

- The Higher Council for Environment and Natural Resources
- The National Strategic Planning Council
- National Drought and Desertification Control Unit (NDDCU)
- States Councils for Environment
- Other sectoral institutions
- Civil Society institutions

Sudan's institutional structure for environmental governance is very weak in the light of the environmental challenges. An Environmental Framework Act (2001) and sector legislation with environmental components exist, as well as a federal structure for environmental governance.

There are several laws, acts or ordinances that deal with the environment, either for protection or conservation. What characterises the current environmental legislation in Sudan is that it is sector-based. We have environmental legislation dealing with land tenure, health, forestry, wildlife, fisheries, agriculture, livestock, public health, etc. The sectoral legislation is closely connected to the structure of the government ministries, departments and parastatal corporations.

Natural ecosystems in Sudan have undergone serious ecological degradation with potentially significant impacts on biodiversity. Many constraints have affected the implementation of biodiversity management plans: namely the lack of clear policy for the conservation of the local genetic resources of both animals and plants, absence of a specialised full-time programme to manage these genetic resources, poor understanding of the role of ecosystem values and services leading to ineffective management. There are also problems with inadequate legislation and poor law enforcement, lack of a national framework with legislative and institutional instrument to cater for matters related to access to the genetic resources, and the information related to biodiversity is not quite extensively published or easily accessed.

Ambitious adaptation

Sudan has successfully pushed-back on a mitigation-centric agreement, to include adaptation to adverse effects of climate change, and is continuously leading the charge for a stronger finance component in the agreement.

A balanced agreement must be an ambitious in terms its emission reduction and adaptation commitments to ensure that we are in track to achieving the two or one-and-a-half degree celsius target. We will be able to adapt with the associated climate risks to the achievable temperature scenarios.

Ambitious mitigation and adaptation actions cannot be achieved and maintain without adequate support for developing countries in terms of means of implementation, specially for Africa, Least Developed Countries (LDCs), and Small Island Developing States.

A lack of ambition in the Paris outcome means increasing climate risks, devastating impacts and further undermining the development prospects of the African countries, more cost for adaptation and loss and damage, which vulnerable countries can not afford to meet alone without adequate provision of international support.

The gaps in ambitions require a result-based approach in defining the commitments and obligations of Parties under the 2015 agreement and political leadership from developed countries in both pre and post 2020 periods.

Ecosystems in Sudan have undergone serious ecological degradation

In Copenhagen in 2009 and in Cancún in 2010, developed countries committed to raising $100 billion by 2020 to help developing countries cope with climate change. This promise is linked to the historic responsibility of developed countries with regard to global warming.

The $100 billion scheme is an important aspect of the negotiations: guaranteeing developing countries that developed countries will uphold this commitment is essential in order to build the confidence needed to negotiate an agreement in Paris.

Minimum obligations

The post-2020 finance provisions should take into consideration the need for adequacy and predictability in flows of funds and the clarity of appropriate burden sharing among developed countries.

The objective of financial support is to enable developing countries to enhance action in the post-2020 period. It should further provide for scaling up the delivery of financial resources from the floor of $100 billion per year, current levels based on a percentage of GDP, based on the needs and priorities of developing countries, with a 50-50 balance for mitigation and adaptation.

We call for the minimum obligations for developed countries to be consistent with the Convention and voluntary contributions by developing countries and recognition of south-south cooperation.

The agreement should ensure a balance between mitigation and adaptation through the establishment of a Global Goal for Adaptation, which recognise adaptation as a global responsibility, and the fact that insufficient mitigation action increases the burden of adaptation in developing countries.

The agreement should define minimum information adaptation 'undertakings' – differentiated to include support by developed countries-needs to developing countries; should be country driven, flexible, transparency of support. It should not replace the Framework Convention on Climate Change, be under the Convention and in accordance with its principles and provisions, particularly equity and Common but Differentiated Responsibilities and Respective Capabilities.

Being classified as a LDC, Sudan is not obliged to pursue a greenhouse gas (GHG) emission reduction target. Nevertheless, Sudan views the planning process to reduce GHG emissions, or rather pursue low-carbon development, as an opportunity to strengthen national capacity, promote sustainable resource management, facilitate technology transfer, and identify synergies between national economic objectives and sustainable development.

To meet the main goal of 25 per cent forest coverage from the total area of the Sudan by 2030, an area of 790795 hectares needs to be planted annually if international financial support is provided.

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KEY TAKEAWAYS

- G20 growth targets will only be met by encouraging entrepreneurship
- Promoting trade and investment will help boost productivity

Strengthening momentum for growth

The G20 has pledged to support policies that help recovery and increase social inclusion. Now it must implement them, writes ***Bernhard Welschke***

The world economy is now growing at the lowest rate since the onset of the global financial crisis in 2008. While essential in many countries, continued monetary and fiscal responses have their limits. Achieving the G20's additional two per cent growth scenario by 2018 – a 2014 commitment from the Australian presidency – will only be possible through bold actions to unleash entrepreneurship.

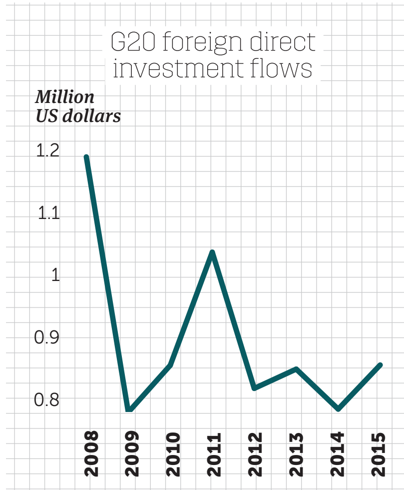
Revival policies

Companies encounter significant policy uncertainties, regulatory burdens, protectionist measures and economic risks that constrain their business activities in markets. Policies can revive business confidence and enhance both competitiveness and predictability. There are three things to do now: identify the needed structural reforms, bridge the implementation gap and leverage the role of the G20 in this endeavour.

Evidence from the Organisation for Economic Co-operation and Development (OECD) shows that well-designed structural reforms have added on average five per cent of potential gross domestic product per capita since the early 2000s. Further reforms based on best practice could add an additional 10 per cent, on average.

Earlier this year the OECD submitted a paper to the G20 to persuade it of the value of structural reforms. It also proposed priorities including promoting trade and investment to boost total factor productivity, removing barriers to competition and encouraging innovation, reforming labour markets and improving infrastructure to encourage long-term investment.

These policies vary depending on the national context, but the 2016 economic survey issued by the OECD's Business and Industry Advisory Committee (BIAC) suggests such reforms are essential because they address the deceleration in productivity experienced in many economies.



Source: OECD

10%

Possible growth best practice reforms could add to per capita GDP

G20 leaders have agreed to monitor and be accountable for growth

The G20 summit in China should focus on planning and implementation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Several of these reform priorities, particularly those that enhance trade and foreign direct investment, are good for growth and social inclusion. They enhance the ability of firms and individuals to participate in markets. For example, the financing of small- and medium-sized enterprises benefits from better access to global value chains. In cases where negative side effects of some structural reforms are apparent, flanking policies could be introduced to offset these effects.

Ensuring implementation

The next step is implementation. G20 leaders have agreed to "monitor and hold each other to account" for the implementation of their growth strategies in the coming years, based on continued analysis by the OECD and the International Monetary Fund. Business agrees with a great majority of the OECD's structural policy recommendations. However, BIAC's economic survey found that more than 70 per cent are perceived as only partly implemented. Reasons for the current lack of implementation include political economy factors or social concerns. Another possible reason may be shortcomings in regulatory policymaking procedures.

Consultation processes on new policies and regulations often appear insufficient. This could undermine stakeholder support for new reforms. Many governments do not make sufficient use of impact assessments to help make the case for reform.

G20 leaders have made commitments to place structural reform at the centre of the global growth agenda. The focus at China's G20 summit should be on their implementation. This will call for strategic planning, consultation and communication over the next years to make a strong case to G20 citizens and stakeholders. International cooperation is needed more than ever.

The OECD – together with the business community, through BIAC – is well placed to support the G20 in this endeavour. **G20**

Bernhard Welschke

Secretary General
Business and Industry Advisory Committee

Bernhard Welschke has been Secretary General of the Business and Industry Advisory Committee (BIAC) to the Organisation for Economic Co-operation and Development (OECD) since 2013. An economist, he joined BIAC after a successful career in the Federation of German Industries (BDI), leading the departments for European affairs and global governance, among other assignments. He represented German industry and trade in Washington DC from 2006 to 2010. Prior to that, he was a member of the European Union's Economic and Social Committee.

@BIACOECD
www.biac.org

$12TN Growth that could be added to GDP by gender parity by 2025

Global labour force participation in 2015

76.1% men

49.6% women

Women as a global growth generator

The G20 can stimulate the growth of women in the workplace and benefit the global economy. Its Women 20 engagement group is an important first step, writes ***Phumzile Mlambo-Ngcuka***

KEY TAKEAWAYS

Women's economic empowerment is essential for sustainable development

G20 members need to address women's unpaid work

The private sector must be actively engaged in empowering women

When more women work, economies grow. A recent report from the McKinsey Global Institute argues that if all countries match the historical progress towards gender parity achieved by their best-in-region country, $12 trillion could be added to global gross domestic product in 2025. But achieving this kind of growth requires addressing the structural causes of discrimination that women face, not only in the labour market, but also in the household and in society more broadly.

Women are half of the population. Their economic security and independence are directly linked to their educational attainment and health, the welfare of families and children, as well as to their own voice, agency and community engagement. The 2030 Agenda for Sustainable Development highlights these linkages and clearly shows that gender equality and women's economic empowerment are essential to achieving sustainable development for all.

Gender gaps and segmentation in labour markets mean that women are concentrated in low-paid, vulnerable work. They also have less access to social protection and are more likely to live in poverty. In 2015, women's global labour force participation stood at 49.6 per cent compared to 76.1 per cent for men, and 75 per cent of women's employment in developing countries was informal and unprotected. Globally, on average women are paid 24 per cent less than men and spend two and a half times more time on unpaid care and domestic work.

Redressing these gaps means expanding women's access to decent work through active labour market policies, implementing equal pay legislation, promoting gender-responsive social protection and reducing and redistributing unpaid care work between women and men and between households and the state, through improved public services and social infrastructure. It requires fostering a macroeconomic environment informed by human rights standards and concerns for the well-being of all, rather than narrowly focused on areas such as price stability and growth rates.

A tremendous opportunity

The formation of the Women's 20 (W20) engagement group by the G20 represents a tremendous opportunity to bring gender perspectives to global economic governance. This year, under the leadership of the All-China Women's Federation, the W20 has drafted a robust set of policy recommendations for endorsement by the G20 towards fulfilling commitments to gender equality. UN Women commends both the G20 and W20 for adopting an ambitious target of reducing the gender gap in labour force participation by 25 per cent by 2025 and urging members to integrate gender perspectives into macroeconomic policies and global economic governance.

We invite the G20 to make further commitments to recognise, reduce and redistribute women's unpaid care and domestic work. Members need to increase investment in public goods and address the care deficit by promoting the care economy. When care work is valued and adequately paid, it benefits the care workers, through increased access to decent work, and the care receivers, through improved quality and access to care.

G20 economies can stimulate the growth of women-owned business through targets and quotas for sourcing from women suppliers and by creating workplace

42,000 jobs to be created for women by UN Women and Coca-Cola

ONLINE Read more about Women's 20 online at www.g7g20.com

conditions and opportunities that take into account women's unique needs and contributions. For example, UN Women is working with Australia's Department of Foreign Affairs and Trade on the Markets for Change project to ensure that markets in Fiji, the Solomon Islands and Vanuatu are safe, inclusive and non-discriminatory, and to promote gender equality and women's empowerment.

Decent work opportunities for women should extend to the green, low-carbon economy. This requires support for skills development and innovative technical education for women.

Women's Empowerment Principles

In addition to government-led initiatives, the private sector has a central role to play and must be actively engaged. Action could include implementing the Women's Empowerment Principles, which offer guidance to empower women in the workplace, marketplace and community, as well as strategic partnerships that support the acquisition of experience. For example, UN Women is working in Brazil, Egypt and South Africa, in partnership with Coca-Cola, to provide 46,000 women with the necessary skills, equipment and access to credit to initiate and successfully manage their small businesses.

In 2016, the UN Secretary-General established the High-Level Panel on Women's Economic Empowerment. I am honoured to serve on the panel along with distinguished heads of state and UN agencies, World Bank and the International Monetary Fund, as well as leaders from trade unions, civil society and the private sector. Improving economic outcomes for women entails partnerships among all stakeholders and increased investment.

UN Women is ready to contribute to the 2030 Agenda to achieve gender equality, women's empowerment and a 50-50 planet by 2030. **G20**

Phumzile Mlambo-Ngcuka

Under-Secretary-General
United Nations

Phumzile Mlambo-Ngcuka has been United Nations Under-Secretary-General and Executive Director of UN Women since 2013. From 2005 to 2008, she served as Deputy President of South Africa. Prior to that she served as South Africa's Minister of Minerals and Energy and Deputy Minister in the Department of Trade and Industry. She is the founder of the Umlambo Foundation, which supports leadership and education.

@UN_Women
www.unwomen.org

Improving economic outcomes for women entails partnerships among all stakeholders

KEY TAKEAWAYS

The G20 did not agree on hard targets for reducing gender inequality until 2014

Implementation has risen in subsequent years

UN PHOTO/MARCUS BLEASDALE/VII

The Salem Police force, which is 25 per cent female, in Monrovia,

Ensuring women's full economic participation

*The G20 must form a comprehensive strategy to reduce the gender gap and better include women in the workforce, writes **Julia Kulik***

Since 2008, G20 members have worked together to promote strong, sustainable and balanced economic growth and ensure that globalisation works for the benefit of all people. A central way to do this is to encourage the inclusion and full economic participation of women. Yet the G20 did not address the gender gaps in the economy in a meaningful way until its summit in 2013 in Saint Petersburg, Russia. Moreover, it was not until the following year in Brisbane, Australia, that G20 leaders agreed to a hard target and timeline specifically to reduce the gender gap in the workforce by 25 per cent by 2025.

Closing the gap

In the first year of implementation following Brisbane, G20 members complied with this commitment at a level of 66 per cent. This is below the overall G20 average of 71 per cent across 151 assessed commitments on

All members need policies to reduce the strain of caregiving on women

Short- and medium-term targets need to be clarified at the 2016 G20 summit

ECONOMIC EQUALITY

£1.2BN

Increase in education and childcare spending in the UK

80%

The 2015 G20 interim compliance rate in reducing the workforce gender gap

30%

Quota for female representation on company boards in Germany

all issues since 2008. Members that scored full compliance with the Brisbane gender gap commitment made investments in affordable childcare programmes. The United Kingdom, a full complier in the first year, announced a £1.2 billion increase in education and childcare spending to help balance the responsibility of caregiving.

Germany, another full complier, implemented a quota system to ensure 30 per cent female representation on company boards. Japan complied fully by increasing access to finance and business training for female entrepreneurs and working to increase the number of women in science and engineering.

In 2015, at their summit in Antalya, Turkey, G20 leaders promised to continue monitoring the implementation of their goal to reduce the gender participation gap. After an additional eight months of monitoring, G20 members scored 80 per cent, a significant increase from the previous year's score. Those members that received full compliance initiated policies that help relieve the strain of caregiving on one's job. Canada provided resources for employers to create more caregiver-friendly workplaces. Japan released a report on the treatment of women in the workplace that found that 35 per cent of women in full-time employment had been sexually harassed.

It did not, however, indicate how it planned to respond. The United States unveiled a new policy that requires companies with more than 100 employees to provide annual data on employee wages by gender, race and ethnicity.

Committing to change

The 2014 Brisbane commitment has led to some important progress in reducing the gender gap in employment, and the reiteration in 2015 has continued to hold members accountable. But there is no evidence of a comprehensive strategy by G20 members to meet this goal by 2025, as required and deserved.

All members need policies to reduce the burden of caregiving on women, such as extending maternity leave, offering equal amounts of parental leave, and expanding affordable childcare and eldercare options. The G20 should also target specific industries to encourage female participation, as the G7 did with science, technology, engineering and mathematics (STEM), not only to get more women into the workforce but also to get them out of the precarious, low-paying jobs in which they are disproportionately found.

For many G20 members, there is much to be done to end gender stereotypes and discrimination.

Without putting an end to gendered social norms that confine women to traditional roles, gender parity in labour force participation cannot be reached. Policies to end workplace violence and harassment are also needed for female economic empowerment.

When G20 leaders meet in Hangzhou on 4–5 September 2016 they should reiterate their commitment to meeting this goal. Such a statement should increase compliance. The leaders should also make clear their action plans on how they propose to meet the commitment of reducing the gender gap in the workforce by 25 per cent by 2025, and lay out their short- and medium-term targets. Sustained momentum for encouraging female economic empowerment is essential for G20 success. **G20**

Julia Kulik

Co-director of Research
G20 Research Group

Julia Kulik is based at the Munk School of Global Affairs at Trinity College in the University of Toronto, where she is Co-director of Research for the G20 Research Group, the G7 Research Group, the BRICS Research Group and the Global Health Diplomacy Program. She has written on G20, G7/8 and BRICS performance, particularly on the issues of gender equality and regional security. Kulik leads the groups' work on gender, women's health, regional security and summit performance.

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KEY TAKEAWAYS

Many economies must find jobs for those about to enter the workforce

G20 Young Entrepreneurs' Alliance represents more than 500,000 people

A POWERFUL SOLUTION TO YOUTH UNEMPLOYMENT

*The G20 Young Entrepreneurs' Alliance forges a unique network in the quest for innovation, growth and opportunity, writes **Xia Bing, Julia Deans** and **Alex Gill***

For the past several years, G20 members have grappled with an increasingly troubling economic equation. Low rates of growth, high levels of youth unemployment and increasingly younger populations have combined to pose a serious question: what policies can G20 governments adopt to encourage growth and proactively address youth joblessness and disengagement?

Policymakers recognise that this poses a significant challenge to our economies and societies. According to the International Labour Organization, youth unemployment in Canada and the United States generally runs at twice the national average, while in parts of the European Union and the Middle East, rates can range up to five to seven times the national average.

Many rapidly developing economies face the challenge of finding work for large numbers of young people who will soon enter the workforce. Across much of the Middle East, approximately half the population is under the age of 25. In India one-third of the population is under 15.

10M

Jobs the G20 could create for young people

The G20 Young Entrepreneurs' Alliance (G20 YEA) is a unique group of non-governmental organisations that promote youth entrepreneurship, collectively representing more than 500,000 young entrepreneurs. During the past several years we have developed a powerful solution to the issues of youth unemployment and low economic growth.

Following our initial discussions at the 2008 G8 Summit in Italy, our group was invited by Canada's Prime Minister Stephen Harper to organise the first G20 Young Entrepreneurs' summit during the G20 Summit he would host in Toronto in June 2010. This laid the groundwork for what would become the G20 YEA.

The ability of young entrepreneurs →

It meets with senior officials from government and industry

It promotes policies that address job creation, employment and growth

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Xia Bing

Xia Bing is Host of the G20 Young Entrepreneurs' Alliance 2016 Beijing Summit and the President and Founder of NovoNation Youth Community (NovoNation) in China.

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Julia Deans

Julia Deans is Chair of the Partnerships and Thought Leadership Committee of the G20 Young Entrepreneurs' Alliance and Chief Executive Officer of Futurpreneur Canada.

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Alex Gill

Alex Gill has moderated the G20 Young Entrepreneurs' Alliance since its inception in 2010.

www.mendicant.ca

> *We partnered with the G20 Research Group to understand the concerns of G20 leaders*

→ to succeed around the world is determined by five interrelated factors:

- The availability of training and educational resources
- Whether they have the 'cultural permission' and encouragement to start a business
- The taxation and regulatory environment in which they live
- Access to funding to support start-ups and early-stage business growth
- The ability of parties across an ecosystem to coordinate their actions

These five areas became the pillars of the alliance's work. They feature prominently in the themes of our annual Young Entrepreneurs' summits, held in the same country as the G20 summit. These unique events bring together hundreds of the world's young entrepreneurs who are founding the businesses throughout the G20 that will lead our economic growth and renewal in the coming years.

Partnerships and engagement

Beginning with the G20 YEA's Nice Summit in 2011, a growing roster of partners began to work with the alliance. EY, for example, produced the first-ever 'entrepreneurship barometer', which ranks the conditions influencing young entrepreneurs across the G20. Accenture is also a partner, most recently reporting on the practical steps that the G20 members could take to create 10 million jobs for young people in the knowledge economy. We also partnered with the global network of the G20 Research Group, based at the University of Toronto, to understand the concerns of G20 leaders and how we could better work with them.

Meetings with increasingly senior government and industry representatives have also moved the cause of youth entrepreneurship forward. At the 2012 summit, Mexican President Filipe Calderon met with more than 200 young entrepreneurs at his residence in Los Pinos. Guest speakers have included captains of industry and the heads of such bodies as the International Monetary Fund and the Organisation for Economic Co-operation and Development.

The G20 YEA's 2013 Moscow Summit was our first substantial engagement with the Business 20 (B20) and the inclusion of language on youth entrepreneurship in the subsequent G20's Saint Petersburg communiqué. The G20 YEA's 2014 Sydney summit created a global action plan for young entrepreneurs, while the G20 YEA's 2015 summit yielded a commitment in the leaders' communiqué at Antalya that year to "support the better integration of our young people into the labour market including through the promotion of entrepreneurship."

The engagement of the B20 process has resulted in alliance member organisations working on various task forces, including those looking at small and medium-sized enterprises and growth issues. Global CEOs have welcomed our call that entrepreneurship for young people will play an important role in social and economic renewal, as well as the competitiveness of individual countries.

Promoting potential

As we move towards the G20 Hangzhou summit, we will continue to share with the G20 leaders the road map that we have been creating in conjunction with the world's young entrepreneurs and our partners.

At our own 2016 Beijing Summit, taking place immediately following the Hangzhou Summit, the world's young entrepreneurs will come together under our theme of 'Disruptive Innovation: Smart Entrepreneurship'.

Supported by the research of our knowledge partners, the G20 YEA will issue a communiqué to G20 leaders that will continue to promote the potential for youth entrepreneurship, innovation and progressive policies to address the related challenges of job creation, youth employment and growth. **G20**

Investing in infrastructure

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority infrastructure commitments from 2008 to 2014

+0.95 98%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

HELPING EMERGING ECONOMIES

The transformation of the developing world will be driven by technology and sustainability. Banks and governments must work together in new ways to accomplish their common goals, writes ***KV Kamath***

ASIAN DEVELOPMENT BANK/FLICKR

Two schoolboys study a smartphone in Thailand

$1TR Annual infastructure investing gap in developing countries

15% Demand from developing countries catered for by MDBs

KV Kamath

President
New Development Bank

KV Kamath is the President of the New Development Bank, established in 2015. He is the former Chair of ICICI Bank and Infosys Ltd and previously worked with the Asian Development Bank. In 2008 he was conferred the Padma Bhushan, one of India's highest civilian honours. He has also served as the President of the Confederation of Indian Industry (CII) and as Co-Chair of the World Economic Forum's Annual Meeting in Davos.

www.ndb.int

KEY TAKEAWAYS

The New Development Bank is led by developing countries

It is strongly committed to utilising technology

It supports the G20 and will strive to innovate and collaborate

The New Development Bank opened its doors in Shanghai, China, in July 2015. Established by the BRICS group of Brazil, Russia, India, China and South Africa, we began our operations with a resolve to fund sustainable infrastructure requirements in our member countries.

We believe we are the first institution of global scope led by developing countries. During the past year we have formulated our policies and procedures, appraised our first set of loans and issued our first onshore green bond in renminbi.

In the last few years, the G20 has addressed some of the important challenges stemming from the global financial crisis and has provided effective leadership in enhancing confidence in the financial markets. However, the global recovery remains fragile. Downward risks and uncertainties persist against the backdrop of continued financial volatility.

There is a pressing need for the recovery to be stable and resilient to economic shocks. This next chapter of development must unleash economic growth that is inclusive and sustainable.

Estimates suggest that developing countries face an annual infrastructure investment gap of $1 trillion. Multilateral development banks (MDBs) cater to only about 15 per cent of this demand. If we project the annual investment estimates of $5-7 trillion to realise the Sustainable Development Goals for infrastructure, clean energy, water and sanitation, and agriculture, based on the current trend MDBs will have a limited impact. Given the magnitude of this need, there is a case for continued and concrete progress on the reform agenda and broad-based collaboration among stakeholders.

Technological advances

The New Development Bank is strongly committed to incorporating technology into everything we do. Technology is changing fast and its adoption – especially in developing countries – is even faster. With close to three billion people connected to the internet and a billion people owning smartphones, people understand the issues, people understand the solutions and people understand the constraints.

There is growing impatience and the demand for rapid development results will only increase. We must make change more visible. We must also avoid stereotyping and backward-looking policies and procedures steeped in the past.

We are conscious of this ongoing transformation. We will align ourselves with a world where the development ecosystem will be driven by technology, obsolescence

ONLINE **Read more at g7g20.com about the New Development Bank**


ALEXMAX/ISTOCK PHOTO

Construction on a residential building in Saint Petersburg, Russia


ISTOCK PHOTO

Solar panels maintained with a wet sponge in New Delhi, India

will be rapid and cost structures will be dramatically different from those today. The need for speed in our institutions is critical. We will build on the existing framework and with the help of innovate partnerships, services, people and products.

We will foster adoption of green infrastructure. Sustainability practices are now mainstream. Technological advancements mean going green is a commercial requirement, not a moral one.

Developing countries are leapfrogging in their adoption of green technology especially sustainable green energy access. We will accelerate deploying funds for green investment and seek knowledge flows from existing MDBs.

We recognise the importance of building on the existing framework and acknowledging the work done by MDBs. They have successfully funnelled resources for development with limited shareholder contributions. They have also lent their technical expertise in infrastructure design and utilised best practices and adherence to basic standards.

We are conscious of the destabilising effects of currency misalignment. To insulate our borrowers from volatile currency movements we will promote local currency lending and develop domestic capital markets. We are living in times with record-low interest rates and ample global liquidity. MDBs should seize this opportunity to collaborate, pool their resources and deliberate on how to increase funding bases to provide the necessary resources to meet infrastructure needs.

Forming partnerships

Governments are the main drivers of development. They can provide a thrust by developing a robust project pipeline.

MDBs may not be subject to national regulations, but they are subject to oversight by rating agencies, which need to evolve as well. MDBs with sovereign shareholders, preferred creditor status and higher liquidity requirements function on a lower leverage ratio and in a tighter operating environment than commercial banks.

We will partner with central banks and create new channels for currency swaps among our member countries. We look forward to working closely with our member governments, central banks and rating agencies in advancing our agenda.

The New Development Bank affirms our support of the G20. We will strive to add value as we underpin a holistic and sustainable development agenda, listen, learn, innovate and collaborate. We will drive the development agenda and be the partners of change. **G20**

NEW LOANS

New Development Bank loans announced this year

Brazil $300M

India $250M

South Africa $180M

China $81M

IN CONVERSATION

We must work together to increase affordable financing

John Kirton speaks to President of the Islamic Development Bank ***Ahmad Mohamed Ali Al Madani*** *about sustainable development*

Q Why is investing in infrastructure a key driver of sustainable development in the Islamic world?

A The Islamic world – among the most vibrant economic blocs consisting of mostly developing countries – represents a quarter of the global population with different social, economic and financial structures. Like all developing countries, it faces numerous challenges such as high rates of poverty, deep-seated inequality, insecurity, disease, slow economic growth, undiversified economies and poor standards of living.

Infrastructure development is critical for addressing these challenges as well as for a properly functioning modern economy.

Today, inclusive growth is on the agenda of every country. One pillar of inclusive growth is access to basic services: providing the infrastructure imperatives of water, electricity, transportation and telecommunication. These services all significantly affect the quality of life of individual citizens and communities broadly.

Q How is the Islamic Development Bank Group working to advance such infrastructure investment?

A Over the past seven years, during which the world economy was hit by a global financial crisis, the Islamic Development Bank (IDB) Group has invested more than $21 billion in infrastructure in its 57 members, spanning Asia, sub-Saharan Africa, the Middle East, North Africa, Europe and Latin America. Its potential to affect economic and social development and regional integration positively through infrastructure financing is one of its greatest strengths. The Sustainable Development Goals (SDGs) cannot be realised without properly addressing the huge infrastructure deficit. In 2014–15, our investments in energy, transport, water, sanitation and urban services exceeded $8.3 billion, representing about 80 per cent of our total project financing.

Q What are its unique approaches?

A First, some Islamic financing instruments are debt based, such as leasing, instalment sale and Istisna'a construction financing contracts. We plan to develop the Sukuk market of domestic and international capital markets to mobilise more funds from existing liquidity, as well as create an infrastructure asset class to attract long-term investors such as pension funds and sovereign wealth funds.

Second, we need to address the massive reconstruction needs of post-conflict countries such as Yemen, Iraq and Syria and conflict-affected countries such as Jordan and Lebanon. This requires closer collaboration among multilateral development banks (MDBs) and supporting countries. It also requires new financing tools and initiatives such as the MENA Financing Initiative, which we launched this year with the World Bank and the United Nations.

Third, addressing the infrastructure needs of low-income countries is critical to achieve the SDGs. Low-income countries cannot rely on capital markets and MDBs. We must work together to increase the affordable beneficiary financing available for them.

Q What large impacts have the IDB's infrastructure financing made on the economic development of its members?

A Infrastructure development continues to drive economic growth in IDB members. Four of every five requests for IDB financing relate to infrastructure – energy, water, transport and telecommunication.

IDB has scaled up its infrastructure financing through public-private partnerships (PPPs), the Arab Financing Facility for Infrastructure, the New Mudaraba Infrastructure Investment Facility: Islamic Infrastructure Fund I and II and the IDB Infrastructure Fund. It has facilitated affordable access to energy, fostered urban development and improved transportation networks.

Infrastructure continues to receive the largest allocation of the IDB's Ordinary Capital Resources. Approvals covered

Ahmad Mohamed Ali Al Madani

President, Islamic Development Bank

electricity generation and transmission, transportation, and water and sanitation.

Since its inception in 1975, the IDB has financed more than $30 billion worth of infrastructure to help members meet their increasing financing needs, to compete effectively and benefit from the G20's new infrastructure initiative.

The G20 discussed mainstreaming Islamic finance in the global financial system under the Turkish G20 presidency in 2015. The IDB calls on the G20 leaders to consider Islamic finance to support infrastructure development. It stands ready to work closely with the G20 to implement this and other proposals from the G20's previous and current meetings, especially those related to Islamic finance.

Q What are you most proud of achieving during your time at the helm at the Islamic Development Bank Group?

A The promotion of technical cooperation in economy, finance, investment, trade and knowledge sharing. Our trade finance programme has helped boost trade within the Organisation of Islamic Cooperation from 13 per cent a decade and half ago to about 20 per cent this year.

Our technical cooperation programme finances on-the-job training, visits of technical experts to share knowledge, and attendance at conferences and seminars. The Reverse Linkage Initiative supports South-South technical cooperation, facilitating the sharing of technical knowledge between two IDB members. Some members now contribute financial resources as well as volunteer to transfer technical knowledge and, in so doing, strengthen solidarity – which is the core aim of the IDB.

Q What does the future hold?

A We anticipate significantly scaling up partnership arrangements with development partners, philanthropists and civil society organisations. More funds will be set up similar to the Lives and Livelihoods Fund established by the IDB and Bill and Melinda Gates Foundation.

We look forward to placing knowledge sharing at the centre of our policy dialogue with our stakeholders and partners, which will bring efficiency through policy harmonisation and shared best practices. **G20**

KEY TAKEAWAYS

Markets are increasingly uncertain because of geopolitical tension

Private sector involvement is critical to improving standards of living

Multilateral development banks commit to growth

By increasing its investments in infrastructure, the private sector is helping spur economic recovery, writes ***Sir Suma Chakrabarti***

Upgrading roads in Albania with the support of the EBRD, the EU and the EIB

When Chinese President Xi Jinping announced China's priorities for its 2016 G20 presidency, he spoke of an "innovative, invigorated, interconnected and inclusive world economy". This vision aligned perfectly with the new global development agenda that had just been adopted by the international community at the United Nations General Assembly.

It is also a goal shared by the European Bank for Reconstruction and Development (EBRD), which strives to reinvigorate the transition in emerging economies by building up economic resilience, promoting integration, and addressing global and regional challenges.

This year, economic cooperation has grown between the EBRD and China, which became its 67th member in January. The EBRD also deepened ties with the Asian Infrastructure Investment Bank (AIIB). As we look ahead to the G20 summit that China will host in Hangzhou in September, the realisation of President Xi's vision is clearly gaining importance by the day.

A sustained recovery from the worst global downturn in more than half a century remains elusive. Markets are increasingly uncertain because of recurring bouts of geopolitical tension.

$1.5TR

is the estimated annual infrastructure gap for the next 15 years

The EBRD and its fellow multilateral development banks (MDBs) are committed to getting the world back on a path to growth. We aim to do this by delivering a higher quality of life and greater prosperity in fairer societies to people throughout the countries where we work.

I am convinced that together we can make a difference. By providing the infrastructure that oils the wheels of commerce and transport, we can improve the standard of municipal services received by millions of citizens in our countries of operations.

Minding the gap

The infrastructure gap in the developing world is estimated at an almost unfathomable $1.5 trillion annually over the next 15 years. This shortfall includes spending on all-important highways linking cities, countries and regions; ports and airports; modern, safe and comfortable urban transport systems and drinkable water supplies.

Government funding will not cover this gap and financing from MDBs is limited. MDBs play a critical role in helping to tap into funds in the private sector and creating a larger pool of finance. They can deliver the private sector involvement critical to improving standards of

The quantity and quality of planned investments need to increase

©EBRD/ROBERT HACKMA

Many tasks lie ahead, such as assessing the legal and regulatory impediments to investment

living, job creation and enhanced global competitiveness.

Earlier this year, MDBs pledged publicly to work together to scale up our own infrastructure investments and also to attract that all-important private sector investment.

Increasing and improving

As MDBs we have a unique opportunity to catalyse higher levels of private investment into developing country infrastructure. We can help overcome obstacles to investment, build up planning capacity and create the environments that enable the development of a pipeline of affordable, bankable and sustainable projects.

As important as increasing the quantity of planned investments is our ability to improve the quality of investments through our knowledge-sharing platforms. One of the ways we achieve this is via our work with the G20's Global Infrastructure Hub. Its mandate is to grow the global pipeline of quality, bankable infrastructure projects. We also implement our own programmes for infrastructure project preparation.

By taking steps to increase their own efficiency and effectiveness, MDBs are helping to ensure that their contributions have maximum impact. MDB support for the recently launched Global Infrastructure Connectivity Alliance will also provide greater coordination in the response to the global infrastructure challenge.

EBRD teams work daily to deliver infrastructure projects that can transform whole communities. New opportunities are opening up with new partners. In June this year we signed our first project with the AIIB, providing finance for a motorway connecting Tajikistan's capital, Dushanbe, with neighbouring Uzbekistan. We also recently unveiled investments aimed at improving the road transport system in the Western Balkans, where integration is an overriding economic priority.

Making progress

One key aspect of the EBRD's engagement is its ability to attract capital market funding to support infrastructure investments. For example, we are an anchor investor in a Eurobond recently launched to finance the Mersin International Port on Turkey's Mediterranean coast. MDBs have our work cut out, especially in identifying and helping to remove the bottlenecks that hinder greater levels of private and public sector infrastructure investment.

Many technical tasks lie ahead, such as assessing the legal and regulatory impediments to investment, choosing the financial instruments best attuned to attracting private investors, standardising documentation and procedures and sharing knowledge among the various parties. We shall not shy away from this work. We are determined to embrace it as we concentrate on achieving the longer-term goal of delivering the infrastructure that the global economy needs.

In July, G20 finance ministers asked the MDBs to report regularly on the status of their pledge to increase infrastructure investment and to catalyse additional private investment. I am confident that we will be able to demonstrate that real progress has been made. **G20**

Sir Suma Chakrabarti

President
European Bank for Reconstruction and Development

Sir Suma Chakrabarti is the sixth President of the European Bank for Reconstruction and Development (EBRD) and was re-elected for a second four-year term in 2016. Before arriving at the EBRD he held the position of Permanent Secretary at the British Ministry of Justice and was its most senior civil servant. Previously, Sir Suma headed the United Kingdom's Department for International Development. He also worked in the UK Treasury and in the Cabinet Office.

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KEY TAKEAWAYS

Asian markets are fragmented because of bottlenecks in infastructure

The Asian Infrastructure Investment Bank has been created to meet needs

New approaches to infrastructure investment

*A new type of multilateral development bank has been created to help investment and overcome the challenges of the global economy, writes **Jin Liqun***

Infrastructure forms the foundation of an economy. Improved infrastructure facilitates growth and prosperity and is critically important for the free movement of goods, services and labour. It is essential for promoting development and a good life for the people of all nations.

In Asia, markets are fragmented, partly because of inadequate connectivity that reflects bottlenecks in infrastructure. The persistence of this market fragmentation has adversely affected the leveraging of the vast savings in this region. It has also compromised regional integration and economic development.

Meeting demand

With ample capital and a significant need for investment, we must ask ourselves what can be done to get funds where they are desperately needed. We must find a way to translate need into demand, developing a supply of bankable projects.

Multilateral development banks (MDBs) can help mobilise financial resources to meet the pent-up demand for infrastructure investment by filling in the funding gaps.

MDBs are also able to provide crucial advice, help with project preparation, leverage their own balance sheets and help governments create a credible environment. All this is critically important to successful and sustainable investment.

Against the backdrop of the global economy, the investment environment has become more challenging. Sluggish growth, rising debt and policy uncertainty all pose formidable risks for investors. There have been a record number of sovereign credit rating downgrades by the big three credit rating agencies (S&P, Moody's and Fitch) this year. An unprecedented $13 trillion in government bonds now carry negative yields as investors flee for safe assets.

To overcome the plethora of challenges, we must all work together. MDBs, hand in hand with borrowers, need to ensure a stable policy environment that can assuage concerns from the private sector. We must reduce project and country risk to boost the attractiveness of investment.

Existing MDBs have undoubtedly made meaningful contributions to addressing major infrastructure needs. However, their capacity is insufficient for the task. The Asian Infrastructure Investment Bank (AIIB) has been created to add capacity and to meet the needs mentioned above.

Everyone should be encouraged to push for the creation of something good that will benefit everyone, as they did for the World

75%

Approximate amount of shares in the Asian Infrastructure Investment Bank held by its regional members

It focuses solely on infastructure but allows for a broad definition

Green and cross-border infastructure are among its clearly defined targets

ISTOCK IMAGES

Gardens by the Bay is part of a strategy by the Singapore government to transform Singapore from a "Garden City" to a "City in a Garden"

Bank, the International Monetary Fund, the G20, the World Trade Organization and other initiatives.

This is particularly true now, at a time when the global economic environment is complex and when the actions of AIIB can provide a steadying force for growth.

A different approach

As the newest member of the MDB family, the AIIB cannot stray too far from the practice of existing MDBs. We are not wildly different, but we have striking new features to justify our raison d'être.

Like other MDBs, we seek a high leverage of shareholder capital. We also share the same governance and core principles. Our environmental and social standards are the same and our operational policies and institutional documents have benefited tremendously from other MDBs' expertise.

AIIB is different from other MDBs in that we have a razor-thin focus, but a broadly defined mandate. We are focused solely on infrastructure and only on project finance, yet we have a broad definition of what constitutes infrastructure. This combination will give us flexibility within our mandate.

$13TR
Government bonds carrying negative yields

As a more focused institution, AIIB seeks to make a significant contribution to address infrastructure gaps, especially in three areas.

First, we will fully devote our efforts to develop green infrastructure, helping countries address environmental challenges and the Paris Agreement commitments.

Second, we will prioritise cross-border infrastructure. It is important to have a new type of multilateral financial institution that contributes to intra- and inter-regional connectivity through infrastructure investment, facilitating trade and cross-border investment while pushing for a broad-based reduction in poverty and peace.

Third, we will focus on mobilising private capital for infrastructure, which is necessary if we are to meet the enormous infrastructure needs.

We believe the AIIB is well poised to weather any storm in the toughest of global economic and financial environments.

Our success depends on a clear, implementation of sound governance and management, and persistence in adherence to best practices as we move forward. **G20**

Jin Liqun

President
Asian Infrastructure Investment Bank

Jin Liqun was appointed the inaugural President of the Asian Infrastructure Investment Bank (AIIB) in January 2016, having served as President-Designate since September 2015. Previously, he was Secretary-General of the Multilateral Interim Secretariat (MIS), which prepared the legal, policy and administrative frameworks required for establishing the AIIB. Before working on the AIIB, Jin served in top management at the China International Capital Corporation Ltd, China Investment Corporation and the International Forum of Sovereign Wealth Funds, as well as the Asian Development Bank and China's Ministry of Finance.

www.aiib.org

KEY TAKEAWAYS

- Infrastructure is at the heart of the Chinese G20 agenda
- The GI Hub's tool for risk assessment will help to guide governments

Christopher Heathcote

CEO
Global Infrastructure Hub

Christopher Heathcote is the Chief Executive Officer of the Global Infrastructure Hub, mandated by the G20's 2014 Brisbane Summit to grow the global pipeline of infrastructure projects. His career began in the private sector in the 1990s as a founding partner of Hyder Infrastructure Investors and adviser on many international public-private partnerships (PPPs). Towards the end of the 1990s, he moved to Partnerships UK, a PPP project set up by the UK Treasury to advise the public sector in procuring infrastructure programmes. He returned to the private sector in 2006.

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GI Hub: providing concrete support for China's G20

*The Global Infrastructure Hub will help the G20 work towards long-term impact by growing the global pipeline, writes **Christopher Heathcote***

The global economy faces low growth, an estimated infrastructure deficit of up to $20 trillion by 2030 and low interest rates, which are compressing margins and driving a search for higher yielding assets.

Infrastructure is at the heart of the Chinese G20 agenda. The GI Hub, with its mandate to grow the global pipeline of potential infrastructure projects, has worked closely to support the Chinese presidency.

At their most recent meeting in July in Chengdu, G20 finance ministers and central bank governors welcomed the GI Hub's online, interactive tool for risk assessment in public-private partnerships (PPPs). This tool will help to guide governments to better allocate risk in PPP projects, a key barrier to the private sector investing in an infrastructure project.

The finance ministers also asked the GI Hub "to work with the MDBs (multilateral development banks) to assess internal

It is a member of the G20's Global Infrastructure Connectivity Alliance

Its Capability Framework will be publicly available from early 2017


DAVID GRAY/REUTERS/ALAMY

Workers underneath a railway bridge building project in Beijing, China

> *The GI Hub has been asked to provide leadership on the knowledge agenda*

$20TR

The global economy's estimated infrastructure deficit by 2030

incentives with regard to crowding in private finance and to report to our Deputies in December 2016". This is a key priority for the GI Hub, with MDBs uniquely placed to catalyse further inflows of private finance into infrastructure. MDBs are present on the ground in many countries and are trusted partners. They have project preparation facilities to support learning and good processes and they have financial and guarantee-based products to support private sector investment. With their scale, they are ideally placed to take a leadership role in ensuring that lessons learned are generalised within countries, helping to reduce the barriers to investment preventing many countries from progressing.

Partnerships and assessment

The difficult area of cross-border projects was a further priority of the Chinese presidency. Together with the World Bank, which will provide the secretariat, and the Organisation for Economic Co-operation and Development, the GI Hub is a member of the Global Infrastructure Connectivity Alliance, which was launched by G20 finance ministers and central bank governors on 24 July. The GI Hub has been asked to provide leadership on the knowledge agenda relating to the financing of infrastructure. It will also look to include connectivity-related literature in its knowledge-sharing resources and connectivity-focused projects on its project pipeline.

In partnership with EDHECinfra in Singapore, the GI Hub has also recently released a survey assessing the attitude towards and appetite for investment by infrastructure investors and advisers. Important findings included that 65 per cent of investors are looking to increase their exposure to infrastructure and more than 90 per cent are concerned by the lack of opportunity. Encouragingly, there is strong investor appetite for emerging market infrastructure.

Providing forecasts

During the next six months, three priorities for the GI Hub are the release of the Infrastructure Needs Assessment, the initial iterations of the Capability Framework and the Global Project Pipeline.

The Infrastructure Needs Assessment will be a comprehensive estimate of 50 key countries, with a global overview. It will provide detailed global, regional and country-level forecasts of annual infrastructure spending, needs and gaps, up to 2040. The estimates will be separated by infrastructure sector – water, power, transport, telecoms – and will account for the United Nations Sustainable Development Goals and the Paris Agreement on climate change. The assessment will be designed for the public and private sectors as a platform for policy reform and investment analysis.

The Capability Framework, which will be publicly available in early 2017, will provide a detailed analysis of the capability of individual countries to undertake infrastructure development, focusing particularly on the investment environment, government capability, public and private financing, and infrastructure markets. It will identify the strengths and weaknesses of existing legislation and frameworks, so as to help countries maximise their appeal to private investors.

Pipeline launch

The GI Hub's Global Infrastructure Project Pipeline initiative, which is being undertaken in response to a specific mandate from the G20, is designed to meet the private sector's need for a consolidated and standardised global database of prospective infrastructure projects. The pipeline will present prospective projects using a common format, to assist users to make comparisons across countries, sectors and projects. It will include advance visibility of upcoming government projects, and will provide an opportunity for countries to market their infrastructure projects broadly on a global platform.

The GI Hub is aiming to have the pipeline launched with a select number of initial governments by the end of the year, with additional countries joining the pipeline throughout 2017. Like all the GI Hub's products, it can be used by both G20 members and all other countries. In 2017, as well as focusing on deployment of these various tools, the GI Hub will continue to develop other new products to help deliver on its mandate. **G20**

ICAEW

G20 China: towards a world of strong economies

Working at the heart of the public policy challenges faced by the G20, chartered accountants are well placed to support governments and business to address the complex issues facing the global economy.

In 2016, G20 leaders once again meet in economically challenging times. The IMF has cut its global growth forecast for 2016 to 3.2 per cent and political and financial developments in Europe and Asia have further increased economic uncertainty. There is a need for increased cooperation between G20 countries to rise to the challenges that lie ahead and escape the "low growth trap". Strategic leadership at the G20 must be matched by effective collaboration between nations, the business community and international institutions if we are to restore the path towards sustainable growth.

If the G20 is to achieve its objective of boosting global GDP by a further two per cent by 2018, it must shift from simply reacting to events towards shaping our economic destiny. To reignite global growth and achieve a world of strong economies G20 leaders should focus on:

1. **Investing in infrastructure as a catalyst for re-invigorated growth**
   From the roads that transport our goods to the broadband that keeps us connected, world-class infrastructure provides a strong foundation for businesses to deliver jobs, growth and prosperity for all.
2. **Implementing international tax reform to enable growth in an interconnected world**
   In an increasingly interconnected global economy, it is critical that the international tax system reflects the changing nature of business whilst maintaining the trust of the public. The international community's ability to agree on the consistent implementation of the BEPS package is essential to deliver an tax system which is fit for the 21st century.
3. **Facilitating an environment that promotes entrepreneurship and SME driven innovation**
   Small and medium-sized businesses are the backbone of national economies. They account for two thirds of all jobs in G20 countries and form the bedrock of dynamic and innovative economies. The World SME Forum was a promising development at last year's Summit; this year the G20 should renew its commitment to fostering a world of entrepreneurship. .

ICAEW: A world leader of the accountancy and finance profession

China is well placed to drive this ambitious agenda for the G20 and support economies in both the developed and developing world. The Hangzhou Summit, held under the overarching theme of "an innovative, invigorated, interconnected and inclusive world economy" is a golden opportunity to agree a set of actions and principles that will steady the ship and lay the path for sustainable growth in the years ahead.

The chartered accountancy profession works to advance economic stability, strengthen financial systems, promote accountability and long-term sustainable growth. As an international professional body which supports over 146,000 chartered accountants worldwide, ICAEW stands ready to work with the G20 to help tackle the complex challenges facing the global economy and achieve the vision of a world of strong economies.

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Regulating finance

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority financial regulation and international financial institutional reform commitments from 2008 to 2014

+0.48 74%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

ICON MADE BY ELEONOR WANG FROM FLAT ICON

Spearheading the OECD's BEPS Project

The OECD and the G20 are working together on an Inclusive Framework in order to combat global tax avoidance, writes ***Pascal Saint-Amans***

This year, the Base Erosion and Profit Shifting (BEPS) Project of the Organisation for Economic Co-operation and Development (OECD) and the G20 remained a significant focus for tax policymakers, tax administrations as well as enterprises and tax practitioners around the globe. Launched in 2013 at the behest of G20 leaders, the project targeted the loopholes and mismatches in the international tax system that facilitate shifting corporate profits away from the location of the underlying economic activity and value creation. After two years of working with G20 members, the OECD delivered a comprehensive package of anti-BEPS measures in October 2015, which was endorsed by the G20 leaders in November 2015 at their meeting in Antalya.

The package of BEPS measures addresses three key issues identified in the 2013 BEPS Action Plan: to ensure that the substance of international tax rules aligns taxation with the location of economic activity and value creation, establish coherence between domestic tax systems and across the international rules, and promote transparency including with a view to increasing certainty and predictability. The measures delivered are practically focused, providing policy detail as well as tools for implementation, including model provisions for tax treaties and domestic legislation, templates and practical guidance. They represent the most significant reform of the international tax system in a century and are expected to address tax avoidance by multinational enterprises conservatively estimated to cost almost a quarter of a trillion dollars in lost revenue annually on a global basis.

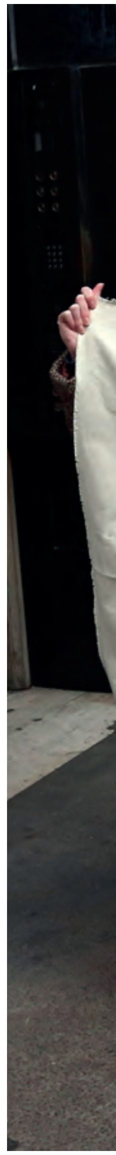
> *The project targets the loopholes and mismatches in the international tax system*

Going global

Setting the standards is, however, only the starting point. The BEPS Project is now moving into its implementation phase. G20 and OECD members have agreed this year to enhance global engagement further by creating a new framework that enables the direct involvement on an equal footing of interested countries and jurisdictions.

Thirty-nine new countries and jurisdictions have joined the Inclusive Framework on BEPS and have committed to implement the BEPS package, bringing the total number of countries and jurisdictions participating in the project to 85, including more than a dozen African countries. This constitutes a milestone, noting that the corporate income tax (CIT) revenue losses are of particular concern for developing countries, where the impact of BEPS, as a percentage of tax revenues, is higher than in developed countries given their greater reliance on CIT revenues.

The mandate of the OECD and the G20 Inclusive Framework on BEPS focuses on the review of implementation of the four BEPS minimum standards in four areas – harmful tax practices, tax treaty abuse, country-by-country reporting requirements for transfer pricing purposes and improvements in cross-border tax dispute resolution – while monitoring implementation of the rest of the BEPS package. It will also monitor new developments relating to taxation of the digital economy and measure the impact of BEPS, as well as finalise the remaining technical standard-setting work on the BEPS package by 2017. The framework will support countries in implementing the BEPS


PETER MACDIARMID/GETTY IMAGES

KEY TAKEAWAYS

The package addresses key issues identified in the BEPS Action Plan

There are 85 countries and jurisdictions participating

The Multilateral Competent Authorities Agreement is now in place

Protesters from UK Uncut target Starbucks in London, England

package, taking into account the needs and constraints of low-income countries, by delivering some practically focused toolkits on their top priority BEPS-related issues, such as comparable information needed for transfer pricing purposes, and indirect transfer of assets.

Supporting implementation

This year countries have initiated the challenging process of turning the BEPS measures into reality, with the OECD working to support consistent, global implementation. It not only applies to hybrid mismatch legislation, but also to country-by-country reporting.

More than 50 countries have now taken concrete steps to implement this reporting, and 44 have already signed the Multilateral Competent Authorities Agreement, which establishes the framework for the automatic exchange of the country-by-country reports. Furthermore, tax treaty-related BEPS measures are being incorporated in a multilateral legal instrument to update existing networks of bilateral tax treaties. There are 96 countries involved in its negotiations, which account for more than 2,000 bilateral treaties. The negotiations are to be concluded by the end of 2016, with this landmark instrument then being open for signature by countries.

The BEPS package is already becoming reality in 2016, demonstrating that tax avoidance is not a fate to which we must simply resign ourselves. Working with the OECD and supported by the political leadership of the G20, governments have been able to find a consensus that has brought dramatic change and a much-needed update to the international tax landscape. **G20**

Pascal Saint-Amans

Director
Center for Tax Policy and Administration at the OECD

Pascal Saint-Amans has been Director of the Center for Tax Policy and Administration (CTPA) at the Organisation for Economic Co-operation and Development (OECD) since 2012. He joined the OECD in September 2007 as Head of the International Co-operation and Tax Competition Division in the CTPA. In 2009, he was appointed Head of the Global Forum Division, created to service the Global Forum on Transparency and Exchange of Information for Tax Purposes. Before joining the OECD, he was an official in the French Ministry for Finance for nearly a decade.

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The global state of tax

While the global markets may have slowly recovered from the financial crisis of 2008, there are many lingering reminders of its impact across politics, policy and business. Tax, together with the role of Multinational Corporations (MNCs), has often been in the firing line. Most recently, the Panama Papers emphasised public cynicism and hostility towards big business, while the Brexit decision – at least for some commentators – was as much about society's rejection of so-called establishment "elites", as it was about whether or not the UK should remain in the European Union.

As public trust remains fragile, MNCs continue to operate in a volatile stakeholder environment, characterised by uncertainty and a significant disconnect between economic and political institutions and the societies in which they function. Tax is frequently the prism in which the relationship between big business and society is viewed.

> *It is in the court of public opinion that solutions have to be negotiated*

Tax matters

Tax, at its most fundamental level, is the entry fee we pay for a civilized society. Trust between all stakeholders and players in this social contract is based on the foundation of responsible tax.

Responsible tax behaviour should therefore be an integral part of governments and of all socially responsible businesses that seek to earn and maintain society's trust and citizens' respect.

Advances in globalisation, financialisation, and digitalisation, however, have created unstable conditions: where money flows freely across borders and legislation struggles to keep pace, it can result in mismatches and legal anomalies (sometimes characterized as "loopholes") that are complex to the point of opacity. At the same time, similar advances facilitating the free flow of information have made public suspicion and scrutiny all the more intense: citizens and society have the tools to hold businesses to account – sometimes aggressively so. Businesses can no longer expect to impose or receive public support just by stating that what they do is within the strict letter of the law – they must also consider the context in which we all live and operate. Tax remains a legal duty but, in the court of public opinion, it also has a clear moral or ethical dimension. It is in the court of public opinion that solutions have to be negotiated, not imposed.

This question or challenge of tax responsibility, which is always subjective, makes policy and decision-making more complex still. While KPMG in the UK has publically available Tax Principles in place to help guide [its]tax professionals, KPMG can neither impose nor lay claim to any easy solutions – it has discovered in a two-year project on Responsible Tax, in the UK.

Responsible tax – learning from the UK

Acknowledging and embracing the complexity of the situation, were the first steps in bringing to life the Responsible Tax for the Common Good project. Launched in 2014, the project now involves a stakeholder community of more than 700 – including 100-plus active members – drawn from corporations, advisory firms, government, regulators, NGOs and civil society. Importantly, a number of these are harsh critics of the status quo and of the corporations and their advisors that some see as the source of the problem, not the solution. In the spirit of radical transparency, KPMG has opened up the tax subject for discussion, and encouraged constructive dialogue between multiple stakeholders to determine responsible ways forward. Dissenting voices have been especially welcome. Greater trustworthiness between the various parties has been built through this demonstration of reciprocal vulnerability.

The UK Responsible Tax movement continues to attract new voices, and – among many initiatives – recently led to the creation of the first All Party Parliamentary Group (APPG) on Responsible Tax in

Jane McCormick,
Global Head of Tax,
KPMG International

the UK as well as a series of consensus-seeking work-streams on, inter alia, the role of corporation tax; the needs of the developing world; the demands of transparency; and the core challenge of tax morality itself.

What began as a KPMG UK initiative now has real national and global momentum.

A constant conversation with no easy answers

KPMG fully endorses the OECD and BEPS initiatives geared towards transparency and, coordination of international tax rules. It is true that sovereign states have the right to decide what tax system is most appropriate for their situation; but, one country's tax competitiveness can be easily interpreted by others as supporting tax avoidance. MNEs may look to arbitrage conflicting rules to reduce their tax rate or may just be caught in the cross fire between the various countries and stakeholders with different priorities and views. Hence, the visible need for an open and honest, global discussion. KPMG's experience in the UK has provided the firm with the high-altitude training required to help lead the discussion – and hence these first stages in now convening a global council on Responsible Tax.

An informed, collective conversation, reaching to the heart of taxation as a concept, and played-out against a global economy, has wide-reaching potential to change the way we think about tax and therefore business's relationship to society.

The first stage in initiating this debate will be to ensure participants in the conversation can ask the right questions. A recent 2016 event hosted by KPMG for Chief Tax Officers to discuss the global roll-out of the tax debate revealed a number of issues currently vexing the corporate tax community:

- What will it take to make a difference globally and create a real tax coalition between nations?
- How do we engage all sides in conversation (corporations, policy-makers and civil society) to ensure a balanced debate?
- How do we build technical capacity for responsible tax to take root and flourish?
- How do we ensure the debate on responsible tax fully engages and respects the challenges of developing countries?
- How important is US support in this debate? How can it be properly integrated?

These are just five opening questions. There will undoubtedly be more. KPMG is pleased to help lead and host the debate, recognising its importance for issues not only of global taxation but also of public trust and confidence in business. We appreciate that there is no easy answer, but we very much hope that others are ready and willing to join-in to help us further develop thinking around Responsible Tax behaviour and advice.

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KEY TAKEAWAYS

An increase in China's non-performing loans (NPLs) is causing concern

An increase in NPLs is normal during periods of economic transition

Creating better banking

*If the last decade has taught us anything, it is that the global banking practices are far from perfect. **Zhang Yanling** looks at what can be done in banking to promote Chinese reforms*

In Brisbane in 2014, when the G20's focus was on the money shortage in China in 2013, I outlined how the situation would be improved. Since then, this problem has been solved quite successfully.

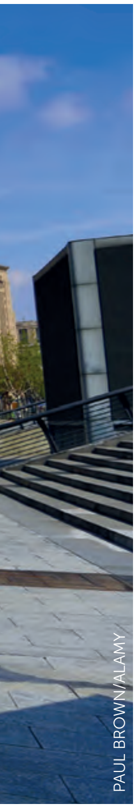
Today, the main concern about China's economy focuses on the banking sector's non-performing loans (NPLs). By the end of May 2016, NPLs exceeded two trillion RMB, up 0.16 per cent since the beginning of the year. The NPL rate has now risen to 1.75 per cent of all loans, with another 4.01 per cent falling into the next-worse or 'special mention' category. This increase in bad loans will inevitably lead to a decline in profits. In 2011, profits in China's banking sector surpassed 36 per cent. In 2015, they were only 2.4 per cent. The NPL rate in China is causing widespread concern worldwide, casting China's financial sector in an unfavourable light. Headlines proclaiming that China has the biggest NPL banks or that financial risk is the biggest uncertainty troubling China's economy understandably make people uneasy. However, a few points should be made.

NPLs on the rise

First, most NPLs can be traced back to when the economy was booming. When an economy grows fast, bank loans expand rapidly and the NPL rate becomes diluted by fresh loans. However, today, during the economic transition, China's government is implementing measures to cut excess production capacity, adjust the overall national economic structure and de-stock inventory. In this environment, the growth of bank loans slows down considerably, no longer diluting the NPL rate as much. The absolute number of NPLs is shooting up, because some enterprises are short

Banks are addressing NPL issues, partly by disposing of bad assets

China's banking sector is restructuring to become more customer-centric



PAUL BROWN/ALAMY

The 'Shanghai bull' sculpture, installed in 2010, symbolises the Chinese markets' durability

of liquidity after banks tightened lending standards. With such changes, the NPL ratio has indeed worsened. Higher NPL ratios have a reassuringly regular pattern of returning, though. In a given year, the worsening ratio usually occurs in the same banks, the same regions, the same industries and the same economic zone. This correlation is enough to confirm that the main cause of the problem has been accurately identified.

Second, banks' exposure to higher NPL levels is a good thing because it obliges them to solve NPL issues, speeding up the disposal of bad assets. Historically, banks have not paid enough attention to weaknesses in their risk control systems. Now they must adopt more useful measures to reduce credit risks more swiftly. This contributes to the national industrial adjustment policy by promoting the optimal allocation of financial resources and will help China's banks.

Third, to be fair, the performance of banks in other countries is no better than that in China. According to the World Bank, China's NPL rate is far lower than that in some developed countries and notably lower than in Brazil, Russia or India. China's loan provision ratio is 3.06 per cent, taking only cash into account and not the value of collateral. Its NPL provision coverage ratio (175 per cent) and return on equity are both the highest in the world.

Fourth, the Financial Stability Board should conduct ex-post evaluations of financial regulatory reform since 2008.

175%

China's non-performing loan provision coverage ratio, the highest in the world

The high costs of regulation, complicated procedures for customer access to financial services, and stringent requirements for businesses and others should be assessed. Today micro-payments are almost entirely dominated by internet finance, because banks are subject to strict procedures that force up their costs and leave them less competitive. Similarly, banks conducting finance under factoring – or selling accounts receivables to avoid a 30- or 60-day delay – face such strict requirements on capital and risk controls that their costs have jumped and they are losing out to independent factoring companies.

Development and growth

Last, to meet the challenge of market-oriented reforms of interest rates and to compete with emerging internet finance, China's banking sector has already begun restructuring. Banks are beginning to live up to a more customer-centric philosophy. Each bank is also developing a differentiated strategy to match its own strengths and provide customers with integrated, one-stop financial products and services.

From 2008 to 2014, China contributed an average of 30 per cent to global economic growth. In 2015 it still exceeded 25 per cent. China's financial markets and banking sector have played an important role and adapted considerably over the development processes of the last decades. They will again adapt successfully, as integral parts of these latest reforms, and, as a result, continue to optimise their facilitation of

Zhang Yanling

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Having joined the head office of the Bank of China in 1977, Zhang Yanling was appointed Executive Assistant to the President in 2000. From 2002 until retiring in 2011, she served as Executive Vice President. She is currently a Senior Fellow of the Chongyang Institute for Financial Studies at Renmin University of China, a member of the executive board of the World Council of the International Chamber of Commerce (ICC), Vice Chair of ICC-China, and director of the Negotiable Instruments Law Research Centre at China University of Political Science and Law.

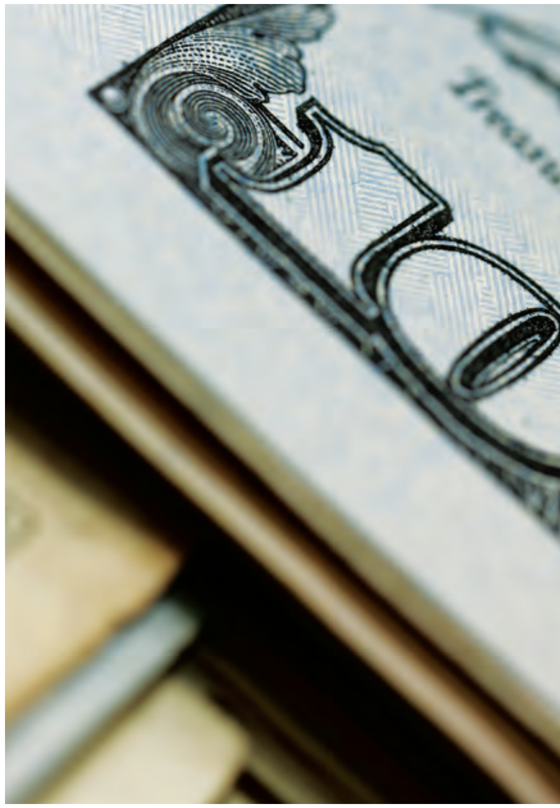
www.ruc.edu.cn/en

KEY TAKEAWAYS

- The FATF framework provides tools to deprive terrorists of their funds
- It has identified large-scale misuse of legal persons and arrangements

Fighting money laundering and terrorist financing

The Financial Action Task Force's global framework and standards are relevant to and can be implemented by the G20, writes ***Juan Manuel Vega-Serrano***



The persistent terrorist threat and the recently highlighted large-scale abuse of corporate vehicles demonstrate once again how critically important the work of the Financial Action Task Force (FATF) is in protecting the integrity of the international financial system.

The FATF has developed a global framework of standards to combat money laundering, terrorist financing and proliferation financing. At the highest level, 198 jurisdictions have committed to implement them fully. The FATF also analyses the methods criminals and terrorists use to launder and raise their funds. We conduct peer reviews to assess how effectively countries are implementing the global standards. We identify countries with strategic deficiencies that pose risks to the international financial system and take action to make sure they fix those problems.

As a result, most countries now have the tools necessary to deprive criminals and terrorists of their funds. But many still fall short of implementing them and enforcing them effectively.

Terrorist groups may benefit from access to the international financial system. A global effort is required to deny them that access. Preventing and disrupting terrorist financing creates a hostile environment for terrorism. A lack of money can limit the capability of terrorist groups to prepare or carry out attacks and financial intelligence can reveal the structure and activities of terrorist groups, and their logistics and facilitation networks.

> *"A lack of money can limit the capability of terrorist groups to prepare or carry out attacks"*

Using tools effectively

The FATF's top priority is to reinforce international measures to combat terrorist financing. Earlier this year we adopted a consolidated strategy focused on maintaining an up-to-date understanding of the changing terrorist financing risks, ensuring that the FATF standards provide effective tools to identify and disrupt terrorist financing. The aim is to ensure countries are using these tools effectively, and promoting better domestic coordination and easier international cooperation to combat the financing of terrorism.

In April, the large-scale misuse of legal persons and arrangements was exposed. The FATF had introduced standards in 2003 to prevent the misuse of companies and trusts and to ensure transparency about their true owners. As a result, most countries now require their financial

Technological innovations can make financial services more efficient

The G20 can provide leadership for the global effort needed

BERNIE_PHOTO/ISTOCK IMAGES

institutions, lawyers, accountants and other regulated sectors to identify the beneficial owner of their customers. However, that is only part of what is required.

Most countries have not fully implemented the FATF Recommendations to ensure the adequate, accurate and timely availability of basic legal and beneficial ownership information. The FATF's peer review process is already identifying countries with inadequate measures to prevent the abuse of corporate vehicles. The FATF, with the support of the G20, is working to identify further ways to strengthen implementation of these measures globally.

198

Jurisdictions committed to the FATF framework

Private sector insights

In recent years the FATF has intensified its engagement with the private sector, a primary entry point into the international financial system. This constructive and continued dialogue enables the FATF to benefit from private sector insights and ensures a partnership is in place that protects the integrity of the financial system.

Technology-based innovations are radically changing the financial industry and some of the assumptions on which the FATF standards are based. We need to ensure that these innovations can realise their potential to make financial services more accessible and more efficient. At the same time, we must ensure that emerging financial technologies do not make life easier for criminals and terrorists.

The FATF plans to develop a new partnership with the financial technology (FinTech) and regulatory technology (RegTech) communities to support innovation in financial services, while maintaining transparency and mitigating the associated risks.

The FATF's work is relevant across the G20's agenda – from anti-corruption to countering terrorist financing, to supporting stable and efficient financial markets. The FATF regularly updates the G20 on terrorist financing risks and the progress countries are making to mitigate these.

Through fully and effectively implementing the FATF standards as soon as possible and calling on other countries to do the same, the G20 can provide real leadership in the global effort to deprive criminals and terrorists of their funds. **G20**

Juan Manuel Vega-Serrano

President
Financial Action Task Force

Juan Manuel Vega-Serrano became President of the Financial Action Task Force (FATF) on 1 July 2016. He is the Director and CEO of Servicio Ejecutivo de la Comisión de Prevención del Blanqueo de Capitales e Infracciones Monetarias de España (SEPBLAC), Spain's Financial Intelligence Unit and Anti-Money Laundering and Countering Financing of Terrorism (AML/CFT) Supervisory Authority. In 2001 he became Assistant Deputy Director General of Spain's Treasury and began attending FATF meetings. In 2005, he was appointed Secretary of the Commission for the Prevention of Money Laundering, where he promoted a comprehensive revision of Spain's AML/CFT legal framework.

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LIECHTENSTEIN BANKERS ASSOCIATION

Liechtenstein: a competitive and stable IFC ready for the future

The ongoing flood of regulations poses great challenges for financial centres worldwide. For smaller financial centres such as Liechtenstein, it is even more challenging. However, Liechtenstein was in recent years able to evolve into a competitive financial centre and a reliable and respected partner in the international community. This was not accomplished without having to take major steps.

Since the 2008 financial crisis, the regulatory environment has become vastly more dynamic and complex. Financial centres around the world are faced with constant changes. Liechtenstein as well has been directly affected by a bulk of regulations since joining the EEA in 1995, transposing more than 8,000 pieces of EU legislation into national law. The tax debate then kicked off in 2008, putting Liechtenstein under heavy pressure. The Liechtenstein Declaration of 2009 represented a milestone in the country's evolution into a modern financial centre of international standing. In the Liechtenstein Declaration, the country unanimously agreed to consequently comply with international standards in tax matters. Since then, Liechtenstein has signed more than 45 OECD-compliant tax conventions, including 18 new double taxation agreements and two special agreements with the UK and Austria to ensure tax compliance.

Early adopter and reliable partner

The government declaration issued four years later in 2013 was a second key milestone, in which the firm commitment to automatic exchange of information was anchored. That year and 2009 can certainly be characterised as critical years in moving Liechtenstein forward. Just a week or so after the government declaration, Liechtenstein signed the Convention on Mutual Administrative Assistance in Tax Matters. On 29 October 2014, Liechtenstein was an 'early adopter' in signing the Multilateral Competent Authority Agreement (MCAA) on automatic exchange of information with 50 other countries. Joining the early adopters group and signing the MCAA was the logical next step in executing the country's formally adopted tax compliance strategy, which banks had already promoted by adopting uniform minimum due diligence obligations to ensure tax compliance on the part of their clients. Liechtenstein thus demonstrated its predictability, and again in 2015, by unsurprisingly signing the Agreement on Automatic Exchange of Information with the EU.

International bodies confirm credible implementation

Words were followed by deeds, as in 2015 Liechtenstein conducted its first automatic exchange of financial data with the US on the basis of the Intergovernmental Agreement (IGA) signed in May 2014. The Global Forum likewise published its report on phase 2 of the audit of implementation and application of OECD standards in Liechtenstein in 2015. The report confirmed that Liechtenstein is adopting the OECD standards as law and pro-actively and effectively enforcing these in actual practice. The report found that Liechtenstein is "largely compliant", underscoring the country's credibility as a reliable partner. On 1 January 2016 a comprehensive legislative package came into force including the national law on automatic exchange of information, the corresponding ordinance as well as the legal foundation for expanding mutual administrative assistance in tax matters to permit group requests, along with implementation of requirements to treat serious tax offences as a predicate offence to money laundering.

Stability as the greatest asset

Despite these many regulations and international obligations – involving many legislative change and political processes – today Liechtenstein's banking industry is more stable and solid than ever before. Banks have systematically pursued targeted strategies of internationalisation and service development.

Today, Liechtenstein is a successful and respected IFC. This was not accomplished without major steps

The results for the financial year 2015 were entirely satisfactory, even though conditions remain difficult. Operating results have again improved and costs have been further reduced, significantly optimising the cost-income ratio overall. Banks recorded solid new money inflows in growth and domestic markets and also improved their capitalisation. The average Tier One ratio for all banks on a consolidated basis was 21.3 per cent. Given the current political and economic uncertainties, a high equity ratio represents a valuable asset not to be underestimated for the attractiveness of Liechtenstein as a banking centre.

Prudent business strategy

Liechtenstein is a small but unquestionably attractive and stable financial centre in the heart of Europe. The country's positioning between two separate economic areas is without parallel worldwide. Thanks to Liechtenstein's membership in the European single market, Liechtenstein banks enjoy full service freedom in all the EEA states with more than 500 million customers. Stability is one of the chief advantages Liechtenstein has to offer. On July 29, 2016 rating agency Standard & Poor's affirmed again its top AAA sovereign rating with a stable outlook. That makes Liechtenstein one of only 12 countries worldwide to enjoy this top rating. Another important reason for the stability of the banks is the prudent business strategy pursued for decades. Under S&Ps Banking Industry Country Risk Assessment (BICRA), Liechtenstein provides one of the lowest country risks being assigned to risk group two. Liechtenstein is a small and specialised financial centre with more than 150 years of experience in its core competency private banking and with representations in more than 20 different locations worldwide. Professional advice and high-quality services are the traditional strengths of Liechtenstein's banks, and have driven their success. High risk investment and credit business was not entered into down the decades.

Ongoing challenges and constant change

Although we look forward with optimism, there is clearly still a great deal to be done. The flood of regulation will not be ebbing any time soon. And the next momentous changes are already underway. Banks have to deal with constant change, including continuously shifting client needs. Sustainability-oriented investment policies are becoming increasingly important. And digitalization, which will open up entirely new channels for settlement, communication and distribution and will break up existing value chains, holds great potential as well. Liechtenstein's financial market players have been working on those two issues for some time already. Sustainability has in fact joined quality and stability as a key pillar of the Roadmap 2020 – the recently issued strategy for the future of the banking centre. The LIFE Climate Foundation Liechtenstein is one such sustainability initiative the banking industry is involved in.

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LIECHTENSTEIN BANKERS ASSOCIATION

KEY TAKEAWAYS

- Standard-setting boards for accountants can help everyone
- Financial stability should be promoted in the private and public sectors

Accounting for stability

As the G20 leaders gather in Hangzhou, China, global security will undoubtedly be on the agenda – and rightly so, writes ***Fayez Choudhury***

85% of the world's GDP belongs to G20 members, while they represent **78%** of the world's trade

CURRENT ACCOUNT BALANCE

2015 (US$ Billions)

The largest surplus and deficit among G20 members:

Source: World Bank

In the search for social and economic stability – the prerequisite for a more secure world – it is important to look deeper into the fabric of our economies and to understand that restoring public trust and integrity in government and business is essential. This can only be realised when leaders enact the highest principles of good governance.

Strong public and private sector governance are key pillars for recovery, growth and stability – and essential to the fight against fraud and corruption. We in the International Federation of Accountants believe the G20 should strongly endorse good governance in this context.

Transparent and accountable

Professional accountants, bound by a code of ethics to act in the public interest, have long understood that transparency and accountability are key to organisational success. Instead of merely talking about it, we have been actively working towards solutions by supporting the work of critical organisations, such as the international standard-setting boards for accountants in the fields of audit and assurance, education, ethics and public sector accounting, and the International Integrated Reporting Council (IIRC).

The output of these bodies can make an important contribution to the health of the global economy. Reliable financial information is the cornerstone of efficient capital markets, which enable a vibrant private sector. Increasingly investors and other stakeholders seek a more coherent and forward-looking corporate culture that embraces the preservation and creation of value over time, something offered by the IIRC's International Integrated Reporting Framework.

When so much of the world's gross domestic product is based on financial flows through the public sector, public sector institutions must be subject to the same high-level reporting requirements as many governments demand of their private sectors. Public trust in government in many countries has been shaken by poor financial management and weak, opaque and unaccountable institutions. A critical reason why public sector leaders are frequently unable to make sound spending decisions on behalf of their citizens is because they lack clear, transparent financial information on which to make those decisions.

Accordingly, we call on the G20 to actively encourage the adoption of accrual-based accounting using the International Public Sector Accounting Standards.

A permanent G20 secretariat would help increase global cooperation

We call on the G20 to actively encourage the adoption of accrual-based accounting

Already adopted in several jurisdictions, and with many more in the process of doing so, they create far better visibility about the true health of countries and enable better long-term decision making. A concerted G20 push would help ensure that all governments are talking the same accounting language.

Restoring confidence

Given its crucial importance to the global economy, we believe the remit of the Financial Stability Board – founded to promote international financial stability and to monitor and make recommendations about the global financial system – should be expanded to encompass the public sector. Together, these recommendations would advance public sector transparency and accountability, help restore confidence in public sector finances and support a renewal of public trust in government.

We also strongly believe that international cooperation and regulatory consistency are essential to re-energising the compact between governments and the people they serve, beyond improving both public and private sector governance, reporting and transparency. Regulatory fragmentation inhibits growth and stifles innovation. It further erodes trust in the institutions essential to robust, thriving financial and economic markets. In recent months following various data leaks, we have seen sustained public outrage at tax paid – or unpaid – by individuals and corporations.

Professional accountants have strongly supported the work of the Organisation for Economic Co-operation and Development on addressing base erosion and profit shifting because it fosters cooperation and inclusiveness on international tax policy.

Finally, as the taxation and regulatory debates have shown, going it alone on important national policy decisions can lead to international confusion and public consternation. The G20 has stood for promoting cooperation and addressing global challenges since its inception. We believe a permanent G20 secretariat would enhance the capacity of this great institution to follow through on consensus and maintain dialogue continuity.

The solutions we propose will foster increased global cooperation, and help embed trust and integrity at the heart of the global economy. The social dividends arising from their implementation are both compelling and, most importantly, firmly in the public interest. **G20**

Fayezul Choudhury

Chief Executive Officer
International Federation of Accountants

Fayezul Choudhury became Chief Executive Officer of the International Federation of Accountants (IFAC) in 2013. He was previously with the World Bank, where his last two positions were Vice President of Corporate Finance and Risk Management and Controller and Vice-President of Strategic Planning and Resource Management. Choudhury was a member of the Public Interest Oversight Board from 2005 to 2010 and chaired the Global Steering Committee of the International Forum for Accountability Development.

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EDUCATION INTERNATIONAL

International trends and the multiple paths of education privatisation

Education privatisation is an important topic in the global education agenda, and generates contentious debates between a broad range of education stakeholders. Recently, pro-privatisation reforms are advancing all over the world. In parallel, enrolment in private education institutions has experienced a significant and constant growth, particularly in low and middle-income countries. Among the most emblematic policies promoting the involvement of the private sector are charter schools, voucher schemes, or the contracting out of private schools.

Although there is a common trend towards more private participation in education worldwide, education privatisation is not a monolithic process. National and sub-national governments are engaging with privatisation policies for very different political, economic or social reasons, and in very different circumstances. Specifically, following a systematic literature review on the political economy of education privatisation, our research has identified six different paths toward education privatisation, which clearly reflect such diversity:

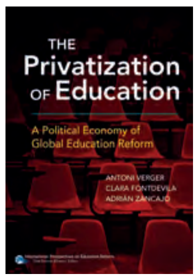
- **Reshaping the role of the state in education.** Drastic privatisation process as part of a structural state reform adopted by neoliberal governments in the 1980s and consolidated by succeeding center-left administrations.
- **Education privatisation in socio-democratic welfare states.** Introduction of market reforms, framed modernisation of the welfare state, and with the collaboration of social-democratic forces.
- **Scaling-up privatisation.** Uneven but progressive alteration of the system through the authorisation and encouragement of new forms of provision and management such as charter schools.
- **De facto privatisation in low-income countries.** Expansion of low-fee private schools originally set by local edupreneurs responding to a growing education demand, but increasingly promoted by the international development community.
- **Historical public private partnerships,** in countries with a longstanding presence of private, faith-based schools, which were incorporated in the state network during the expansion of the education system in the 20th century.

- **Privatisation by way of catastrophes.** Education privatisation catalysed by natural disasters or violent conflicts, framed by privatisation advocates as an opportunity to reconstruct the system.

"The Privatization of Education: A Political Economy of Global Education Reform", which has been sponsored by Education International, develops the main characteristics of each of these paths.

Privatisation solutions are strongly advocated by international and national actors under the argument that these solutions contribute to expanding access, quality and efficiency in education systems. However, critiques of privatisation, which are increasingly supported by evidence, show that education privatisation – especially when it is associated to market and competition dynamics – generates further school inequalities, segregation and discrimination in education. Education privatisation and marketisation also contribute to the individual goals of education overshadowing the social and collective goals. Understanding how and why education privatisation happens is a first and necessary step to organise contextualised and meaningful responses to this global trend.

Order "The Privatisation of Education: A Political Economy of Global Education Reform" here: ***https://go.ei-ie.org/educationprivatisation***



ANTONI VERGER, CLARA FONTDEVILA AND ADRIÁN ZANCAJO,
Universitat Autònoma de Barcelona

Development challenges

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority development commitments from 2008 to 2014

+0.34 67%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

BETTER SKILLS, BETTER JOBS, BETTER LIVES

*Equipping people with better skills can help countries and individuals thrive. G20 members can do more to help achieve these goals, writes **Andreas Schleicher***

PRADEEP GAUR/MINT VIA GETTY IMAGES

Automobile skill training at Maruti Suzuki in Meerut, Inida

Andreas Schleicher

Director for
Education and Skills
Organisation for Economic Co-operation and Development

Andreas Schleicher is Director for Education and Skills and Special Advisor on Education Policy to the Secretary-General at the Organisation for Economic Co-operation and Development (OECD). In addition to policy and country reviews, the work of the Directorate includes the Programme for International Student Assessment, the Survey of Adult Skills, the Teaching and Learning International Survey, and the development and analysis of benchmarks on the performance of education systems. Schleicher was previously Director for Analysis at the International Association for Educational Achievement.

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$27 TN Possible economic gains from meeting universal basic skills goal

21.6% Average amount of GDP used for social spending in 2014

KEY TAKEAWAYS

People need skills to collaborate, compete and connect

Skills development is more effective that qualifications-focused education

Every sector needs to foster skills development and entrepreneurship

Jobs, wealth and individual well-being all depend on what people know and what they can do with that knowledge. There is no shortcut to equipping people with the right skills and providing them with the right opportunities to use their skills effectively. If there is one lesson the global economy has taught us over the last few years, it is that we cannot simply bail ourselves out of a crisis, we cannot solely stimulate ourselves out of a crisis and we cannot print money as a way out of a crisis.

Most G20 members can do better when it comes to equipping people with skills to collaborate, compete and connect in ways that lead to better jobs, better lives and drive our economies forward. If the United States were to ensure that all students meet the Sustainable Development Goal of universal basic skills, measured by the lowest level of proficiency in the Programme for International Student Assessment (PISA) of the Organisation for Economic Co-operation and Development (OECD), the economic gains could exceed $27 trillion in additional income for the American economy during the working life of these students.

The OECD's Survey of Adult Skills shows that poor skills severely limit people's access to better paying and more rewarding jobs. It works the same way for countries. The distribution of skills has significant implications for how the benefits of economic growth are shared. Where large shares of adults have poor skills, it becomes difficult to introduce productivity enhancing technologies and new ways of working, which then stalls improvements in living standards.

In all countries, adults with fewer skills are more likely to report poor health, perceive themselves as objects rather than actors in political processes and have less trust in others. Without the right skills, people languish on the margins of society, technological progress will not translate into economic growth and countries cannot compete in the global economy. Such competitiveness is particularly important for today's youth, who cannot draw on experience and social networks the way older people can.

Skills-oriented learning

G20 members need to better anticipate the evolution of demand for skills. The coexistence of unemployed graduates on the street and employers who say they cannot find the people with the skills they need shows clearly that more education does not automatically translate into better skills, better jobs and better lives.

The dilemma for educators is that the skills that are easiest to teach and to test are also the skills that are easiest to digitise, automate and outsource.

Countries need to put a greater premium on skills-oriented learning throughout life, instead of on qualifications-focused education that ends when the working life begins. Skills development is far more effective if the world of learning and the world of work are integrated. Compared to purely government-designed curricula taught exclusively in schools, learning in the workplace enables young people to develop 'hard skills' on modern equipment and 'soft skills', such as teamwork, communication and negotiation, all through real-world experience.

Using such skills effectively explains a large part of labour productivity. It is another area where G20 governments can do better. The lowest hanging fruit is telling young people more of the truth about the labour market outcomes of their educational choices and incentivising educational institutions to pay attention to it.

Labour markets and learning

High-quality career guidance services, complemented with up-to-date information about labour market prospects, can help young people make sound career choices. Ensuring that qualifications are more coherent and easy to interpret can also make a big difference. Continuous certification that incorporates non-formal and informal learning over the working life is essential, as is recognition of foreign diplomas. Labour market arrangements, including employment protection, can also facilitate or hinder the effective use of skills and address skill mismatches.

Countries also need to maintain and expand the most effective active labour-market measures, such as counselling, job-search assistance and temporary hiring subsidies for low-skilled youth. We need to link income support for young people to their search for work and their engagement in measures to improve their employability.

None of this will work unless skills become everybody's business. This includes governments, which design financial incentives and favourable tax policies; education systems, which foster entrepreneurship and relevant skills; employers, who invest in learning and make the most out of people's skills; labour unions, which ensure that investments in training are reflected in better-quality jobs and higher salaries; and individuals, who can take better advantage of learning opportunities and shoulder more of the responsibility for learning. **G20**


IT'S NOT WHAT YOU KNOW,
IT'S HOW YOU USE IT
Asian Development Bank Institute
We've been putting the know into how for 20 years
adbi.org
ADBInstitute

KEY TAKEAWAYS

- The G20 can add value by deepening international cooperation
- The G20 will identify specific contributions its members can make

THE SUSTAINABLE DEVELOPMENT GOALS

1. *End poverty*
2. *Zero hunger*
3. *Good health and well-being*
4. *Quality education for all*
5. *Gender equality*
6. *Clean water and sanitation*
7. *Affordable and clean energy*
8. *Decent work and economic growth*
9. *Industry, innovation and infrastructure*
10. *Reduced inequalities*
11. *Sustainable cities and communities*
12. *Responsible consumption and production*
13. *Climate action*
14. *Conserve life below water*
15. *Conserve life on land*
16. *Peace, justice and strong institutions*
17. *Partnership for the goals*

Implementation of the 2030 Agenda

The G20 has a critical part to play in helping achieve the 2030 Agenda's Sustainable Development Goals. It needs to support the initiatives at the highest political levels, writes ***Helen Clark***

Last year in Antalya, the G20 leaders agreed to develop an action plan to ensure that G20 work aligns with the 2030 Agenda for Sustainable Development. G20 leaders are expected to adopt this action plan at their Hangzhou Summit in September. By doing so, the leaders will demonstrate their commitment to sustainable development.

When the G20 began meeting at the leaders' level, it focused on short-term actions to stabilise the global economy. Thereafter, its focus shifted to how to advance sustainable and balanced economic growth. Now, by framing policy action within a longer-term sustainable development perspective, the G20 can strengthen its ability to address the underlying drivers of short-term risks. This will open up more space in which the G20 can consider sources of instability to the global economy and development that go beyond the traditional, finance-centred concerns.

With the action plan in place, the G20 can add value to the implementation of the 2030 Agenda through policy actions that build on its economic cooperation work. Its convening power and ability to adopt and support initiatives at the highest political level will contribute to deepening international cooperation for sustainable development. This will benefit all developing countries and the provision of global public goods.

$5BN
United Nations Development Programme budget for 2016

Specific contributions

The United Nations Development Programme hopes that the G20 will identify specific contributions its members can make to implement the 2030 Agenda's Sustainable Development Goals (SDGs) across all relevant G20 work streams. Such a declaration will help increase the momentum for the 2030 Agenda and help tackle global challenges that extend beyond the ability of any individual country to address on its own.

Six members of the G20 presented their national voluntary reviews on the 2030 Agenda at the recent session of the UN High-Level Political Forum on Sustainable Development. This is a central platform

Its timeframe should ideally match that of the 2030 Agenda

The UN Development Group will facilitate knowledge sharing

LI MUZI/XINHUA/ALAMY

for following up and reviewing the 2030 Agenda at the global level.

Ideally, the G20 action plan would have a timeframe matching the 2030 Agenda. As a living document, it should have the flexibility to address emerging issues and to accommodate specific actions and priorities of subsequent presidencies. Implementation will call for greater policy coherence of the G20's work across its agenda.

As it implements its action plan, the G20 can also increase its dialogue with low-income developing countries to support their integration into the global economy and achievement of the SDGs. It could also increase its dialogue with international organisations, civil society, the private sector and G20 engagement groups. These efforts will be crucial for enhancing global partnerships for sustainable development and for ensuring effective implementation of the action plan.

National implementation

The UN Development Group supports the national implementation of the SDGs through 'MAPS' (Mainstreaming, Acceleration and Policy Support) in developing countries. This approach supports incorporating the 2030 Agenda in national and local strategies, plans and budgets. It also strengthens data, monitors systems to assess progress and identifies the obstacles to achievements, as well as those interventions that could catalyse progress across the SDGs. MAPS can be adjusted for each development context and set of challenges. We will facilitate knowledge sharing and the exchange of good practices regarding how countries are advancing sustainable development.

By working together, we increase the chances of success in achieving the 2030 Agenda for Sustainable Development. The G20's role in support of that will be vital. **G20**

Helen Clark

Administrator
United Nations Development Programme

Helen Clark became the Administrator of the United Nations Development Programme in 2009. She is also the Chair of the United Nations Development Group, a committee consisting of the heads of all UN funds, programmes and departments working on development issues. Prior to her appointment with the UNDP, she served three successive terms from 1999 to 2008 as Prime Minister of New Zealand. Before being elected to New Zealand's Parliament in 1981, she taught in the Political Studies Department of the University of Auckland.

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The G20 can increase its dialogue with low-income developing countries to support their integration into the global economy

KEY TAKEAWAYS

The Sustainable Development Goals are a bold, unified statement

Investment is needed in a proven platform that captures our experience

Alfred Hannig

Executive Director
Alliance for Financial Inclusion

Alfred Hannig is the Executive Director of the Alliance for Financial Inclusion (AFI), a global network of policymakers and regulators from more than 90 countries. AFI members are dedicated to providing the world's two billion unbanked safe access to the formal financial system through smart policy initiatives.

@NewsAFI
www.afi-global.org

Achieving goals with financial inclusion

Alleviating poverty and providing financial services for the unbanked population requires new deals that cut across sectors and traditional divides, writes ***Alfred Hannig***

The United Nations Sustainable Development Goals (SDGs) were unveiled to the world in 2015, setting the stage for the global development agenda for the next 15 years. As we navigate the SDG road map laid out in the Addis Ababa Action Agenda, it is easy to see how the development lessons of the last decade are being applied. One lesson is that financial inclusion is one of the fastest, most effective routes to alleviate poverty and provide safe and sustainable financial services for the unbanked.

Through the SDGs and the Action Agenda, the international community has made a bold and unified statement on the importance of financial inclusion to inclusive and sustainable development. The agenda includes a dedicated financial inclusion initiative, a welcome sign of high-level understanding that connects financial inclusion to economic stability, social inclusion, green finance, gender equality, sustainability, health, education and much more. This perception of financial inclusion has been evolving for some time, moving slowly but steadily from the sidelines of global debate into mainstream economic and social policy agendas.

But recognition alone is not enough to confront the monumental task of bringing financial services to the world's two billion unbanked. Investment is needed in a proven platform that captures our collective global experience and enables every country to tap

The cooperation model is based on country-led approaches

The Maya Declaration has inspired regulators across the globe


NEIL THOMAS/CORBIS VIA GETTY IMAGES

Repaying a loan at a microfinance meeting in Uganda

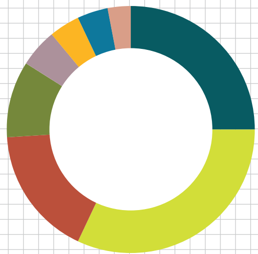
into this wealth of knowledge and use it to tailor its own policy solutions. Fortunately, we are not starting from scratch.

A proven cooperation model

The Alliance for Financial Inclusion (AFI) was founded on the idea that a global knowledge exchange platform was key to expanding and improving financial inclusion policy. During the last eight years, the AFI network, supported by its funders, has invested deeply in this platform, and data show the model is delivering tangible results while saving time and money. AFI's members are actively engaged in advancing financial inclusion at national, regional and international levels through partnerships and cooperative arrangements with other regulators, as well as with international organisations and private sector leaders.

The cooperation model is a simple one, based on country-led approaches and peer-to-peer engagements. By following these two key principles, AFI has created an international community of peers based on trust and mutual respect, driven by a common vision of advancing financial inclusion. The growth of our network is proof that the model is popular, but the more important question to ask is whether the model actually works. This can best be answered by looking at how the AFI Maya Declaration has already altered the landscape of financial inclusion.

Adults without a bank account by region



31% *South Asia*
24% *East Asia & Pacific*
17% *Sub-Saharan Africa*
10% *Latin America & Caribbean*
5% *Europe & Central Asia*
4% *Middle East*
4% *Other economies*
3% *High-income OECD economies*

Source: Global Findex database.

112

Maya Declaration financial inclusion targets already achieved

Launched in 2011, the Maya Declaration quickly grew from a simple statement of intent to a comprehensive initiative that has inspired regulators across the globe. The declaration and the financial inclusion commitments it inspired represent the AFI cooperation model in action. In little more than five years, more than 100 regulatory institutions have adopted the Maya Declaration, with 57 national commitments currently underway and 112 financial inclusion targets already achieved. It is an incredible accomplishment, but represents only a glimpse of what could be possible.

Enhancing G20 leadership

The successes of the Maya Declaration across emerging and developing countries offer an opportunity to be replicated through the leadership of the G20. Investing resources in expanding a financial inclusion cooperation platform will not only provide an invaluable tool for advancing the SDGs, but will also solidify the G20's standing as a global leader.

The G20 has a well-deserved reputation for bridging the developing and developed worlds. It has always been looked to for leadership in raising issues that cut across traditional dividing lines of North versus South or developed versus developing. At the 2010 G20 Seoul Summit, G20 leaders recognised financial inclusion as a main pillar of global development and endorsed the Financial Inclusion Action Plan in cooperation with like-minded partners, such as AFI. Since then, every G20 presidency has moved the action plan forward by advocating for financial inclusion in theory and by highlighting the specific and measurable impacts being felt in developing and emerging countries through initiatives such as the Maya Declaration.

Financial inclusion's future

Of the 17 SDGs, the one that will provide the greatest returns is 'Partnerships for the Goals'. There are very few development issues as crosscutting as financial inclusion. Achieving its full potential requires new partnerships across the public and private sectors. An investment now in developing and promoting these partnerships through a proven cooperation model will pay dividends long into the future. **G20**

KEY TAKEAWAYS

The G20 has increased its commitment to the developing world

The G20 can become a proactive force for global sustainable development

Setting goals for G20 development governance

The G20's action plan for the 2030 Agenda for Sustainable Development can help transform the developing world, writes ***Thomas Fues***

Critical observers have long questioned the genuine commitment of the G20 to the developing world, notwithstanding the introduction of the G20's Development Working Group in 2010. A significant evolution of the G20's identity may now be in the making.

The current Chinese presidency seems determined to open a new chapter of the group's engagement for the global common good. At the Hangzhou Summit, leaders are expected to adopt an ambitious, potentially transformative document: the G20 action plan for the 2030 Agenda for Sustainable Development, which includes the Sustainable Development Goals (SDGs) and the Addis Ababa Action Agenda on Financing for Development.

This comprehensive action plan, as elaborated on by the Development Working Group, identifies the policy implications of the universal 2030 Agenda unanimously adopted by members of the United Nations in 2015. The G20 action plan addresses three dimensions of sustainable development:

- domestic action by each G20 member
- collective efforts for the provision of global public goods
- support for low-income and developing countries

The G20 wants to contribute to global transformation by becoming active on all three levels. It intends to focus on issues and policy areas where it can build on its comparative advantage, without undermining the follow-up mechanisms of the United Nations. The document includes a wide range of well-established concerns, such as infrastructure, financial inclusion, employment, trade and investment. Policy coherence and coordination are highlighted as profound systemic challenges.

> *It seems essential that sherpas – the leaders' personal representatives – assume direct responsibility for the plan*

The global common good

China's emphasis on the 2030 Agenda offers the G20 a historic opportunity to reshape its narrative and to position itself as a proactive force for global sustainable development. If leaders become serious about their proclaimed commitment to the global common good, they can decisively strengthen the transformative momentum of the 2030 Agenda.

A key prerequisite for implementation of the G20 action plan is to ensure coherence across all work streams of the sherpa and finance tracks. This involves a big effort by leaders because the Development Working Group, which so far has been in charge of the G20's response to the 2030 Agenda, does not hold sufficient power. As is the case in national governments, policymakers responsible for development cooperation rank low in the bureaucratic hierarchy.

The G20 should strive for a common framework of cooperation

Closing the existing institutional gap is necessary to share experiences

JOERG BOETHLING/ALAMY

Processing sisal fibres at Tancord in Tanga, Tanzania

It seems essential that sherpas, who are the leaders' personal representatives, assume direct responsibility for the plan. They are the only ones who could convince the finance track of the binding nature of the commitments.

Transformation

In addition to guaranteeing coherence within the G20 architecture, members would need to initiate domestic transformation towards sustainability in critical areas such as energy, climate, the circular economy, inequalities and social inclusion.

Limiting G20 activities to the international space would not be compatible with the universal nature of the 2030 Agenda. With regard to global public goods, the G20 would have to set priorities, taking into account the interests of developing countries. Possible items for its agenda could be the fight against corruption and corporate tax shifting, as well as the access of developing countries to sustainable global value chains.

The G20 should strive for a common framework of South-South and North-South cooperation in order to mobilise synergies. An important challenge here is to create a global platform that is acceptable to providers, recipients and other stakeholders.

Closing the existing institutional gap is necessary in order to facilitate the sharing of experiences and mutual learning needed for effective implementation of the SDGs. Brazil, China and India have remained distant from the Global Partnership for Effective Development Cooperation, which they regard as dominated by the Organisation for Economic Co-operation and Development. Because no viable alternative is in sight, Southern providers should be encouraged to participate as observers in the partnership's upcoming high-level meeting.

Enhancing global knowledge

The upcoming German presidency should build on China's efforts by initiating a comprehensive monitoring process for the G20 action plan. This should include systematic interaction with developing countries and the G20 engagement groups. German think tanks are ready to enhance the role of global knowledge communities in policy analysis and recommendations through the Think 20. **G20**

Thomas Fues

Senior Researcher
German Development Institute

Thomas Fues has been with the German Development Institute (Deutsches Institut für Entwicklungspolitik) in Bonn as Senior Researcher since 2004. His main research interests include global governance, rising powers, United Nations and international development cooperation. Fues also heads DIE's training department. He previously worked for the German parliament, the Institute of Peace and Development (University Duisburg-Essen), the government of North Rhine Westphalia and the German Advisory Council on Global Change.

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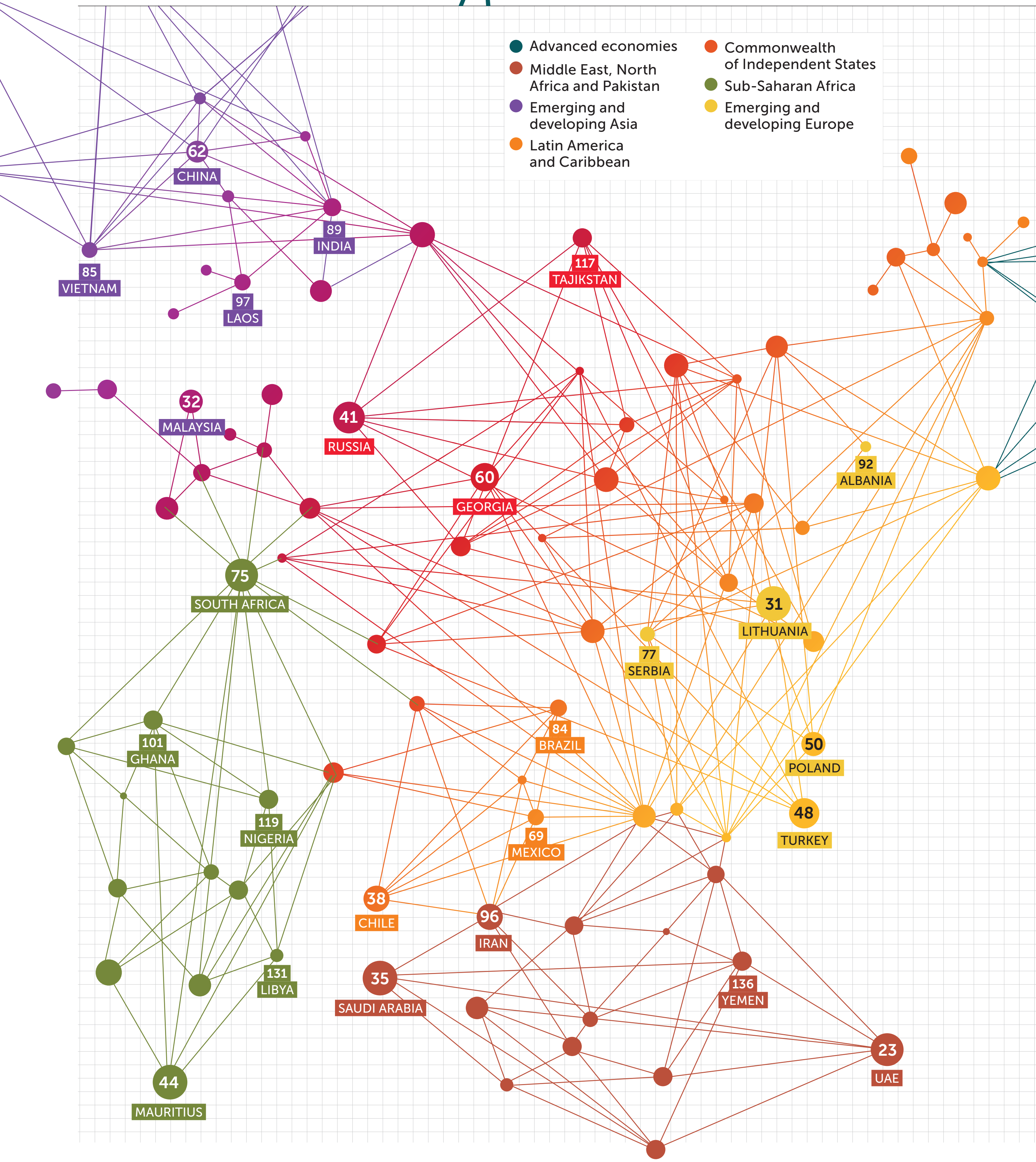
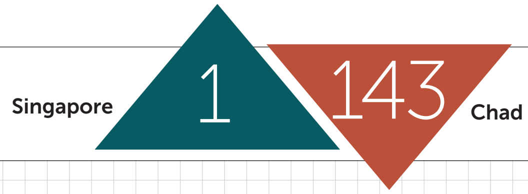
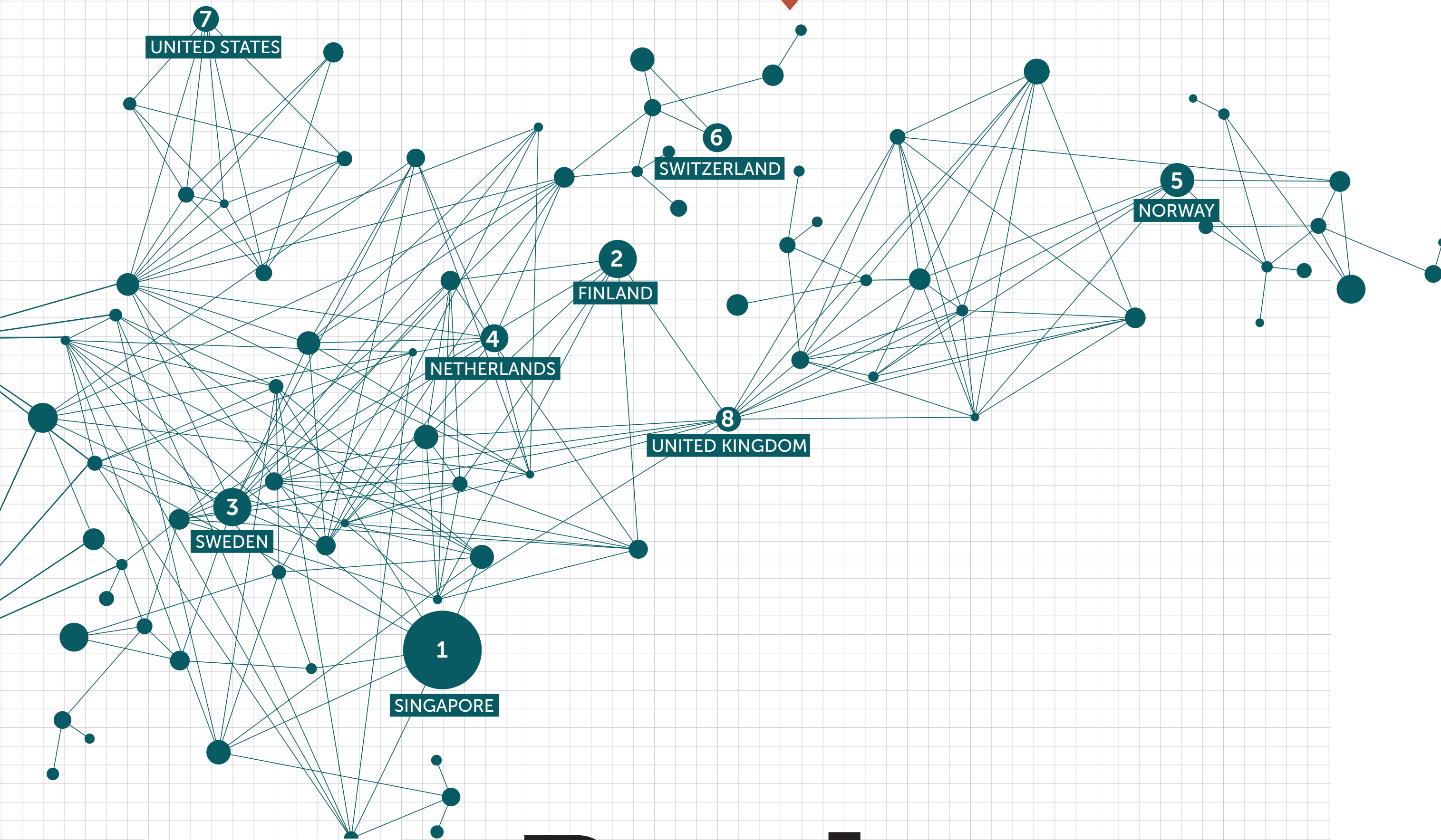
450M People out of reach of a mobile network globally

60% Global population unable to access the opportunities the internet provides







Ready to network

The Networked Readiness Index ranks the ability of 143 countries around the world to use information and communications technologies

FOUR KEY AREAS

Environment
The political, regulatory, business and innovation environment and its ability to generate impact

Readiness
The quality of infrastructure, the affordability of technology and the technical competence of the population

Usage
The integrated use of technology among individuals, businesses and the government

Impacts
The social and economic impact of ICTs

In the global economy, technology is of increasing economic, political and social importance. To help measure this, the World Economic Forum has produced its Networked Readiness Index (NRI) since 2001. The NRI ranks countries' ability to utilise information and communications technologies (ICT) for "increased competitiveness and well-being".

NRI scores, as originally listed in *The Global Information Technology Report 2015*, measure how tcountries use ICT in both local and global markets. There is a surprising range of both inter- and intra-regional results.

This infographic highlights key rankings, derived from scores based on four sets of criteria (see left).

KEY TAKEAWAYS

An action plan will be formulated for the 2030 Agenda

Several G20 working groups should share the responsibility

Zhu Jiejin

Associate Professor
Fudan University

Zhu Jiejin is an associate professor at the School of International Relations and Public Affairs at Fudan University. His research interest is global economic governance, especially the G20, the BRICS and multilateral development banks.

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Mainstreaming the development agenda

*The G20 Development Working Group can play a unique role in implementing the 2030 Agenda, writes **Zhu Jiejin***

As the largest developing country to host the G20 summit, China has paid special attention to the development agenda in its G20 presidency. As a result, there will be several firsts at the Hangzhou Summit. One will be an action plan to implement the United Nations 2030 Agenda for Sustainable Development. Another will be mainstreaming the development agenda within the G20 system.

The G20 Development Working Group is in charge of the action plan and is playing a leading role in implementing the 2030 Agenda. The 2030 Agenda's 17 Sustainable Development Goals (SDGs) and its 169 targets go far beyond its scope, however. The Development Working Group should invite other G20 working groups to share the responsibility. There is some overlap and inconsistency with other G20 working groups, such as the Employment Working Group and the Investment and Infrastructure Working Group. Mainstreaming the development agenda in the G20 system and improving coordination and policy coherence are even more important for the G20's role in

G20 groups could share information with low-income developing countries

New payment methods have significantly reduced remittance costs

TREVOR SNAPP/BLOOMBERG VIA GETTY IMAGES

An employee uses phone banking in Nairobi, Kenya

> *The Development Working Group and others can share such policy tools wherever possible*

implementing the 2030 Agenda.

How can coordination and policy coherence be enhanced? What can the Development Working Group do to increase the development mandate of the other working groups?

Optimising the membership of other G20 working groups

Previously, other G20 work streams only paid attention to coordinating policy among G20 members. If the Development Working Group wants to improve the development mandate of other G20 work streams, it could suggest they change their membership. For example, the Anti-Corruption Working Group has two sub-groups: the Core Group, which consists of members of four taskforces from the Business 20 (B20), and the Expert Group, which consists of other experts. All of them come from developed countries and have strong business backgrounds. If the Development Working Group advises the Anti-Corruption Working Group to pay more attention to anti-corruption within non-G20 countries, there should be more participation by experts from developing countries.

Sharing information

Information sharing involves sharing work plans and regular reporting between the Development Working Group and the other work streams, as well as close contact among the working group chairs, promoting two-way communication. Moreover, the Development Working Group could strengthen information sharing between G20 members and low-income developing countries. Given that financial inclusion has been incorporated into the 2030 Agenda, coordination and policy coherence between the Development Working Group and the Global Partnership for Financial Inclusion (GPFI) would be important for achieving the SDGs.

The prevalence of the internet in developed economies has led to innovations in payment methods, which have significantly reduced remittance costs. The same phenomenon has occurred in some low-income countries, such as in Kenya, where M-PESA has effectively facilitated mobile phone-based money transfer, financing and micro-financing services. The Development Working Group should work with the GPFI to launch an initiative to enable G20 and non-G20 countries to share information and knowledge of successful remittance and payment cases.

Setting agendas with development implications

The Development Working Group can recommend improvements to the development mandate of other G20 groups. For example, the G20 finance deputies oversee the G20's tax agenda, usually focusing on the Base Erosion and Profit Shifting (BEPS) initiative, international tax avoidance and the automatic exchange of tax information, and tax transparency. The Development Working Group can advise the finance deputies on supporting effective domestic resource mobilisation to ensure that developing economies can fully and effectively participate in and benefit from the G20 international tax agenda.

Facilitating policy tools

Policy tools and frameworks developed in one working group can be adapted to guide relevant work in other work streams. Many international organisations are involved in the governance of the Development Working Group and other work streams, providing technical advice and policy tools.

So, the Development Working Group and other work streams can share such policy tools wherever possible. This applies to both G20 countries and non-G20 countries. For example, with respect to human resource development, the Organisation for Economic Co-operation and Development maintains the World Indicators of Skills for Employment (WISE) database, and the International Labour Organization has developed the Technical and Vocational Education and Training (TVET) system.

G20 and non-G20 countries can use these tools. Therefore, the Development Working Group could improve its synergies with the Employment Working Group on facilitating policy tools. **G20**

KEY TAKEAWAYS

Some countries remain untouched by technology

Success stories in the developing world need to be nurtured

The development challenge

*Diversity has improved developing countries since the millennium. **Yoginder K Alagh** looks at what more needs to be done and suggests how policy changes can help*


An employee applies studs at Viswa & Devji Diamonds in Coimbatore, Tamil Nadu, India

In the last two decades there has been a sea change in both the practice of development policy and the orthodoxy of thinking about it. The driving force has been technology and yet technology is but a handmaiden. Widespread growth needs institutions driven by people – especially women – who cross the divide between classes and countries. Including every last individual is a challenge of both communication and skills. India is an example. Its recent robust growth largely comes from the demographic dividend of the young in an old civilisation. Incontrovertible progress was made on the Millennium Development Goals (MDGs), but countries remain untouched by technology. That is the development challenge.

Updating aid and investment

The experience of developing countries is that global crises lead to out-of-the-box thinking. The aid and investment agenda needs to be updated. Official aid will not overcome obstacles created by developmental challenges. They will be addressed only with a global etiquette that nurtures the success stories in the →

Rules and organisations must widen the human experience

Public policy should focus on a few areas and long-term solutions

PRASHANTH VISHWANATHAN/BLOOMBERG VIA GETTY IMAGES

Yoginder K Alagh

Chancellor
Central University of Gujarat

Yoginder K Alagh is Chancellor of the Central University of Gujarat and Professor Emeritus and Vice-chair of the Sardar Patel Institute of Economic and Social Research in Ahmedabad. From 1996 to 1998 he was the Minister of State (Independent Charge) for Planning and Programme Implementation, Science, Technology and Power and, until 2001, a member of the Rajya Sabha. He has previously served as Vice-Chancellor of Jawaharlal Nehru University, a member of the Planning Commission, Chair of BICP, Secretary to the Government, and Chair of APC.

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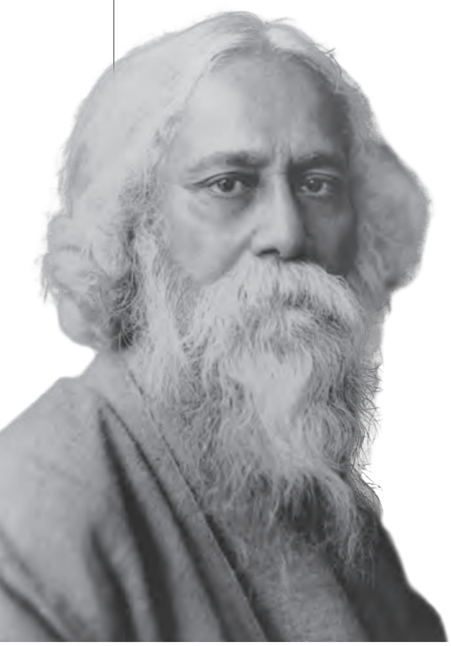
Into that land of freedom, oh my father, let my country awake – Tagore



developing world. As Keynes showed, small savings by many people can outrun large savings by a few, so we must never confuse the average with the marginal. Nonetheless aid would provide fortification when things fail, as they sometimes will.

It is also important to champion the success stories of diverse development leaders. These range from enthusiastic civil servants to managers running a public utility, a farmers' group resolving a supply-chain bottleneck and an entrepreneur who discovered that a farmer has the skills to satisfy a particular market.

Policy creates the institutions and the legal and administrative structures necessary for championing to become embedded in the system. It is also the task of governance to set the rules that determine what we should and should not do. Punishment for doing what should not be done should be severe.

Rules and organisations must encourage widening the human experience. Despite the power of technology harnessing decentralised markets, obscurantism, avarice and violence remain part of human existence.

7.6%
India's economic growth for the last fiscal year

Raising resources

At the turn of the millennium, some critical questions stood out. How could communities and individuals in at-risk regions turn around? How could sustainable development strategies be operationalised? What were the international implications of supporting these strategies?

The comprehensive development framework set out by the MDGs supplemented the knowledge base. Development strategies raise resources.

Do we have the knowledge to develop systems – using resources, technology and organisational support – that help those who help themselves? How the power of modern technology and decentralised markets can be used where resource support is weak is not clear.

Can partnerships be considered if the language of the other is not known? What are the requirements of participation and transparency, and how can they be part of a functioning system?

The G7 and the G20 do not use civil society coalitions to buttress official initiatives, as suggested by Anne-Marie Slaughter two decades ago. The United Nations and the Organisation for Economic Co-operation and Development keep civil society safely in the next room, as it were.

Developing knowledge

The success stories of transformed communities and the fast-changing dynamics of the development process remain in their own world.

The people who built the 'producer company' – the farmers group, the fisherman's cove or the artisan cluster making waves in global markets – have likely not even heard of the global development challenge. India's diamond polishers earn more from exports than its software exporters.

When China abolished its state planning committee and created the National Reform Commission, it gave it the power to allocate funds where long-term thinking and action were needed in private-public partnerships. India abolished its Planning Commission and set up a substitute with no such powers. Therefore no one takes its long-term studies seriously. It is better to focus on a few areas where public policy can encourage public-private cooperation for long-term solutions.

These are the days of short cycles of development knowledge. As the great Indian poet Tagore prayed for prophetically almost a century ago, wanting his country to remain open to ideas from all over the world, "Into that land of freedom, oh my father, let my country awake". **G20**

Trade and investment

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority trade commitments from 2008 to 2014

+0.17 **59%**

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

ICON MADE BY FREEPIK FROM FLAT ICON

TRADE AFTER BREXIT

The UK voting to leave the EU could harm the global economy. While two pending international trade deals may not be threatened, the G20 must address the issues behind the votes, argues ***Claudia Schmucker***

Claudia Schmucker

Head of the Globalization and World Economy Program
German Council on Foreign Relations

Claudia Schmucker has been head of the Globalization and World Economy Program at the German Council on Foreign Relations since 2002. Before joining the research institute, she was project manager at the Centre for International Cooperation in Bonn. She has written widely on the global financial crisis and the role of the G20 and the International Monetary Fund as well as on the World Trade Organization and the world trading system.

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DANIEL LEAL-OLIVAS/AFP/AFP/GETTY IMAGES

Transatlantic appeal: Philip Hammond and John Kerry hold a joint press conference

52% Majority of the victorius 'Leave' vote in the UK referendum

767M People covered by the US-EU trade agreement without the UK


DREW ANGERER/GETTY IMAGES

On 23 June 2016, the public in the United Kingdom voted with a majority of 52 per cent to leave the European Union after 43 years of membership. Although England and Wales voted predominantly in favour of the so-called Brexit, Scotland and Northern Ireland both supported staying in the EU. The move is unprecedented and therefore many legal implications remain unclear. To start the official process of withdrawing from the EU, the British government needs to trigger Article 50 of the Treaty on the European Union.

Once the UK officially enacts this process, the ensuing negotiations will last at least two years. Until then, the United Kingdom remains a member of the EU and part of the European common trade policy.

Right now, two important projects are at the top of the trade agenda: the ratification of the Comprehensive Economic and Trade Agreement (CETA) with Canada and the mid-game negotiations on the Transatlantic Trade and Investment Partnership (TTIP) between the EU and the United States.

Progress still possible

Canada's International Trade Minister Chrystia Freeland has already stressed that, despite the Brexit vote, her counterparts in the UK, France, Germany, Italy and the Netherlands have promised to continue to back CETA. In July 2016, the European Commission formally proposed to the Council of the EU that the trade agreement be signed and concluded at the EU-Canada summit in October 2016.

After pressure from its member states, the commission decided to declare CETA a 'mixed agreement'. It now wants to apply CETA provisionally after the council decision in October and the consent of the European Parliament, while awaiting formal ratification by the national parliaments. During this procedure, the UK will still be part of the EU. Brexit therefore has no implications for the formal ratification of CETA. A successful implementation would be an important way for Europe to show that progress is possible in the wake of the Brexit crisis.

But Brexit has some implications for the ongoing TTIP negotiations. US Trade Representative Michael Froman and EU Trade Commissioner Cecilia Malmström both reiterated that the arguments for TTIP remain strong, even if the UK leaves the EU.

According to the Atlantic Council, without the participation of the UK the US-EU trade agreement would still cover 767 million people and account for 42 per cent of the world's gross domestic product

KEY TAKEAWAYS

Two important projects – CETA and TTIP – top the trade agenda

Brexit has no implications on formally ratifying either deal

The G20 needs to help counter concerns about globalisation

P104 Larry Summers's view on Brexit and globalisation

A Union Jack hanging in a British grocery store in New York

ISTOCK IMAGES

ISTOCK IMAGES

British citizens protest the referendum result (left) and a ballot paper (above)

(GDP). But the outlook is gloomy that both sides will reach an agreement by the end of 2016 and the exit of the UK will make some adjustments necessary.

Remaining open and constructive

An EU without the UK will still be the largest trading partner of the US, accounting for trade in goods and services of $870 billion. The EU may lose one of its most outspoken proponents of open markets and free trade, but it will remain a global trading power, albeit a slightly smaller one.

However, Germany would lose one of its closest allies in Europe in the fight for economic reforms. In a poll taken shortly before the referendum by the German news magazine *Der Spiegel*, 79 per cent of Germans favoured the UK staying in the EU.

After initially warning that the UK's withdrawal from the EU should not be rushed, German Chancellor Angela Merkel is now urging the UK to move ahead to avoid a "never-ending game, for the notification and for the negotiations". Italian Prime Minister Matteo Renzi and French President François Hollande have also spoken in support of a quick exit to avoid economic and financial instability.

Merkel, speaking in the Bundestag on 28 June, stressed that in her view, there must be a "palpable difference" between members and non-members of the EU.

Despite these frank statements, the negotiations should remain open and constructive, for the benefit of both sides.

G20 members can only advise the EU and the UK to proceed with the negotiations in a calm and productive manner, in order to avoid prolonged uncertainty for the global economy. However, it does have an important role to play.

The Brexit vote in the UK was mainly about immigration, partly rooted in a fear of globalisation and open borders. As a group that accounts for 85 per cent of global GDP, the G20 must make a strong counterargument for globalisation and open borders.

The G20 needs to engage and create a positive trade agenda to address these fears and the long-term challenges we face in the global economy. **G20**

We must and will make a palpable difference over whether a country wants to be a member of the European Union
– Angela Merkel

KEY TAKEAWAYS

- Digital customs help facilitate and secure international trade
- They replace paper-based procedures with electronic operations

The digitalisation of international trade

The importance of information and communication technologies cannot be stressed enough. Embracing it is our only option for successful international trade, writes ***Kunio Mikuriya***

Customs administrations must adopt 'digital customs' to facilitate and secure international trade in the era of advanced information and communications technology (ICT). Digital customs is global in scope and it is vital that the G20 understand its importance for strengthening international trade and transport and thus support its further development.

Technology is changing rapidly. Several key trends are emerging, such as cloud computing, mobile technologies, advanced analytics and information management. These provide numerous opportunities to drive connectivity among customs administrations, and with trade operators and other border agencies. They can increase productivity, which will in turn lead to greater economic growth.

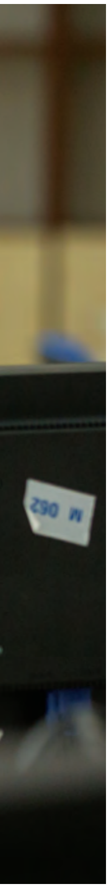
Digital customs initiative

To reaffirm the importance of ICT for customs administrations and in the work programme of the World Customs Organization (WCO), digital customs was chosen as the theme for 2016. Digital customs means using digital systems to collect and safeguard customs duties, to control the flow of goods, people, conveyances and money, and to secure cross-border trade from crime, including international terrorism, which continues to plague countries around the globe.

The digital customs initiative aims to replace paper-based customs procedures with electronic operations, creating a more

Some countries may struggle to embrace new ways of working

Support from the G20 will help implement digital customs



INNA SOKOLOVSKA/SHUTTERSTOCK; ICONS BY FREEPIK FROM FLAT ICON

Customs officials at work at the Service of State Fiscal Service of Ukraine

efficient and modern customs environment in tune with global developments. By focusing on digital customs, the global customs community is signalling its aspiration to develop further its digital solutions and services, making life easier for the trading community, other border agencies and customs officers. It also wants to adopt enabling technologies to help increase operational performance and to reinvent the way it does business.

Optimising processes

Digitalisation offers many opportunities, but some countries may struggle to prioritise ICT projects based on their strategic goals and resource constraints, and how to embrace new ways of working. The WCO recommends that ICT projects should be based on business processes that take into account international standards and are optimised for effectiveness, efficiency and level of risk.

We will monitor and communicate best practices on ICT as widely as possible. In particular, customs administrations and international trade stakeholders should share information on how they are adapting to the digital environment. This includes how they are leveraging the potential of ICT and how they are using digital technologies to achieve their objectives and respond to the expectations of traders, transport and logistic operators, and governments.

As customs services progress in adopting new digital technologies – particularly related to data management, dematerialisation and the integration of platforms across the supply chain – they will need assistance from policymakers.

Political support from the G20 on this integral and important subject will help to accelerate digitalisation throughout the customs community while promoting connectivity, interoperability and collaboration among all stakeholders. **G20**

Kunio Mikuriya

Secretary General

World Customs Organization

Kunio Mikuriya has been Secretary General of the World Customs Organization since 2009. Previously, he worked for Japan's Ministry of Finance, where he served as Director of Enforcement, as well as Director of Research and International Affairs, paving the way for the conclusion of the first regional trade agreement for Japan. He also spent time as a counsellor at Japan's mission to the World Trade Organization, and participated in the Uruguay Round trade negotiations of the General Agreement on Tariffs and Trade.

@WCO_OMD

www.wcoomd.org

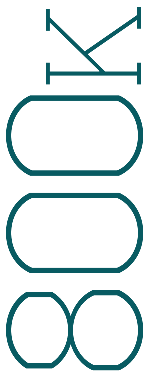
THE DIGITISATION OF CUSTOMS

The South African Revenue Service (SARS) adopted digital innovations and reported numerous benefits, including:

1/2

Number of days to import goods, cut in half

Average yime to process a physical inspection, reduced from eight hours



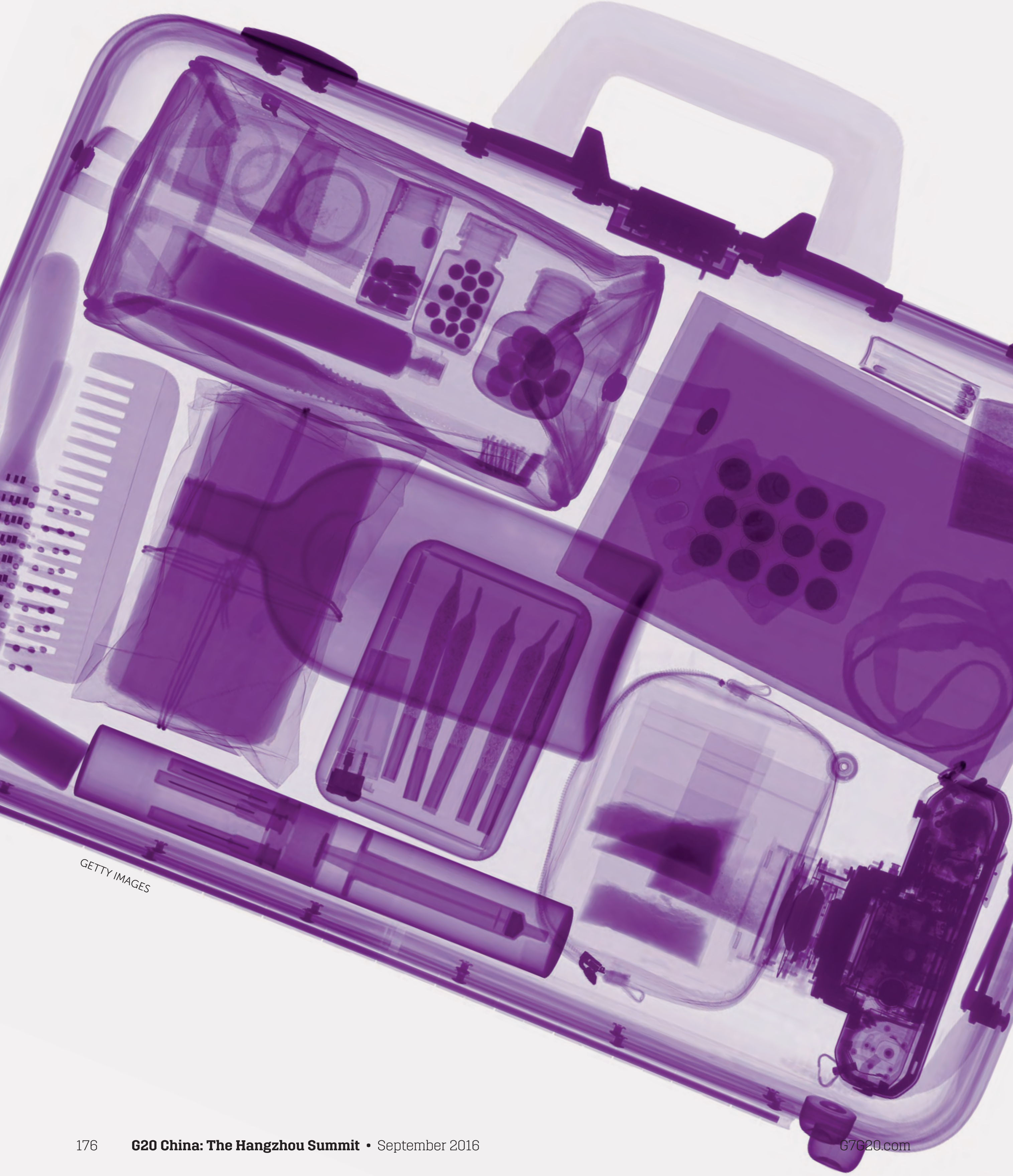
Pieces of paper used to process 5.5 million declarations, reduced from 40 million

Source: World Customs Organization

KEY TAKEAWAYS

Tourism is one of the world's leading economic sectors

It establishes and fosters relationships between countries and communities

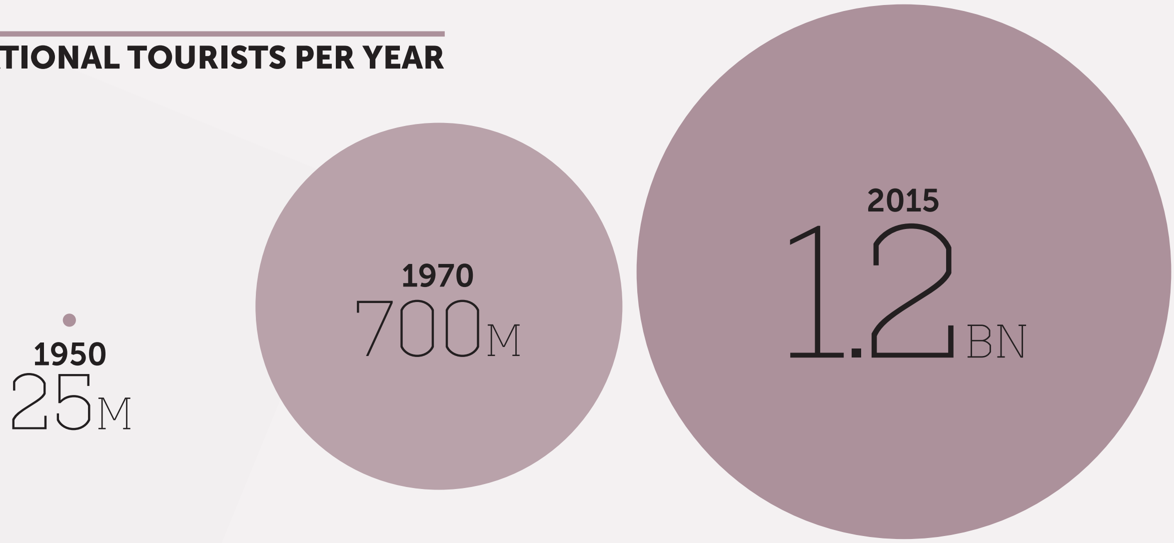


GETTY IMAGES

Recent new barriers to travel need to be overcome

Tourism and security need greater integration and coordination

INTERNATIONAL TOURISTS PER YEAR



TOURISM AND SECURITY

A resilient sector that promotes peace and understanding, tourism must be protected, writes ***Taleb Rifai***

The world has experienced a travel revolution in recent years. The tourism sector has expanded from 25 million international tourist arrivals in 1950 to 700 million in 2000 and more than one billion for the first time in 2012. In 2015, this grew to nearly 1.2 billion. Another six billion people are estimated to have travelled within their own countries last year.

In the process, tourism has become one of the leading economic sectors of our time. It now accounts for nearly 10 per cent of the world's gross domestic product and seven per cent of global exports, employing directly or indirectly one in 11 people across the globe.

Beyond its positive economic contribution, tourism is a pillar of peace and multicultural understanding. In today's globalised world, people are travelling more widely and encountering more cultures than ever before.

These encounters spark connections that contribute to establishing and fostering tolerance and respect among peoples, communities and countries. In a world of increasing discord, these connections are sacred opportunities to create more inclusive, peaceful and equitable societies.

While tourism contributes to peace, it also needs peace and stability to continue to flourish. Sadly, in recent times, the tourism sector has had its fair share of crises including terrorism, natural disasters, pandemics and geopolitical challenges. This has contributed to safety and security becoming top priorities on the agendas of all countries around the world.

Ensuring safe travel

At the global level, tourism has proven its resilience in the face of such challenges, continuing to grow above average year after year. At a destination level, →

Taleb Rifai

Secretary General
United Nations World Tourism Organization

Taleb Rifai has been Secretary General of the United Nations World Tourism Organization since 2010 and was re-elected to serve a second four-year term starting in 2014. He has served as Assistant Director General of the International Labour Organization and held several ministerial positions in the Government of Jordan, including Minister of Planning and International Cooperation, Minister of Information, and Minister of Tourism and Antiquity. Previously, he was Director General of the Investment Promotion Corporation of Jordan.

@UNWTO
www.unwto.org

1.1BN tourists travelled internationally in 2015

39% of the global population could travel without a traditional visa in 2015

→ however, it is significantly affected by crises and shocks that threaten the economy and social structures of affected destinations.

It is essential that all stakeholders prioritise and promote measures to ensure safe and secure travel. To prevent and recover from possible crises, travel and tourism must be integrated into national emergency structures and procedures. Currently, this integration often happens only after a major incident has taken place, because tourism's role is still underestimated in many regional and global safety and security agendas.

The world faces a global challenge that can only be addressed through common efforts.

We have before us an important opportunity to build effective coordination, information sharing and communication mechanisms between the tourism and security sectors. Countries, destinations, tourism and security administrations, businesses and academic institutions must all work more closely together, building on each other's strengths and providing collective support to targeted countries' recovery efforts.

Crises are often magnified or exacerbated by crises of perception, so a priority for the sector must be the creation of crisis management plans and protocols, including crisis communications strategies that encompass quick response, transparency and credibility, so that the impact of real events is swiftly minimised rather than magnified.

We should never forget that enhancing security in the tourism sector can and should go hand in hand with making travel more seamless and friendly to consumers and hosts alike. Security challenges cannot deter us from advancing travel facilitation. On the contrary, they can prompt us to build upon the recent advances around the world in increasing the ease of travel, in terms of visa facilitation and connectivity.

We all need to be vigilant and overcome the emerging trend of building new barriers to travel. In 2015, 39 per cent of the world's population could travel without having to obtain a traditional visa prior to departure, compared to only 23 per cent in 2008. We cannot backpedal on this. Economic and national security is not a zero sum game.

Intergration and coordination

With this in mind I call upon the world's leading economies to continue advancing the integration and coordination between tourism and security as a part of the global response to the safety and security challenge that the world faces.

The World Tourism Organization stands ready to continue supporting countries in this endeavour. We will be leading the creation of a task force to make progress in global tourism and security discussions, aimed at ultimately creating a safety and security charter for the tourism sector.

We must never allow the threats we face to stop us from travelling and experiencing the beauty of our planet and its people. G20

Global health

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority health commitments from 2008 to 2014

+0.65 83%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

IN CONVERSATION

“We have the tools and scientific knowledge needed to end AIDS. This may be our last chance.”

Michel Sidibé

Executive Director of UNAIDS and Undersecretary General of the United Nations

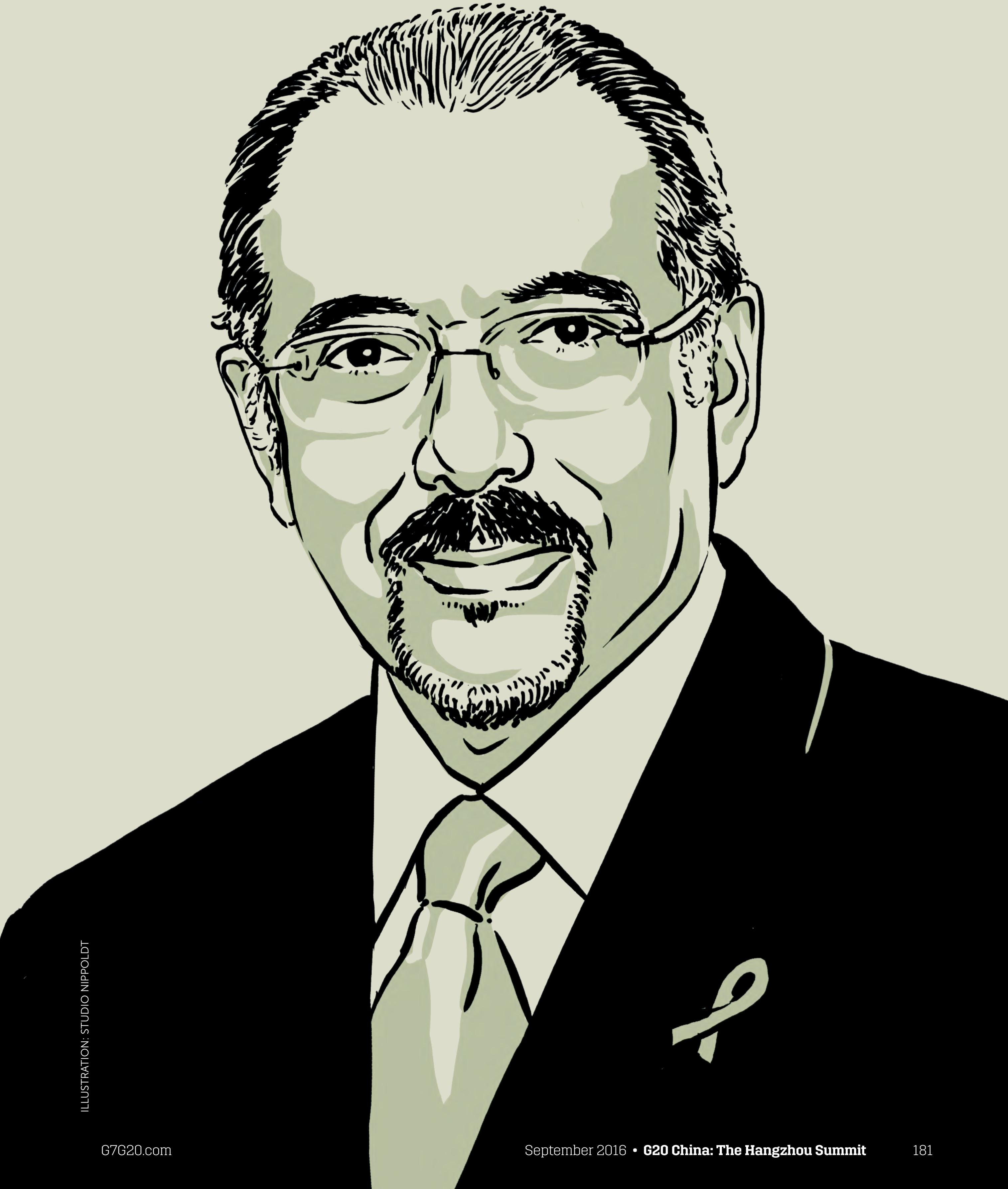


ILLUSTRATION: STUDIO NIPPOLDT

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Q Does the AIDS epidemic still threaten the prospects for an innovative, invigorated, interconnected and inclusive world economy?

A The world has made tremendous progress towards ending AIDS over the past decade. In the last few years, the number of people living with HIV on antiretroviral therapy (ART) has increased by about a third, reaching 17 million people. In the world's most affected region, Eastern and Southern Africa, AIDS-related deaths have fallen by more than a third since 2010. In Africa, more people are now on treatment than are becoming newly infected.

The crippling effect of AIDS is still being felt across all regions, though, including in many G20 members. AIDS still hampers productivity, stifles local and national growth and dims prospects for building truly inclusive economies.

Q How can G20 members support efforts to end the epidemic?

A The Sustainable Development Goals (SDGs) include the bold but achievable target to end the AIDS epidemic by 2030. Whether we get there hinges entirely on what we do today. We need to fast track the AIDS response during the next five years, increasing and front-loading investments. We need to start now.

I am greatly encouraged that United Nations members recently adopted an ambitious political declaration at the UN High-Level Meeting on Ending AIDS. It includes evidence-based actions and commitments, targets to be reached by 2020 and puts us on the fast track to end AIDS within 15 years. It calls for financial investments of at least $26 billion annually, peaking in 2020. If we follow the road map set out by the declaration we will end this epidemic. The returns on the investment will be significant.

We need the G20's help to sustain this critical momentum. We must keep AIDS at the top of the global political and economic agenda. Every day, 6,000 people are newly infected with HIV. AIDS remains the largest killer of women of reproductive age and the second-largest killer of adolescents. We have the tools and scientific knowledge needed to end AIDS. If we squander them, the world will not forgive our failure. This may be our last chance. Maintaining current levels of service coverage will prolong the epidemic indefinitely, and in several low- and middle-income countries the epidemic will rebound.

South Africa now invests $1.5 billion each year for AIDS programmes, compared to almost nothing a few years ago. Today, nearly 3.4 million South Africans receive HIV treatment – more than any other country in the world. South Africa has integrated its AIDS response into the national health system. This is a shining example of how political leadership saves lives, and helps build sustainable, integrated health programmes, lighting the path to universal health coverage and the goal of health security for all.

Q Are there other critical ingredients for success over the next five years, beyond money and political will?

A This is about investing wisely and strategically in the places and people that will generate the greatest impact. AIDS programmes are becoming more efficient every day. Investment returns are growing

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> *We need to fast track the AIDS response during the next five years, increasing and front-loading investments*

exponentially. Although HIV-related funding increased by only 11 per cent between 2011 and 2014, the number of people receiving ART grew by 60 per cent.

Three additional ingredients are critical. First is innovation. We need new medicines, preventive and therapeutic vaccines, female-initiated prevention commodities and, ultimately, a functional cure – and completely new ways to deliver all these to people.

Hand in hand with innovation is the need to continue expanding and strengthening private sector collaboration. One case of a successful partnership in G20 members is Danlan, a community-based organisation working for lesbian, gay, bisexual and transgender rights in China. It combines information technology with community outreach, including links to HIV services in its dating application on social media for its 15 million users. Danlan has been instrumental in dramatically increasing uptake for HIV testing among these populations.

26bn
Annual investment needed to fight AIDS, peaking in 2020

Second, reaching communities left behind is perhaps the most critical ingredient for success. This mandate cuts across all SDGs, including those dedicated to economic growth, industrialisation and innovation.

Third, accountability is central to ensuring that promises are kept. I urge the G20, as the premier forum for international economic cooperation, to commit to the fast-track goals and targets for 2020 in its communiqué and to hold itself accountable. Efforts to end AIDS must form an integral part of the G20 agenda to build inclusive and prosperous societies.

I urge the G20 to spearhead efforts to fast track the AIDS response. China alone has lifted more than 700 million people out of poverty in the past three decades. With the G20 in the lead, together we can end the AIDS epidemic by 2030. **G20**

KEY TAKEAWAYS

- Global health security includes health threats such as climate and disease
- Maintaining it requires political commitment and resources

STRENGTHENING GLOBAL HEALTH SECURITY

Investing and maintaining health policies is key to implementing the Sustainable Development Goals. A cost-effective model that pools resources will help, writes ***C James Hospedales***

The Sustainable Development Goals (SDGs) are a set of 17 development goals for all countries, rich and poor, small or large. Health is a key resource for living; a product of our genes, the environment, and our choices individually and collectively. Health is the explicit focus of SDG 3: "ensure healthy lives and promote well-being for all at all ages". Global health security is covered in SDG 3.d: "strengthen capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks."

Health is integral to all 17 goals, including poverty reduction, nutrition security, water and sanitation, climate change, built environment, and violence reduction. Global health security in the broadest sense includes consideration of health threats such as global warming, non-communicable diseases (NCDs), emerging infectious diseases, violence and injuries.

In practice, global health security focuses on the capacity to detect and respond to infectious disease, including chemical and radiological threats. The global instrument is the International Health Regulations (IHR) 2005, designed to limit the international spread of diseases while minimising adverse impacts on trade and travel. Most countries are struggling to comply.

Components and resources

The key components of strengthening global health security to implement the SDGs include sustained political commitment; designated resources at national, regional and global levels; and building capacity in public health surveillance and response, laboratory, field epidemiology and communications, especially in low- and middle-income countries, and networks of countries.

The World Health Organization should be held accountable, but appropriately resourced to discharge its mandate. Health security today →

The Zika pandemic represents the latest threat to global health security

Small countries pooling resources is an effective way to achieve goals

ZIKA IN NUMBERS

5,548
Reported cases of the Zika virus in US territories

1,825
Reported cases of the Zika virus in the US

493
Pregnant women with evidence of Zika in US territories

479
Pregnant women with evidence of Zika in US and DC

C James Hospedales

Executive Director
Caribbean Public Health Agency

C James Hospedales was appointed the inaugural executive director of the Caribbean Public Health Agency in 2013. He was previously the Coordinator of the Prevention and Control of Chronic Diseases at the Pan American Health Organization. From 1998 to 2006, he was Director of the Caribbean Epidemiology Centre. Dr Hospedales was a member of the Caribbean Commission on Health and Development, which made policy recommendations to the Heads of Government and named chronic diseases as a super-priority for the region.

@CARPHA1
www.carpha.org

A baby born with microcephaly undergoes physical therapy in Joao Pessoa, Brazil

ANDRE PENNER/AP/PRESS ASSOCIATION IMAGES

→ is multisectoral, includes natural and deliberate events, and governments have a leadership role. Zika is the latest mosquito-borne virus pandemic in recent times where the ease of spread across the tropical world represents a glaring hole in global health security.

The health and economic security threats of infectious diseases – severe acute respiratory syndrome cost $54 billion – are insignificant compared to the NCDs of diabetes, heart disease, cancer and mental ill health, estimated to cost $47 trillion over a 20-year period. NCDs are driven by the demographic shift and factors such as tobacco use, alcohol, unhealthy eating and inactive living.

The obesity epidemic now exceeds one billion persons and is increasing in children. Alarmingly, no country has yet reversed an obesity epidemic at the national level. The obesogenic environments driving this epidemic constitute a threat to global health security.

Twenty-year estimated cost of treating common NCDs
$47TN

Tackling health threats

Specific capacity building is needed to strengthen all public health responses to NCDs, violence and injuries, dementia and mental health. It is needed in policy analysis and development, multisector collaboration and private-public partnerships, in health monitoring, data analysis and research in the social determinants of health, in prevention programming, tobacco and alcohol control, and in the promotion of healthy eating and active living.

Dementia rates and long-term cost burdens are rising exponentially, yet the risks are similar to NCDs. Depression and harmful use of alcohol are the two mental health issues strongly linked to NCDs.

The Caribbean Public Health Agency (CARPHA) serves 24 countries and territories, mostly small island developing states, and is a model of a cost-effective, pooled country approach to laboratory and surveillance services to addressing health threats, emergencies and disasters.

CARPHA develops policy for the consideration of ministers and heads of government, for example on Zika and other threats to health security, and is the chair of the Regional Coordination Mechanism on Health Security. A small agency in a complex, tourism-dependent region, CARPHA embraces partnerships to addressing health priorities. This includes the hotel and tourism industry for health monitoring and response.

The Pan American Health Organization, World Health Organization and the CARICOM Secretariat are core partners. The Centers for Disease Control in the United States, the Public Health Agency of Canada, Public Health England, the World Bank and InterAmerican Development Bank are also key partners in regional health security.

This example of many small countries pooling resources to address global health security capacities is noteworthy. It could be a model for other regional political and economic integration blocs. This would help meet the SDG 3.d. G20 leaders can help by supporting and investing in such pooled country approaches of small states. **G20**

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G7 Research Group

In the rapidly globalizing world of the 21st century, the Group of Seven major market democracies serves as an effective centre of comprehensive global governance. G7 members – the United States, Japan, Germany, the United Kingdom, France, Italy, Canada and the European Union – contain many of the world's critical capabilities and are committed to democratic values. At its annual summit and through a web of G7-centred institutions at the ministerial, official and multi-stakeholder levels, the G7 does much to meet global challenges, especially in the fields of security, sustainable development and economics.

The G7 Research Group is a global network of scholars, students and professionals in the academic, research, media, business, non-governmental, governmental and intergovernmental communities who follow the work of the G7, the G8 (with Russia) and related institutions. The group's mission is to serve as the world's leading independent source of information, analysis and research on the G7/8. Founded in 1987, it is managed from Trinity College, the Munk School of Global Affairs and the Department of Political Science at the University of Toronto. Professional Advisory Council members, Special Advisors and participating researchers span the world. Through the G7 Research Group, Trinity's John W. Graham Library has become the global repository of G7/8 documents, transcripts, media coverage, interviews, studies, essays, memorabilia and artifacts.

The G7 Information Centre at www.g7.utoronto.ca

The online G7 Information Centre (www.g7.utoronto.ca) contains the world's most comprehensive and authoritative collection of information and analysis on the G7 and G8. The G7 Research Group assembles, verifies and posts documents from the meetings leading up to and at each summit, the available official documentation of all past summits and ministerial meetings (in several G7/8 languages), scholarly writings and policy analyses, research studies, scholarship information, links to related sites and the "background books" for each summit published by Newsdesk Media. The website contains the annual reports on G7/8 members' compliance with their summit commitments, produced by the G7 Research Group as well as other research reports.

Books on the G7, G8 and Related Issues from Routledge

The G8-G20 Relationship in Global Governance
Marina Larionova and John Kirton, eds.

The European Union in the G8
Marina Larionova, ed.

Securing the Global Economy
Andreas Freytag, John Kirton, Razeen Sally and Paolo Savona, eds.

Global Financial Crisis
Paolo Savona, John Kirton and Chiara Oldani, eds.

Global Energy Governance in a Multipolar World
Dries Lesage, Thijs Van de Graaf and Kirsten Westphal

G8 against Transnational Organized Crime
Amandine Scherrer

The G8 System and the G20
Peter I. Hajnal

The New Economic Diplomacy
Nicholas Bayne and Stephen Woolcock

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Climate change and green finance

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority climate change commitments from 2008 to 2014

+0.35 68%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

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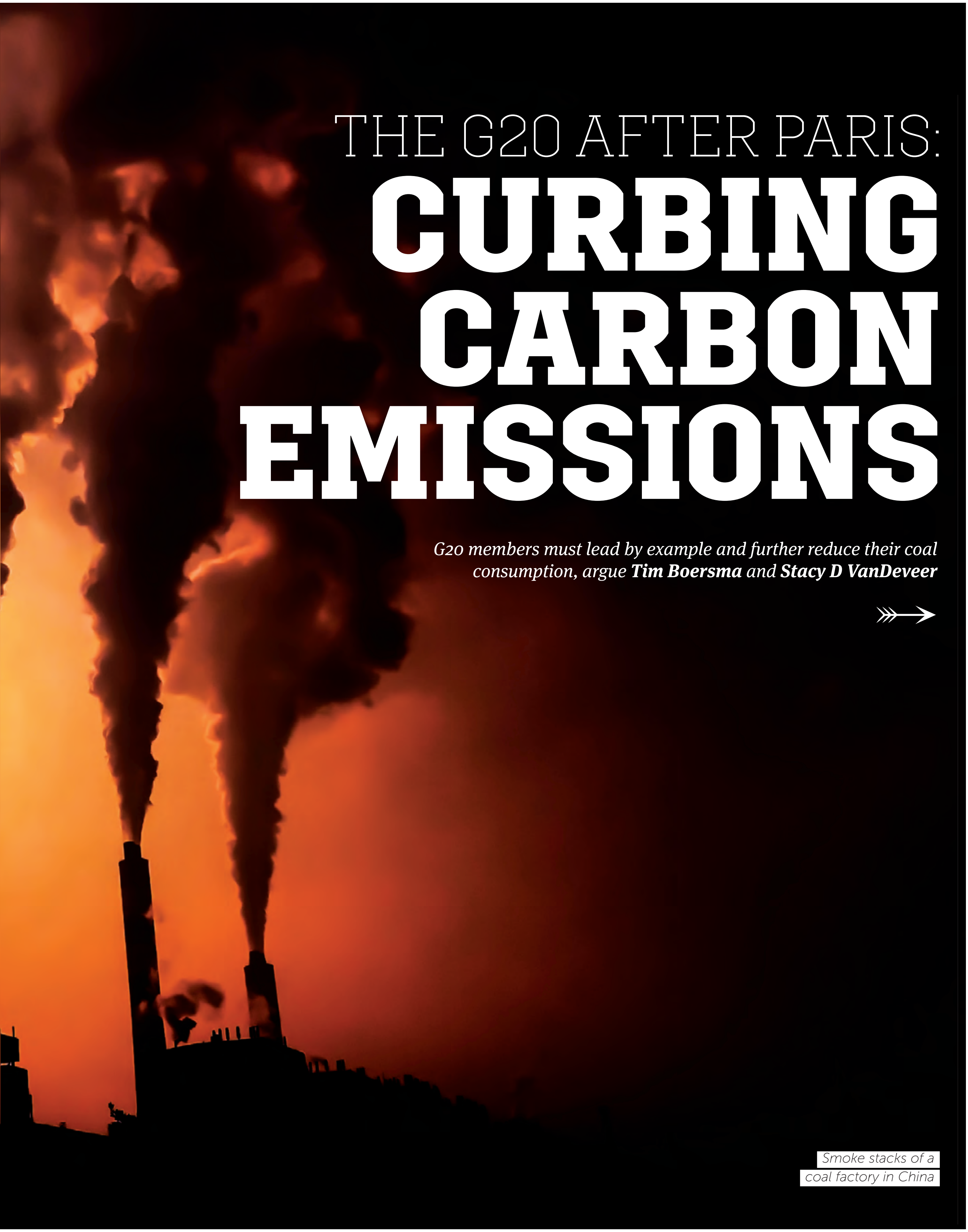
ISTOCK IMAGES

THE G20 AFTER PARIS: CURBING CARBON EMISSIONS

G20 members must lead by example and further reduce their coal consumption, argue ***Tim Boersma*** *and* ***Stacy D VanDeveer***



Smoke stacks of a coal factory in China

KEY TAKEAWAYS

Much more must be done to achieve the emissions reductions required

G20 meetings should take stock and make public promises

The carbon capturing WA Parish power plant in Fort Bend County, Texas, USA.

The accomplishments and limitations of the 2015 Paris Agreement on climate change have been widely debated. The next few years will reveal how well the critical missing transparency, accountability and finance can be addressed.

Despite the significant and broadly shared ambitions contained in the agreement and its associated national commitments, even in the most optimistic scenario of all countries meeting their Paris pledges, much more must be done to achieve the emissions reductions required to meet the stated target of keeping additional global warming at levels around 2 degrees Celsius. More cuts before and after 2030 are required. Which national, intergovernmental and transnational forums are well suited to continue discussions and actions on raising ambitions? The G20 is certainly one.

The world's largest economies are mostly the world's largest emitters. The G20 countries – plus the other members of the European Union, which also participates in G20 summits – constituted almost 75 per cent of global carbon emissions in 2015. Burning coal also contributes a mighty share of other emissions, such as sulphur dioxide, nitrogen oxides and particulates. There is no better place to put coal on the table, at the centre of the global agenda, than a G20 meeting in China.

Several G20 countries are significant producers of fossil fuels, particularly coal (see table). All have an interest and an obligation to incentivise increased investments in many mitigation strategies and technologies, to further redesign industrial activity and to retrain workers

Overview of share of coal in G20 economies

G20 member	*Coal production (Mtoe, 2015)*	*Coal exports (million tonnes, 2013)*	*Primary energy consumption: coal (Mtoe, 2015)*	*Coal share of electricity generation (2013)*
Argentina	–	–	1.4	2.4%
Australia	275.0	336.1	46.6	64.7%
Brazil	3.4	–	17.4	3.8%
Canada	35.8	39.1	19.8	10.0%
China	1,827.0	5.6	1,920.4	75.4%
France	–	–	8.7	4.4%
Germany	42.9	–	78.3	46.8%
India	283.9	–	407.2	72.8%
Indonesia	241.1	410.9	80.3	51.2%
Italy	–	–	12.4	16.8%
Japan	0.6	–	119.4	32.4%
Korea	0.8	–	84.5	41.4%
Mexico	7.0	–	12.8	10.8%
Russia	176.6	140.8	88.7	15.2%
Saudi Arabia	–	–	0.1	0.0%
South Africa	142.9	74.6	85.0	93.7%
Turkey	16.4	–	34.4	26.6%
United Kingdom	5.3	–	23.4	37%
United States	455.2	106.7	396.3	39.9%
European Union	145.3	–	262.4	27.5%

Notes: Uses base years for which data for all G20 members are available. Mtoe = millions tonnes of oil equivalent.
Sources: World Bank, BP Energy Outlook, Eurostat, and Organisation for Economic Co-operation and Development.

> *Explicit naming and shaming is often needed to make progress towards shared goals*

in carbon-intensive industries. G20 leaders cannot leave these discussions to environmental venues. Substantial policy action, not more rhetoric, is required.

The coal sector – the most emissions-intensive sector – is an obvious place to start. Given its enormous role in generating electricity, transitioning away from coal will be laborious and lengthy. This cannot be ignored if the Paris Agreement is to shape global trends. The G20 can be a forum where global leaders assess progress on reducing emissions from coal consumption.

The price of carbon

One important economic, energy and environmental policy instrument is a carbon price. There are different ways to price carbon. G20 states and societies will likely choose different paths and different prices. They may also opt not to price carbon, but instead to install emissions performance standards. G20 leaders should agree that polluting the global atmosphere and damaging the future can no longer occur without cost.

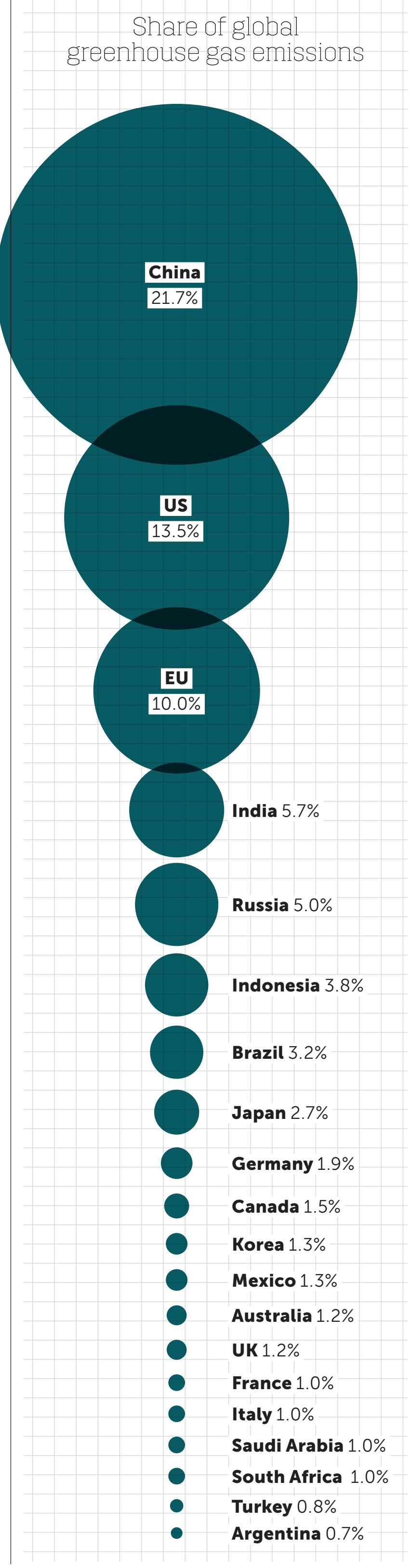
Furthermore, all pricing options are not equally successful. Emissions trading, adopted early in the European Union, has not led to substantial reductions in carbon emissions, low regulatory costs or reduced coal consumption. Pricing alone will not produce a magical invisible hand. Revenue spending and other policies must drive aggressive investment in energy efficiency gains, renewable energy generation, and energy research and development.

In the long term, carbon capture and sequestration (CCS) practices and technologies may be needed to mitigate carbon emissions. Current investments in research and demonstration projects may seem insufficient to drastically reduce the costs. New national and international carbon markets would be needed to store massive amounts of carbon or use that carbon for new purposes. At a minimum, G20 members would be wise to pledge funds and share research efforts for CCS practices and technologies.

Within the G20, China and Germany depend heavily on coal for electricity generation. Starting in Hangzhou this year, all G20 meetings and each G20 member should explicitly address coal consumption, coal production, progress made on carbon pricing and investments in mitigation technologies of all types. Each G20 summit should take stock, publicly, of promises made. In world politics, explicit naming and shaming is often needed to make progress towards shared goals. G20 members must raise the stakes on coal, if the 2015 Paris Agreement is to be as historic as its closing ceremony claimed.

The G20 includes diverse economies, emissions and energy profiles, and stated climate goals. Countries such as the United States, Korea, India and China will not take on the same commitments. The unyielding maths of increasing global greenhouse gas emissions mandates that each must act now to curb its future emissions more than the current goals suggest.

G20 members' goals should be different in the years to come. The climate is warming today, and the world cannot afford any large emitters getting a free pass. G20 members have at least one thing in common: they must do more. **G20**



KEY TAKEAWAYS

- Cities must cut emissions to help limit global temperature increase
- The C40 Cities Climate Leadership Group has been set up to help

Eduardo da Costa Paes

Chair
C40 Cities Climate Leadership Group

Eduardo da Costa Paes is Mayor of Rio de Janeiro, Brazil, and has been Chair of the C40 Cities Climate Leadership Group since 2013. Having entered politics in 1993, in 2000 he was appointed Rio's Municipal Environmental Secretary where he refined his knowledge of environmental issues. During his second mandate as a representative in Congress in 2007, Paes was named Secretary of State for Tourism, Sport and Leisure. A year later, he was elected Mayor of Rio de Janeiro and, in 2012, was re-elected for a second term.

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Building sustainable cities

***Eduardo da Costa Paes**, Mayor of Rio de Janeiro and Chair of the C40 Cities Climate Leadership Group, explains why the G20 needs to work with cities to reduce climate change*

The G20 summit in Hangzhou will be the first meeting of leaders from the world's largest economies since the Paris Agreement on climate change was announced in December 2015. This agreement, adopted by 195 states, represents unprecedented global solidarity and commitment to action.

Despite the numerous political and economic disruptions the world has seen over the past year, many countries are already taking steps to ratify the agreement as soon as possible. As host of the Hangzhou Summit, China deserves particular recognition for its leadership in implementing the Paris Agreement through long-term domestic policies and for having such a strong, bold focus on sustainable growth in its 13th Five-Year Plan. In China, swift action is already engaging businesses and investors in helping to grow the country's low-carbon economy. It represents a compelling example for others to follow.

Delivering the Paris ambition to limit global temperature increase to below 1.5 degrees Celsius above pre-industrial levels requires economic, political and social change unlike anything before. It can only be addressed with the leadership and commitment of the G20 members, with the support of their largest cities.

Rio is committed to reducing its emissions by 20 per cent by 2020

Cutting emissions will also lead to more jobs and less inequality

The Botafogo Neighbourhood in Rio de Janeiro, Brazil

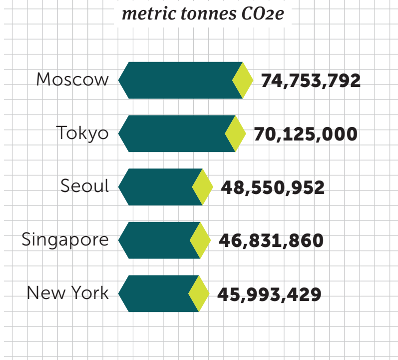
RMNUNES /ISTOCK IMAGES

As Chair of the C40 Cities Climate Leadership Group, a network of the world's largest cities committed to cutting their emissions and tackling climate change, I recognise the potential for the G20 to replicate the type of collaboration and shared ambition to secure a low carbon future seen in the C40 network. Organisations that are able to bring together the expertise and experience of communities, from the Global North and Global South, to drive progress on climate action at a faster pace and at a lower cost will be key to delivering the promise of the Paris Agreement.

Cutting emissions

More than half the world's population now lives in cities and 70 per cent of energy-related greenhouse gas emissions are generated in urban areas. Cities play a major role in delivering the cuts to emissions that countries committed to at Paris. In August 2015, Rio became the first city to comply fully with the Compact of Mayors – the world's largest coalition of city leaders addressing climate change. Through its commitment to the compact and membership in C40, Rio is committed to reducing its emissions by 20 per cent by 2020, compared to 2005 levels.

C40 Cities - Largest Citywide Emissions 2015



Source: CDP

70%

Energy-related greenhouse gas emissions generated in urban areas

Mayors in the great cities of the world have the ambition, skills and knowledge to deliver huge cuts in emissions. However, this also requires more collaboration between national, regional and local levels of government. Recent research by C40 revealed that the lack of such support and collaboration remained a significant barrier facing mayors and city leaders.

One key announcement at Paris was that at least $100 billion per year will be mobilised from public and private sources to help developing countries mitigate and adapt to climate change by 2020. Very little of that will be directly accessible by cities. Initiatives such as the C40 Cities Finance Facility will unlock up to $1 billion in sustainable infrastructure in cities in low- and middle-income countries by 2020.

Sustainable cities

In April 2016, global leaders in city finance met in Rio for the C40 Financing Sustainable Cities Forum, in partnership with the Citi Foundation and WRI Ross Center for Sustainable Cities. It was the first such gathering to accelerate financing climate action in cities. A lot of progress is being made, but to achieve the scale of investment needed to get all cities onto a low carbon development path G20 leaders should ensure that city governments can directly access the growing green finance funding available through public, private and multilateral sources.

As Mayor of Rio de Janeiro I have seen first-hand the devastating impacts of climate change on my city, including the floods and landslides that claimed more than 900 lives in 2011. As the leader of an administration committed to an ambitious climate change agenda, I have also seen the benefits that such action can deliver.

Cutting emissions and adapting our city to meet the threats of climate change are not only good for the planet, but will also deliver cleaner air, faster economic growth, more jobs and less inequality. Now is the time for the G20 leaders to recognise the role of cities and empower them to deliver a low carbon and climate-safe future for millions of urban citizens worldwide. **G20**

65% Emissions reduction necessary to limit global warming

2°C Temperature increase limit for global warming

The role of business in climate change

A number of new agreements and initiatives are primed to help the private and public sector join forces to combat climate change around the world, writes ***Peter Bakker***

KEY TAKEAWAYS

- Industries are transitioning to low-carbon economies
- Scaling up new technologies will redirect trillions of investment dollars
- Financiers and governments need to join global initiatives to benefit

The transition to the low-carbon economy is underway, spurred by the 2015 Paris Agreement and the adoption of the Sustainable Development Goals. Many countries have already ratified the Paris Agreement. It could come into force before 2016 ends.

Smart businesses are not waiting. Influential global companies have begun taking advantage of the opportunities. These include using renewable energy, deploying innovative low-carbon technologies, sustainably sourcing resources, working on innovative and transformative solutions and more.

Every area of industry will be affected by climate change. Because necessity is the mother of invention, businesses know that those who can innovate and take advantage of the low-carbon transition will secure a sustainable future.

Sustainable development and climate change are two sides of the same coin. Business is the world's most powerful economic force, responsible for most spending, wealth creation and investment. Where business goes, others will follow.

Innovative initiatives from business are part of the global shift that will open the floodgates to large-scale opportunities that can combat climate change and transform the lives of millions globally. Companies have a huge opportunity to join these initiatives and bring their expertise to bear, especially those in China, which represents more than a billion people and is hosting this year's G20.

Working on solutions

The Low Carbon Technology Partnerships Initiative (LCTPi) is a groundbreaking collaboration led by the World Business Council for Sustainable Development to accelerate the development and deployment of low-carbon technologies.

More than 150 businesses and 70 non-governmental organisations, government bodies, cities and other partners around the world are working on solutions to the challenges affecting low-carbon transport fuels, forests, energy efficiency in buildings, renewable energy, low carbon freight, chemicals, cement and climate-smart agriculture.

An important outcome of LCTPi is below50. A global collaboration, it brings

$5TN Estimated annual funds needed for a low-carbon economy

10BN Metric tonnes of carbon dioxide per year that business could cut

BRENT LEWIN/BLOOMBERG VIA GETTY IMAGES

ASB Biodiesel's waste-to-biodiesel plant in Hong Kong

together the entire value chain for sustainable fuels, which produce at least 50 per cent less carbon emissions than conventional fossil fuels. below50 is scaling up the global market to unlock the economic benefits, expected to exceed $185 billion in the next five years.

LCTPi demonstrates the importance of collaboration. Its companies and partners are working together on climate solutions that could never be delivered by a single company on its own.

An independent impact analysis by PwC shows that the LCTPi plans could deliver up to 65 per cent of the emissions reduction necessary to stop the world from warming beyond 2 degrees Celsius.

Scaling up new and existing technologies will also redirect trillions of green investment dollars. LCTPi could stimulate between $5 and 10 trillion of investment into the low carbon economy while creating between 25 and 45 million jobs each year.

The Business End of Climate, a report by We Mean Business, shows how bold climate action, supported by smart policy, can keep the temperature rise below 2 degrees Celsius. It examines five initiatives that companies have joined to address climate change: Science-Based Targets, EP100, RE100, Zero Deforestation and LCTPi.

The analysis shows what would happen if these five initiatives achieved their most ambitious plans, effectively constituting a "business-determined contribution". By 2030, business would cut its emissions by 3.7 billion metric tonnes of carbon dioxide equivalent a year – half a tonne of carbon dioxide for every person on the planet, every year. If all the relevant companies signed up to these initiatives, the total impact could reach 10 billion tonnes every year. Imagine the further potential if Chinese companies, currently underrepresented in these initiatives, were to contribute their leadership and expertise.

Such analysis shows that business is the best implementation partner for governments as they strive to hit their climate targets. National and local governments should turn to business to help make their climate commitments real.

Global initiatives

The element of partnership is vital. A reduction of 10 billion tonnes a year is significant, but not enough. Neither business nor government can achieve the needed reductions by acting independently.

Success will depend equally on governments playing their part at the local and national levels. Every country will need to tailor its policies to its unique context and requirements. Governments will also need to work together around the world to address this inherently global challenge.

The proposed financial commitments of the Paris Agreement must be efficiently and effectively mobilised. Private sector funds must be leveraged to fully finance the required transformation. An estimated $90 trillion is needed over the next 15 years. That is $5 trillion per year – more than half of China's annual gross domestic product – that must be directed towards the low carbon economy.

Now is the time to turn ambition into implementation. Companies, including Chinese businesses, must join the global initiatives. Financiers must unlock capital that will drive solutions. Governments and business must work together to help these initiatives achieve their targets.

By 2020 we can significantly bend the curve of global emissions downwards, even before the Paris Agreement is expected to come into effect. **G20**

Peter Bakker

President and CEO
World Business Council for Sustainable Development

Peter Bakker joined the World Business Council for Sustainable Development as President and CEO in 2012. Previously he was the CEO of TNT NV, the Netherlands-based holding company of TNT Express and Royal TNT Post (formerly TPG Post). Under his leadership, TNT entered a ground-breaking partnership with the World Food Programme, set ambitious emission reduction targets from its Planet Me initiative and held multi-year leading positions in the Dow Jones Sustainability Index.

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AKZO NOBEL

ABOUT

AkzoNobel creates everyday essentials to make people's lives more liveable and inspiring. As a leading global paints and coatings company and a major producer of specialty chemicals, we supply essential ingredients, essential protection and essential colour to industries and consumers worldwide. Backed by a pioneering heritage, our innovative products and sustainable technologies are designed to meet the growing demands of our fast changing planet, while making life easier. Headquartered in Amsterdam, the Netherlands, we have approximately 45,000 people in around 80 countries, while our portfolio includes well-known brands such as Dulux, Sikkens, International,Interpon and Eka. Consistently ranked as a leader insustainability, we are dedicated to energising cities and communities while creating a protected, colourful world where life is improved by what we do.

Smart façades for a sustainable future

AzkoNobel is creating essential exterior wall paint products that address the challenges of urbanisation and climate change

Today, nearly four billion people live in cities. This number is expected to increase by 2.5 billion by 2050, with over 90 per cent of this growth being in Asia and Africa. Cities will need to accommodate spiralling urbanisation, service the needs of citizens and stimulate commerce and investment to create jobs, all within the constraints imposed by climate change and the need to meet greenhouse gas emission targets. At AkzoNobel, we believe that innovation can enable cities to "do more with less" and turn the urbanisation challenge into an opportunity to create more "Human Cities" for people and society in general.

As one of the world's leading paint companies – with globally recognised brands such as Sikkens, Dulux, International and Interpon – AkzoNobel has established its global Research, Development and Innovation (RD&I) centre for exterior wall paints in Singapore. This garden city, in the centre of South East Asia, is a stimulating hub for innovation.

"We are striving to increase the use of renewable materials"

The high growth economy of the region increases the need for innovation and AkzoNobel launches essential new products every year in the exterior wall paint category. Our research programs are mainly focused on sustainability, energy efficient solutions, long-term durability and protection, and aesthetics for exterior walls. Guided by our Planet Possible approach to "doing more with less", and underlined by our #1 ranking on the Dow Jones Sustainability Index, AkzoNobel is constantly striving to develop better and more sustainable products and technologies in order to make people's lives more liveable and inspiring.

Reducing environmental footprint

Reducing the environmental footprint of our coatings is a clear focus of our research programs. We are striving to increase the use of renewable materials and optimise our use of lower carbon footprint raw materials. Another significant way to reduce footprint is through increasing the durability of exterior wall paints. Enabling longer maintenance and repainting cycles helps to reduce building maintenance costs and environmental impact. This is achieved by lowering the use of resources for the paint itself, which will last longer, as well as reducing water use due to less need for cleaning.

Both climate and human activities alter the appearance of building façades through UV-driven colour fading, erosion, cracking, flaking, dirt and dust pick-up, fungal and algal growth. In tropical urban environments in particular, most exterior wall paints currently last around five to eight years. We are developing solutions to extend this durability to 10 years and beyond. Our research programs are focused on developing new polymer technologies to best balance weatherability and flexibility to create products with a longer durability than standard products used on building façades. In combination with durable pigments that do not fade under strong UV, and smart formulation modelling, we can deliver extended repainting cycles.

Beyond traditional coatings, zero-VOC powder coatings for exterior façades can last for 20 years or more.

Deliver energy efficient solutions

Cities also experience the "urban heat island effect", especially those cities that are subject to temperatures of 35 degrees celsius and above throughout the year. This results in growing energy consumption, which is needed to cool down buildings. What many people are unaware of, however, is the fact that the materials used on exterior façades can have a significant impact on the temperature inside a building.

When infrared radiation from the sun strikes the surface of a building,

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some of it is reflected and some is absorbed in the form of heat. This causes the exterior wall of the building to increase in temperature, and this heat is subsequently transmitted to the interior of the building. Thanks to innovative technology and smart formulation modelling software, our researchers have developed strategies to increase the solar reflectivity of our coatings. We've carefully managed the pigments we use in our paints to create striking colours while at the same time significantly increasing the amount of infrared radiation which is reflected by building façades. The result is a difference of up to five degrees celsius between a façade coated with a normal exterior paint and one coated with our Dulux Weathershield Keep Cool products. Computer simulation modelling has also demonstrated energy cost savings of up to 10 to 15 per cent, depending on the type of building. And this is achieved simply as a result of less energy being required to cool the inside of the building. This type of cooling effect is available in a variety of decorative and performance coatings within the AkzoNobel portfolio.

Clean air

Air pollution is another challenging urbanisation issue, especially in growing cities in emerging markets. Harmful air pollutants such as nitrogen oxides (NOx) are recognised health and environmental issues being faced by urban communities. NOx (NO, NO_2) are predominantly generated by the combustion of nitrogen in vehicle engines. NOx pollution is flagged as a contributory factor in respiratory diseases and can react with many other chemicals to create further, harmful pollutants.

Photoactive Titanium Dioxide (TiO_2) is a well-established technology for depollution and self-cleaning. When UV radiation strikes a photoactive TiO_2 molecule, highly reactive free radicals are formed. These radicals react with organic materials and can decompose air pollutants into less harmful materials. This reactivity can also decompose other unwanted material, such as dirt, helping to maintain cleaner façades for longer. Incorporating photoactive TiO_2 into coatings is not an easy task, because its reactivity is so high that it can even

degrade the paint film itself. Our researchers are working on technologies to stabilise depollution paints without compromising general coatings properties, particularly with high durability in harsh climatic conditions such as tropical areas. The ultimate aim is to offer customers around the world a technical solution for covering millions of square meters of façade with depollution solutions, with the potential to help clean millions of cubic meters of air.

Three key strengths

One of our clear commitments as a company is to help create more Human Cities around the world. We are using our three key strengths – essential ingredients, essential protection and essential colour – to energise communities and make them more liveable and inspiring. Our researchers and scientists will therefore continue to search for new and innovative ways in which coatings can increasingly play a more significant role in addressing the great urbanisation challenges that lie ahead.

"Our researchers are working on technologies to stabilise depollution paints"

Pamela Phua

Pamela Phua has more than 20 years' experience in Research, Development and Innovation (RD&I) in the coatings industry. In her current role as Directorof RD&I for AkzoNobel, she drives new technology development and product implementation across the South East, South Asia and Middle East regions.

Ms Phua was instrumental in setting up the global research and laboratory operations for AkzoNobel Decorative Paints (Global Exterior Wallpaint Expertise Group) in 2011. In her global capacity, Ms Phua implements the functional and production innovation strategy for Exterior Wallpaint. She spearheads the RD&I functional excellence, standards and capability, and the efficient delivery of processes as the approved Standards & Processes across the globe. Her efforts enabled AkzoNobel's businesses to roll out new products and services across the region in a fast and coordinated manner,supported by an agile supply chain, efficient sourcing and robust quality control.

Some leading innovations launched by Ms Phua and her team included interior and exterior emulsion paints such as Dulux Weathershield Powerflexx, Dulux Pentalite, Dulux Wash & Wear / Easyclean, and Dulux Catylac / Inspire.

*She is an industry consultant to regulatory bodies such as Spring Singapore, Singapore Green Label, the Housing and Development Board, Singapore Green Building Council, National Environment Agency and the Singapore Institute of Architects. She is also an A*Star certified auditor for accredited testing laboratories in Singapore.*

KEY TAKEAWAYS

Green growth strategies are now central to forward planning

Green finance systems are being implemented internationally

Sustainable development needs the financial system

Policymakers, central bankers and regulators are among those working together to implement green finance, write ***Erik Solheim*** *and* ***Achim Steiner***

The G20 is the world's premier platform for international cooperation in economic and financial policy. Its core mission to advance balanced and sustained growth must reflect the ambitions embodied in landmark agreements reached elsewhere in 2015, most significantly, the Sustainable Development Goals (SDGs) and the Paris Agreement on climate change.

Recent significant developments in economic policy commitments have aligned them with sustainable development. Green growth strategies have moved from the margin to the centre of many countries' forward planning. Fossil fuel subsidies are now widely accepted as unhealthy for both the economy and the environment. Clean energy has become a driving force for technology and business innovation.

Unless the world can summon the many trillions of dollars of commercial investment required to make the transition to a sustainable planet, we will fall short of eradicating extreme poverty and reducing fossil fuel emissions at the speed recommended by climate scientists. Such a spectre disturbs investors. A future characterised by climate shocks, failing ecosystems and widespread instability signals the clear need for a renewal of the global financial system.

This has long been understood by leading market players. Lone, innovative initiatives have collectively failed to overcome entrenched interests and incumbent policy frameworks. They have been unable to deliver the new financial products and tools capable of aligning investment with sustainable outcomes – until now.

Quiet revolution

Away from the limelight of the SDGs and Paris, a quiet financial revolution is underway, led by policymakers, central bankers and regulators, often working with financial institutions. They recognise the imperative of fully aligning capital markets with mounting risks, including climate change, water scarcity and degraded environments, around the world.

In capital cities such as Nairobi, Beijing, London, Paris and Jakarta, there is a flurry of activity. Zhou Xiaochuan, Governor of the People's Bank of China, has made it clear that "establishing a green finance system has become a national strategy". It is a reality institutionalised in the 13th Five Year Plan. Mark Carney, Governor of the Bank of England, has advanced prudential analysis to ensure that the financial system is fit for purpose in a world buffeted by climate change.

This quiet revolution is chronicled in the United Nations Environment Programme

Leaders, markets and performance tools all need to be engaged

Conventional wisdom that drives markets must be challenged

(UNEP) report entitled *The Financial System We Need*. Exciting innovations are taking place at the intersection of market innovation and policy frameworks, such as the burgeoning green bond market, which is predicted to surpass $150 billion in market value before the end of the year.

Coordinated action

Far deeper changes are in progress, too. Credit rating agencies are embedding climate risks in sovereign and corporate ratings. Pension fund trustees are embracing broader environmental considerations. Banking and other regulators and stock exchanges are encouraging better flows of sustainable development information to both investors and savers.

Many financial institutions are taking on environmental stress testing, such as France's new requirements for investors to disclose their alignment with global climate goals. Green finance is becoming part of the competitiveness equation. Hong Kong, France, Switzerland and the United Kingdom have all launched initiatives to position themselves as global hubs for green finance.

Coordinated international action is arising from national leadership. The G20, under China's presidency, has established a new work stream of finance ministries and central banks, co-chaired by the Bank of England and the People's Bank of China. It is supported by UNEP to consider options for accelerating green finance through financial market reform and development. In parallel, the Financial Stability Board is hosting a taskforce led by the private sector and chaired by Michael Bloomberg. It is exploring how climate-related financial risks can best be disclosed in financial markets. Leading insurance regulators in the Sustainable Insurance Policy Forum are sharing experience in managing the sustainability dimension of their mandates.

The G20,under China's presidency, has established a new work stream of finance ministries and central banks

Three-part programme

These inspiring developments now need to be scaled up, so that they can realise the promise of the SDGs and the Paris Agreement. This requires a three-part programme that builds on existing practice.

The first part is national leadership. As with reducing fossil fuel emissions, each country needs to produce a roadmap to plot the transition of its financial system. Indonesia was the first to do this in 2015.

The second is developing a coordinated approach to the international financial architecture. All financial market standard setters need to be engaged, along with the international organisations that advise on national action to strengthen the financial systems.

Third, assessment tools and performance frameworks need to be upgraded. Only a handful of countries can measure flows of green finance and system resilience to environmental shocks. Such measurement must soon be the norm.

The SDGs and the challenge of climate change both require a financial system that is fit for purpose for the 21st century. It is time for the quiet revolution to make some noise and reset the conventional wisdom that drives markets. **G20**

Erik Solheim

Executive Director
United Nations Environment Programme

Erik Solheim is the Executive Director of the United Nations Environment Programme (UNEP).

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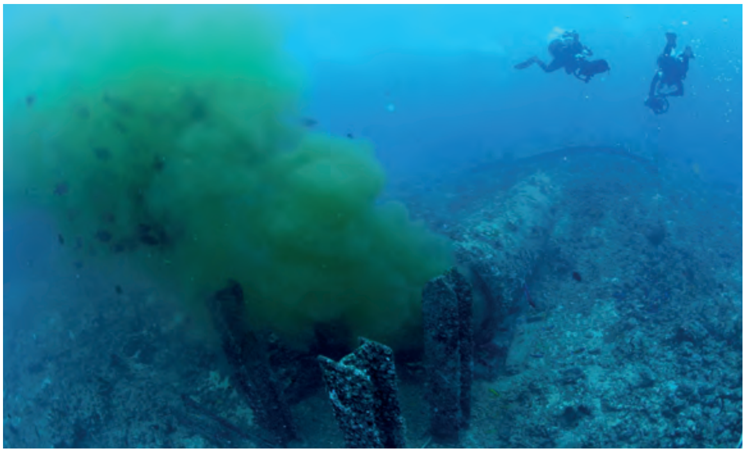
ICONS BY GREGOR CRESNAR AND FREEPIK FROM FLAT ICON

BALEEN

Ending marine pollution: a "solution" to climate change

Yuri Obst, Founder and CEO of Baleen, explains: "Visualise a future in which the Earth's natural cycles and urban economies co-exist. Marine outfalls transformed into Sewer Mining facilities with micro-plastics and non-biodegradables recovered as recyclables separate from energy-rich 'waste' as carbon-positive feedstock and nutrient-laden 'water' reclaimed for irrigation."



Water cycle key to climate change

To counteract climate change we need to understand that the Earth, the biosphere which sustains us, is an ecosystem of which we form part. And to avoid environmental catastrophe we must revitalise the ecological processes that sustain Life.

Water is foremost to any ecosystem. Water cycles through the atmosphere, soil, rivers, lakes, and oceans distributing nutrients to support life. This cycle involves exchange of energy, which leads to temperature changes, contributing energy flow. These heat exchanges influence climate. Consequently, water has a profound influence on climate change.

The Ocean is Earth's largest supporting ecosystem, home to the most abundant life on Earth, but has long suffered as a consequence of industry and growing coastal populations. The Ocean is also the largest carbon sink, absorbing 90 per cent of global warming and 30 per cent of all carbon emissions (WMO GAW 2014) but its own ecosystems are collapsing as a consequence of pollution.

Humanity has dominion over Earth's ecosystems and can preserve essential dynamics in two practical ways. The first is through mitigation of pollution and the second is through preservation of natural water cycles.

Wastewater key to water cycle

Waste water disposal poses a direct influence on the water cycle. It is a 'waste' stream typically 99.9-99.99 per cent in water content and if managed wisely would end marine pollution and benefit natural water cycles indefinitely. Reclamation of 'WasteWater' revitalises a plethora of ecosystems, preserving the second most influential means to cooling the planet, the Earth's flora, and returns natural water cycles in symbiotic relationship with the Ocean.

WasteWater to displace one-third carbon emissions and supply one-third irrigation need

Emission estimates (UNEP 1998) determine there is enough energy-rich 'Waste' contained by 'WasteWater' to yield a greenhouse benefit of some 3.34 billion tonnes of CO_2 avoided annually (vs estimated global emission of 9.5 billion tonnes, US EPA 2011) to reduce CO_2 loading on oceanic ecosystems by one-third. Resulting cleaner 'Water' containing free fertiliser in the form of nitrates and phosphates could supply one-third of global water for agriculture (UN, UNESCO and FAO).

Electricity potential (UNEP 1998) estimate this 'Waste' resource to yield around 583 billion kilowatts of useful power (Vs a global demand of 23,322 billion kilowatts, IEA 2013), though just two-and-a-half percent of global demand, is higher than the combined total of two per cent from wind, solar, geothermal and biomass (REN21 2014).

Unlike non-renewables, 'WasteWater' is found where communities reside, which means it could power the transport industry in lieu of existing coal-fired or oil-combustion sources, to encourage the move from fossil fuels.

Energy-Rich 'Waste' and Irrigation-Fit 'Water' reclaimed simultaneously in just "three" steps. For partnership enquiries contact us

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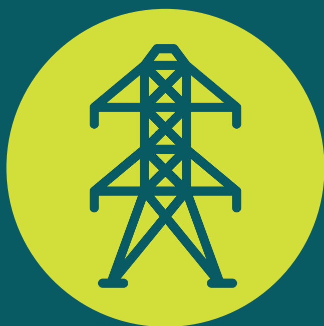
Energy markets and access

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority energy commitments from 2008 to 2014



+0.47 74%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment.
Based on a study by the G20 Research Group

ICON MADE BY FREEPIK FROM FLAT ICON

KEY TAKEAWAYS

- Efficiency improvements have slowed the demand for energy
- A market for energy-efficient investments is emerging

A hybrid car being charged

Energy efficiency for a sustainable energy transition

The choices made now about sustainable and renewable energy policies will be felt for decades. ***Fatih Birol*** *tells us how governments can reduce the growth of energy demand with help from the G20*

Investment is the lifeblood of the global energy system. The importance of energy to the global economy is set to grow as countries strive to accelerate the energy transition and meet collective climate goals. The challenge for countries, both within the G20 and outside it, is how to attract the necessary amounts of capital and encourage the redirection of investment flows to ensure a sustainable energy transition while maintaining energy security. A fundamental means of addressing this challenge is through making policy and investment choices that increase energy efficiency and avoid the growth of energy demand.

Making smart choices

Rapid growth in energy demand since 2003 has been led by industrial growth and urbanisation in emerging economies. The world is now entering a period of slower growth in energy demand. Investments in heavy industry and construction have slowed markedly, particularly in China. Demand growth in Europe and North America is being slowed by efficiency improvements.

G20 members account for 75 per cent of global energy demand

XENOTAR/ISTOCK PHOTO

It is vital that governments take advantage of this trend and make smart choices. Tens of trillions of dollars are invested each year in energy demand and each time such an investment is made – whether by public institutions, private corporations or individuals – future energy demand is shaped. Making smart, long-term choices with appropriate technologies and policies can minimise future energy demand and lead to more energy efficient and sustainable outcomes.

These choices can have a big impact. One regrettable result of lower fuel prices has been a global slowing of the trend towards more fuel-efficient vehicles. Following a decade in which the average fuel economy of new vehicles in the United States improved every year, in 2015 it stayed flat – a slowdown in efficiency improvement that will lock in thousands of additional barrels of oil per day in demand. In India, sales of new vehicles have picked up after a two-year decline, yet the dominant trend there is also towards larger vehicles, resulting in lower average fuel economy and higher demand for oil.

While choices made on consumer goods can lock in demand for years, choices made on infrastructure and buildings can have effects that are felt for decades. Robust building codes in developing countries, for example, are of vital importance for the achievement of climate targets. Opportunities for savings are well within reach. As costs of more efficient goods have fallen through resulting mass production – LED lighting costs, for example, have fallen 90 per cent since 2009 – more ambitious standards have become easier to introduce. It is critical to meet such standards early. If not, inefficient technologies could be deployed for millions of people without access to modern energy infrastructure and appliances.

Governments have ways to encourage smart investment choices. One driver is direct government spending through grants, tax credits, public procurements and loans. Policymakers should not forget about effective measures such as energy performance requirements, which can accelerate the deployment of efficient technological improvements. A market for energy-efficiency investments financed on the basis of avoided future costs is emerging, but growth depends on making efficiency investments similar to other, more familiar, financial products.

Collective action

Energy demand creates the fulcrum on which energy investments pivot, as investments in energy supply seek to balance investments in energy demand. The outlook for energy demand drives investments in energy supply.

G20 members account for 75 per cent of global energy demand. The choices made in the years to come will ensure that meeting this demand does not come at the expense of sustainability. The G20's efforts to collectively act on energy efficiency and renewable energy are to be applauded.

It has been my great pleasure to work directly with G20 energy ministers both this year under the Chinese G20 presidency and in years past. I look forward to greater engagement with the G20 process as the International Energy Agency continues to provide recommendations to underpin these important discussions. **G20**

Fatih Birol

Executive Director
International Energy Agency

Fatih Birol became Executive Director on 1 September 2015. Previously he was the IEA's Chief Economist and Director of Global Energy Economics, with responsibilities that included directing the IEA's flagship World Energy Outlook, *recognised as the most authoritative source of strategic analysis on global energy markets. He is also the founder and chair of the IEA Energy Business Council, which provides a forum to enhance cooperation between the energy industry and energy policymakers.*

@IEABirol
www.iea.org

9,000,000,000 Estimated global population by 2040

Building a sustainable global energy system

The Organization of the Petroleum Exporting Countries (OPEC) welcomes the Paris Agreement made last December, writes ***Abdalla Salem El-Badri***

KEY TAKEAWAYS

We need to utilise fossil fuels and renewable energy sources

An increasing global population will need fossil fuels for energy

Technology can help provide cleaner, more efficient energy

OPEC members have been involved in discussions about combatting climate change from the start of the 21st Conference of the Parties last December, where 11 members submitted their Intended Nationally Determined Contributions.

With this in mind, OPEC is committed to helping develop a realistic energy path in the years ahead. The basic challenge has two components. First, to supply enough energy to meet demand for all and help provide access to the billions who still have no access to modern energy services. Second, we must ensure that this is done in a sustainable way that balances the needs of people in relation to their social welfare, the economy and the environment.

The scale of the challenge means that we will need to use all available energies. It is crucial that we appreciate what each energy source can provide us with as we plan for the future.

There is no doubt that renewables, such as solar and wind, will continue to expand their role significantly. OPEC members recognise and support their development. We are making many investments in the renewables sector. Nuclear and hydropower are also expected to maintain their share in the global energy mix.

In total, non-fossil fuel energy is expected to make up about 22% of the global energy mix by 2040.

That means that fossil fuels will still need to supply more than three-quarters of the energy mix by 2040. Of course, these numbers may vary slightly, but given current energy and technology expectations, we do not see any outlook predicting that non-fossil fuels will come close to overtaking fossil fuels in the decades ahead.

Fossil fuels remain abundant, and are necessary for our future – as they have been an essential part of our past. They have positively affected the lives of billions of people for centuries, providing heat, light and mobility. For oil, the products derived from this precious natural resource are fundamental to our daily lives. They will also be vital to many more billions of people in the years ahead.

Advances and solutions

We need to appreciate that the problem is not fossil fuels themselves. It is the emissions that come from burning them. OPEC does not believe the answer is to stop using fossil fuels. We believe the emissions challenge can be overcome with solutions found in technologies that reduce and ultimately eliminate these emissions.

Our members have already invested a great deal of time, money and brainpower to explore and help develop technological solutions to the challenges posed by climate change. At OPEC we recognise the importance of continually trying to advance

50%

Increase in global energy demand by 2040

A Czech Republic petrochemical industrial plant with solar panels,

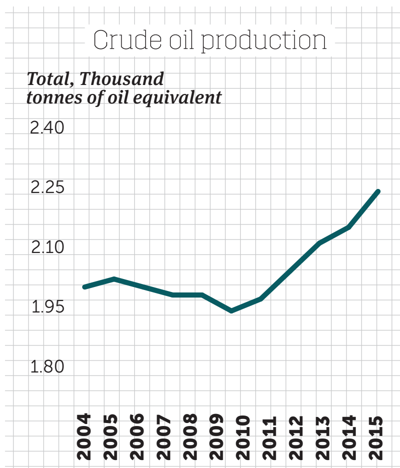
the environmental credentials of oil, both in production and in use.

Examples of such advances include increasing carbon capture and storage, reducing gas flaring, developing hybrid solar-gas power stations and solar-powered desalination units, and producing cleaner petroleum products. We should not forget that our countries are also investing in renewables and taking actions to advance energy efficiency across their economies.

This focus will continue in the years ahead. There will be more renewables, further improvements in energy efficiency and continued investment in oil and gas. It is important to reiterate that environmental protection and the use of oil and gas are not mutually exclusive.

The global population is expected to reach nine billion by 2040. Billions will have no access to electricity and many will rely on biomass for their basic needs. Global energy demand is also set to grow by almost 50% by 2040, so we cannot ignore any energy sources. Nor can we ignore any technologies that can help us use that energy in a cleaner, more efficient manner.

It will be important for G20 leaders at their Hangzhou Summit to keep this in mind as they look to the future. They should also remind themselves that the three pillars of sustainable development – economic, environmental and social – can mean different things to different people. **G20**



Source: OECD/Extended world energy

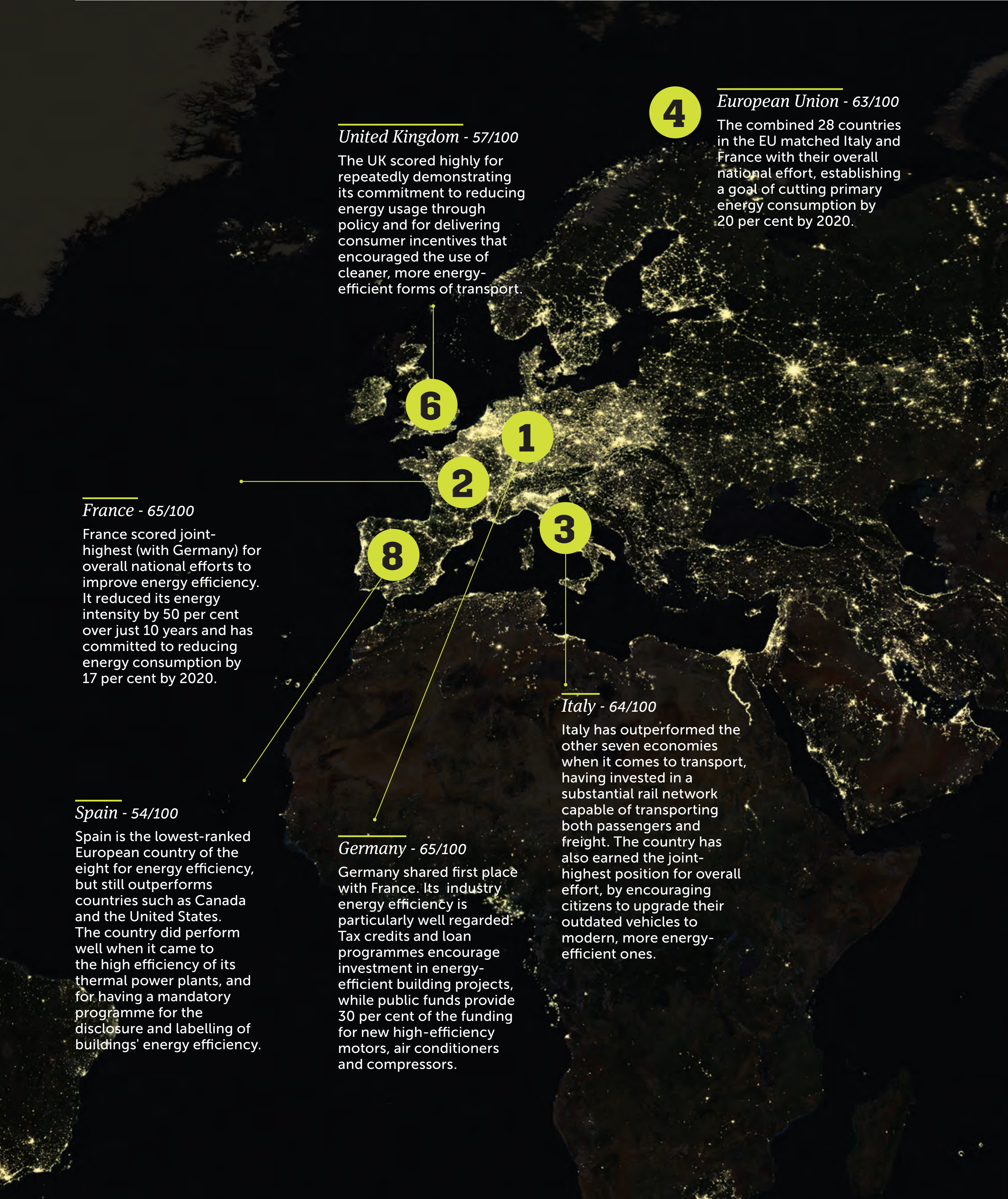
Abdalla Salem El-Badri

Secretary General

OPEC

Abdalla Salem El-Badri has been Secretary General of the Organization of the Petroleum Exporting Countries (OPEC) since 2007. In 1977, he joined the board of Libya's Umm Al-Jawaby Oil Company, and in 1980 was appointed Chair of the Waha Oil Company. He became Chair of the Libyan National Oil Company (NOC) in 1983 and Libya's Minister of Petroleum in 1990. He subsequently served as Libya's Minister of Energy, Oil and Electricity, and Deputy Prime Minister, before returning to NOC until 2006.

www.opec.org



European Union - 63/100

The combined 28 countries in the EU matched Italy and France with their overall national effort, establishing a goal of cutting primary energy consumption by 20 per cent by 2020.

United Kingdom - 57/100

The UK scored highly for repeatedly demonstrating its commitment to reducing energy usage through policy and for delivering consumer incentives that encouraged the use of cleaner, more energy-efficient forms of transport.

France - 65/100

France scored joint-highest (with Germany) for overall national efforts to improve energy efficiency. It reduced its energy intensity by 50 per cent over just 10 years and has committed to reducing energy consumption by 17 per cent by 2020.

Italy - 64/100

Italy has outperformed the other seven economies when it comes to transport, having invested in a substantial rail network capable of transporting both passengers and freight. The country has also earned the joint-highest position for overall effort, by encouraging citizens to upgrade their outdated vehicles to modern, more energy-efficient ones.

Spain - 54/100

Spain is the lowest-ranked European country of the eight for energy efficiency, but still outperforms countries such as Canada and the United States. The country did perform well when it came to the high efficiency of its thermal power plants, and for having a mandatory programme for the disclosure and labelling of buildings' energy efficiency.

Germany - 65/100

Germany shared first place with France. Its industry energy efficiency is particularly well regarded. Tax credits and loan programmes encourage investment in energy-efficient building projects, while public funds provide 30 per cent of the funding for new high-efficiency motors, air conditioners and compressors.

The top eight energy-efficient economies

A guide to how countries and regions around the world have successfully reduced and optimised energy consumption

Japan - *57/100*

Of all the countries studied, Japan had the highest efficiency of electricity production from thermal power plants. It also established successful standards for the fuel efficiency of heavy-duty trucks.

China - *61/100*

China's investment in eco-friendly infrastructure has earned it the accolade of highest-performing country for buildings and construction, with residential buildings consuming less power per square foot than the other countries examined.

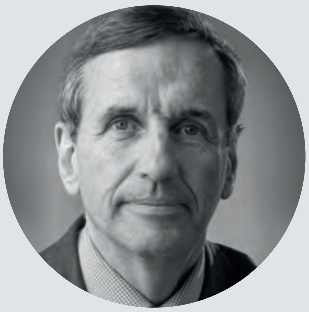
Source: Inhabitat.com

KEY TAKEAWAYS

Financial markets are increasingly investing in low-carbon innovation

Scaling up green finance means removing market distortions

Scott Vaughan



President and CEO

International Institute for Sustainable Development

Scott Vaughan is President and CEO of the International Institute for Sustainable Development and a former Counsellor with the World Trade Organization. He has served as Canada's Commissioner of the Environment and Sustainable Development as well as the Director of the Department of Sustainable Development at the Organization of American States. He is a former Visiting Scholar at the Carnegie Endowment for International Peace and the former Head of Economics at the North American Commission for Environmental Cooperation. At the United Nations Environment Programme, he initiated the Finance Initiative and work on trade and environment.

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Expanding green finance, ending fossil fuel subsidies

The G20 should build on the commitments made in the Paris Agreement last year to accelerate phasing out fossil fuels, writes ***Scott Vaughan***

Sustainable development is about investments. They enable a choice between a coal-fired power plant or renewable energy, light rail transit or a six-lane highway, and oil and gas or small-scale, off-grid solar-powered households. These investment decisions are made daily around the world. Together they set the trajectory towards either a low-carbon and clean economic future or business as usual.

Financial markets are increasingly investing in clean, low-carbon innovation, from transportation and infrastructure to electricity and forestry practices. Green finance is growing steadily from a small, boutique market niche into a broader range of green financial products.

The G20 has been important in both mirroring and pushing these structural shifts. Its Working Group on Green Finance is exploring how different financial market actors, from central banks and asset managers to green bond providers and purchasers, can work together.

G20 work supports convergence on a common definition of what green means within financial markets, as well as standardised accounting, third-party disclosure and verification practices.

Markets need tools to identify how green investments differ from standard financial products. Scaling up green finance means removing market distortions that block progress, such as the hundreds of billions governments spend on fossil fuel subsidies.

A global framework agreement has been adopted by 196 countries


RYHOR BRUYEU/ISTOCK IMAGES

Wind turbines in Spain

> *G20 work supports convergence on a common definition of what green means*

At Pittsburgh in 2009, G20 leaders committed to identify and eliminate inefficient fossil fuel subsidies. Since then, action to measure, reduce and eliminate them has accelerated and extended beyond G20 members. Most reforms have been in developing countries: Argentina, Ghana, India, the Philippines, South Africa, China, Nepal and Vietnam, where governments have taken some gutsy decisions.

Subsidies and enterprises

Calculating fossil fuel subsidies locked within national budgets, opaque tax codes and actual tax treatment is complex and contested. Many subsidies take the form of tax breaks. Accelerated capital cost depreciation methods or flow-through shares are common. Adding the total uptake by companies of allowable tax breaks is difficult. Surprisingly, many finance departments do not even try.

Some finance departments also resist efforts to include as subsidies the billions spent annually through export credits to support fossil fuel-based activities. Since many export banks provide credit at prevailing market rates, by definition prices may not be distorted through subsidies. But that view misses the obvious intent and spirit of the G20 commitment.

The World Trade Organization (WTO) has a more applicable definition of state-owned enterprises. G20 members need to begin measuring how public finance through export credits are creating, extending or deepening fossil fuel activity that would otherwise not exist.

Nonetheless, there is now a wide consensus that $500 billion is spent each year on fossil fuel subsidies. This amount splits into consumption-related subsidies – for example, lower prices at the pump for diesel fuel – that comprise three-quarters of the total and production subsidies for one-quarter.

Arguments to protect domestic subsidies seem endless. Consumption subsidies support pro-poor transfer payments such as public transport support or farm vehicles. They are too complex to calculate and therefore tricky to reform. Production subsidies for oil and gas exploration and pre-production are needed in order to tighten global markets, especially during commodity price dips. The list goes on.

$500bn

Amount spent each year on fossil fuel subsidies

International reform

Yet for all the reasons to avoid action, subsidy reform is slowly winning. The Paris Agreement in December 2015 was a turning point from the leisurely post-Pittsburgh approach. An ambitious universal global framework agreement was adopted by 196 countries, which it committed to reducing emissions through their Nationally Determined Contributions.

The Global Subsidies Initiative of the International Institute for Sustainable Development (IISD) estimates that reforming fossil fuel subsidies to consumers across 20 countries could reduce emissions by an average of 11 per cent.

By taking 30 per cent of subsidy savings and investing them in renewable energy and energy efficiency, national emissions are reduced further to an average of 18 per cent by 2020.

In December 2015 at Paris, 40 countries signed the declaration of the Friends of Fossil Fuel Subsidy, committing to support enhanced transparency, ambitious domestic reform and flanking policies to protect the poor as they reform policies to eliminate fossil fuel subsidies by 2025. At the energy ministerial meeting in the United States, ministers reiterated their commitment to phase out fossil fuels by 2025.

These steps are welcome, but climate science leaves no ambiguity about the urgent need for immediate action. The G20 at Hangzhou in September 2016 should take up the call by hundreds of organisations, including IISD, to accelerate this timetable to 2020. **G20**

Agriculture, food and nutrition

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority food and agriculture commitments from 2008 to 2014

+0.35 68%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

ICON MADE BY FREEPIK FROM FLAT ICON

INNOVATION IN AGRICULTURE

By championing innovation, the G20 can add to the ways in which it supports agriculture and implements the Sustainable Development Goals, writes ***Kanayo F Nwanze***

A banana farmer in Bungoma, Kenya

IFAD/SUSAN BECCIO

Kanayo F Nwanze

President
International Fund for Agricultural

Kanayo F Nwanze was appointed President of the International Fund for Agricultural Development (IFAD) in 2013 for a second four-year term. He had previously served as Vice President for two years. Before joining IFAD, Nwanze was Director General of the Africa Rice Center. In addition, he has held senior positions at research centres affiliated with the Consultative Group on International Agricultural Research (CGIAR) in Africa and Asia, and played a key role in establishing the Alliance of CGIAR Centers. He was also Chair of the World Economic Forum's Global Agenda Council on Food Security.

@knwanze

KEY TAKEAWAYS

- Economies can and have been built on small farms
- Investing in small farms generates both growth and jobs

As the international community implements the Sustainable Development Goals (SDGs), including the ambitious target of eliminating extreme poverty and hunger within 14 years, investments must address the needs of smallholder farmers and small-scale agricultural producers.

Around two-and-a-half billion people depend on the world's 500 million small-scale farms. They are the backbone of food systems in developing countries. In sub-Saharan Africa and parts of Asia, small farms are responsible for 80 per cent of production. Paradoxically, often the people who grow food also go hungry. About 70 per cent of the poorest and hungriest people live in the rural areas of developing countries, and many smallholder farmers are also net food buyers.

There is no reason why small farms should be poor or small-scale producers should go hungry. Small farms predominate in rich countries such as Italy, Japan, Norway, Korea and Switzerland. Thailand and Vietnam have built their economies on small farms. Small farms also make significant contributions in Brazil. Investing in small-scale farming significantly affects growth and poverty reduction. Growth in gross domestic product originating in agriculture far more effectively reduces poverty than growth outside agriculture. Small farms are alsomore productive per unit of land, driven largely by efficiency gains from family labour.

Smallholder benefits

Investing in innovations that benefit small-scale agriculture reaches far and wide. Smallholder farmers with more income employ more people and spend more on goods and services close to home. This leads to growth – and jobs – both within and outside the farming sector in services, agro-processing and small-scale manufacturing.

This employment-generating potential is especially important in countries with rapidly expanding youth populations. In Africa, around 18 million young people enter labour markets every year. Even the most optimistic scenarios concede that urban sectors will be unable to offer employment to such large numbers.

18M
young people enter the African labour markets every year

Innovation in smallholder agriculture is therefore key to feeding the planet, reducing poverty and creating jobs.

Agricultural research has given the world new instruments such as marker assisted selection, tissue culture and embryo rescue techniques. Technology is only a tool. It is not an end in itself. Agricultural research must meet the needs of poor farmers. That includes improving existing methods that are easily affordable and accessible to poor people.

For example, 15 years ago the International Fund for Agriculture and Development partnered with the Government of China to pioneer the development of biogas for poverty reduction. The programme used biogas digesters to turn waste into household fuel by burning bio-methane, which is 22 times more damaging than carbon dioxide. When methane is burned, it is less harmful to the environment and provides a source of renewable and affordable energy.

For poor people not on the power grid, the gas provides energy for lighting, cooking

Innovation in support of agriculture can take many forms

The G20 needs to champion new financial products and technology

ALL PHOTOS ON THIS SPREAD: IFAD/SUSAN BECCIO

A farmer in Chetambe, Kenya, tends to her livestock (opposite and above right), herbs and vegetables (left) and utilises a biogas digester (above left) and biogas-powered stove (right)

Technology is only a tool. It is not an end in itself. Agricultural research must meet the needs of poor farmers

and running generators. They can generate income from animals that produce milk, meat, wool and eggs, as well as the dung needed for the biogas digesters. The project was so successful that it is being scaled up in rural areas including in Eritrea, Nigeria and Rwanda, with a new generation of low-cost, portable biogas systems.

Many forms of support

Innovation can also come from finding novel ways to use established technologies. A technique developed by ICRSAT and its partners is helping farmers grow more food without exploiting the soil by using a bottle cap to measure out small, affordable amounts of fertiliser and place it precisely with or near the seed.

Even a farmer who is illiterate can easily apply the correct amount, avoiding the indiscriminate use of chemicals. It is an elegant solution to an age-old problem. Poor farmers are able to grow more food without overly exploiting the soil.

Innovation in support of agriculture can take many forms, from developments in science and technology to financing and land rights. Digital technology is creating opportunities for younger generations.

The G20 plays an important role in supporting innovation. It has taken an important step by strengthening the meeting of agriculture chief scientists, helping to coordinate efforts among G20 members and sharing knowledge and experience both within the G20 and with non-G20 developing countries. G20 members can also demonstrate leadership by supporting inclusive business models and business practices in the agri-food sector. I applaud the G20 for its first agri-business forum this past June in Xi'an, China.

The G20 has done good work on inclusive finance through the Global Partnership for Financial Inclusion. Now it needs to champion innovative approaches such as introducing new financial products, risk management and technology that improve financing for smallholder agriculture and rural small and medium-sized enterprises.

By working together to support innovation in agriculture, we can accelerate progress under 2030 Agenda and transform rural areas in developing countries so that they provide decent and dignified lives for millions of people. **G20**

ARIA PROPERTY INDONESIA

Aria Property for sustainable solutions

Aria Property Indonesia is a member of Aria Asset Management of Luxembourg. We conduct research development work, administration and execution of multilateral projects that encompass self-sustainability, strategic articulation among the public sector and private national, multilateral and international companies, NGOs and foundations to better serve the developing world with efficient functional strategies. The services of the group are available in several ways, from a very specific single consultation, to turnkey operations and long-term contracts for administration of projects, according to the specific characteristics of each case.

Aria will prioritise and focus on the problem, the resilience of food supplies for communities, economic

Above: Organic farming can build up soil organic matter better than conventional no-till farming can
Below: NRI-Black Rice is our most featured organic rice product

By choosing organic foods, we take a smaller risk of disease, illness and disorders in ourselves

development, especially economic development in developing region. At the present time Aria, in collaboration with the research institute in Indonesia PUSPITEK, are to develop agricultural systems that are more efficient, effective and also produce high-quality, nutritious agricultural products. Aria also developed new technology equipment that can produce low-cost electricity and sewage treatment.

Investment in humanity

Aria plans to launch $2.5 billion on investment in 2016, an amount that will continue to grow until it reaches $15 billion by the end of 2020. In 2016, there will be additional value of total investment in the humanitarian field, especially in the field of health in developing countries by establishing properties, food programmes, health facilities, public technologies and public economic development in the region.

We focus on areas with the potential for high-impact, sustainable solutions that can reach hundreds of millions of people. We work closely with our partners to support innovative approaches and expand existing ones so they reach the people who need them most.

Case study: organic farming

Since 2008, Aria has focused on producing handcrafted organic rice and then farming and packaging technology.

We work with the Farmer Group on the slopes of Mount Lawu, who produce local paddy varieties (Javanica Rice) of handcrafted organic rice using the Organic Farm System and System of Rice Intensification (SRI). These systems use chemical-free fertilisers, herbicides and pesticides, no carbamate, no chlorine and no phosphate. Utilising pollutant-free soil, fresh air and spring water for irrigation in our farmland adds value to our organic quality product.

By choosing organic foods, we take a smaller risk of disease, illness and disorders in ourselves. The advantages of organic food are not only that they protects our planet, but also that they protect our health, the health of loved ones and the health of other living creatures.

The biggest advantages of organic food are its nutritional superiority to its non-organic counterparts and that it is free from dangerous chemicals that have been linked to: various cancers, leukaemia, non-Hodgkin's lymphoma, Alzheimer's, Parkinson's and cardiac disease, immune and endocrine disorders, inflammation, convulsions, hypertension, infertility, diabetes, obesity, allergies, depression, birth defects, learning disorders, childhood leukaemia, ADHD, MR, autism, and nervous system disorders in children.

In 2016, Aria Property Indonesia will raise the level of production to improve the results and quality from 2,000 tonnes per month to 6,000 t onnes per month. In collaboration with local government of Karang Anyar, particularly local government of Karang Pandan, Central Java, and the agricultural extension agency, Aria will improve counselling and education for farmers on agricultural systems and organic systems.

Counselling will include emphasising the importance of using organic fertiliser using natural ingredients and no chemicals. It is intended to create agricultural products that are more nutritional and healthier. By conducting regular counselling to farmers on how to implement paddy cultivation by Standard Operational Procedures, in relation to farm-technology innovation to effectively produce organic rice, Aria will promote the advantages of Organic Farm System and Organic Food for environment and health. We will also elevate human resources competence and develop working-culture in care for environment and human health.

Aria Property Indonesia
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ILLUSTRATION: STUDIO NIPPOLDT

IN CONVERSATION

“The G20 must continue to provide the leadership the world needs by making agreements”

Ertharin Cousin

Executive Director,
United Nations World Food Programme

@WFPErtharin
www.wfp.org

> *I was proud to talk about gender as a blind spot that the global community needs to address*

Q How much are new demands inhibiting the move from emergency relief to food security?

A The two prerequisites to achieving food security and nutrition security are peace and stability. Without them, we cannot effectively achieve food security. Droughts and other climate events also limit our ability unless we receive the necessary resources for investing in adaptation and mitigation to support vulnerable populations, who are the most detrimentally affected by those droughts.

Q Is your funding sustainable?

A No. We are fully funded for our response to Syria for the remainder of this year, because of the generous contributions of many donors, particularly Germany. A lack of reliable, predictable funding prevents us from scaling up to the levels needed to support adaptation activities or reach the full number of affected persons, whether it is a drought or conflict or other obstacle that may affect a person's ability to access food.

Australia, the United Kingdom and Canada, among others, have recently committed to multiyear funding. A growing number of countries recognise the opportunity for delivering outcomes to those we serve – as opposed to simply outputs – when we can perform activities over several years. More and more countries see this opportunity to help us provide different services to the people who need our assistance most. Multiyear funding allows us to move from simply saving lives to actually changing lives.

Q How is the World Food Programme (WFP) working with the G20 to forward the emergency relief through to food security agenda?

A WFP was invited for the first time in recent history to participate in the G20 agriculture ministers' meeting in preparation for the Hangzhou Summit. It gave us an opportunity to support their discussions on agricultural development required to support vulnerable people around the world. We appreciate China's confirmation that the final document will benefit from WFP's input.

As one of the very few women present, I also was proud to talk about gender as a blind spot that the global community needs to address. My colleagues from the other Rome-based agencies and several ministers echoed this concern to best address the challenges facing women. Including women's voices will help ensure we have outcomes that support their needs. This is not to say that our male colleagues are sensitive, but I appreciated the opportunity to speak as a woman about women.

80%
Food-insecure people live in climate-marginal places

Q How is WFP contributing to the implementation of the Sustainable Development Goals (SDGs)?

A We are focusing our next strategic plan on SDG, on zero hunger, and 17, on global partnerships. WFP can serve as a reliable market for smallholder farmers, whether we are purchasing from smallholders for our school meals programmes or supporting access to markets through vouchers that provide cash for people to purchase goods developed or grown in their own communities. WFP's school meals programme is a good example of local agricultural development that can support the education goal as well as the zero hunger and agricultural goals.

The goals are all interconnected and so is our work, whether it is an emergency response by purchasing from smallholders or in development work with communities to help improve agricultural value chains by providing market access. We collaborate with a number of partners – including the Food and Agriculture Organization, the International Fund for Agricultural Development, the private sector, governments and the smallholders themselves – to achieve SDG 2.

Q Are you encouraged by the move towards implementing the SDGs?

A I am excited not only about how fast but how vocal leaders have been about incorporating the SDGs into their plans. This is the first time the entire global community agreed it is not about them over there but all of us together. That kind of public will is the very foundation of what is required for us to achieve the SDGs.

Q What obstacles lie ahead?

A Apart from funding, sustaining that public will is challenging. So many other challenges always face leaders. The G20 is key to keeping food security as a priority, not just in China but also, moving forward, with Germany's G20 presidency in 2017. Emphasising food security at this level will ensure the entire global community will continue to perform the work necessary to achieve 2030 Agenda.

Q How can the leaders at their Hangzhou Summit help?

A If the G20 leaders can embrace the activities identified by their agriculture ministers as essential to achieving food security and then scale up those solutions by investing the necessary resources, whether they be capacity or financial resources, we will be well on our way to realising Agenda 2030.

As governments continue to face evolving challenges, whether it is 65 million migrants and internally displaced people or the 80 per cent of people WFP serves today who are in climate-marginal places, the G20 must continue to provide the leadership the world needs by making significant agreements and financing them in ways that will enable all of us to deliver the 2030 Agenda. **G20**

OCP GROUP

The Africa Fertilizer Complex, Jorf Lasfar, Morocco

MR TARIK CHOHO,
Managing Director, OCP Group & CEO, OCP Africa

From soil to food, OCP geared towards sustainable agriculture

Firmly rooted in Africa and with nearly a century of experience, the OCP Group, leading producer and exporter of phosphate in all its forms, is convinced that Africa will become a major driving force behind the development and success of global agriculture.

Conscious of its responsibility towards future generations, the OCP Group is devoting all its expertise to the development of a flourishing sustainable agriculture both on the African continent and on a global scale.

Supporting sustainable and precision farming

To achieve this goal, OCP seeks ways to fertilise while still protecting the soil, to increase production while respecting natural resources, and to share its expertise while learning from the experience of others. The Group's ambition is to feed the soil in order to feed the planet, to ensure that our current needs, as well as those of future generations, are effectively met.

The global population is indeed expected to rise dramatically by 2050, reaching almost nine billion people, or double the world's population compared to the 1980s. In order to meet the global food challenge that this peak represents, agricultural yields will have to triple by 2050 compared to agricultural production in 1960. In such a context, fertilisers constitute an essential tool in keeping up with global food demands.

Africa could, all on its own, feed the entire planet. The continent bears all the necessary resources, both natural and human: rich subsoils, generous climates, and a young population.

As part of its commitment to Africa, OCP has created a new subsidiary, OCP AFRICA, and launched a fertiliser production plant fully dedicated to the continent. The Africa Fertiliser Complex required an investment of around 5.3 billion MAD (almost 500 million euros). It consists of a fertiliser unit with a capacity of one million metric tons of DAP (diammonium phosphate) per year.

OCP Group's approach in Africa is comprehensive and touches on the entire value chain. Our involvement takes place on multiple levels and is organised around various actions. The starting point is a comprehensive understanding of the needs of African soil and farmers. With this in mind, the Group has created outreach programs that include yield trials, soil analysis and testing with local partners, etc.

The results of these programs are used to develop new products designed for African crops and soil. Furthermore, the Group aims to improve distribution channels in Africa through partnerships with local suppliers and the establishment of contracts that enable fertiliser sales to be combined with agricultural development co-financing projects.

OCP Group
www.ocpgroup.ma
www.ocpafrica.com

UNIVERSITY OF TORONTO

MUNK SCHOOL OF GLOBAL AFFAIRS

G20 Research Group

The G20 Research Group is a global network of scholars, students and professionals in the academic, research, business, non-governmental and other communities who follow the work of the G20 leaders, finance ministers and central bank governors, and other G20 institutions. It is directed from Trinity College, the Munk School of Global Affairs and the Department of Political Science at the University of Toronto, which also host the G7 Research Group and the BRICS Research Group.

Our mission is to serve as the world's leading independent source of information and analysis on the G20. As **scholars**, we accurately describe, explain and interpret what the G20 and its members do. As **teachers and public educators**, we present to the global community and G20 governments the results of our research and information about the G20. As **citizens**, we foster transparency and accountability in G20 governance, through assessments of G20 members' compliance with their summit commitments and the connection between civil society and G20 governors. And as **professionals**, we offer evidence-based policy advice about G20 governance, but do not engage in advocacy for or about the G20 or the issues it might address.

Background Books and eBooks With Newsdesk Media in the United Kingdom, for each summit the G20 Research Group produces a "background book," freely available in print and online, outlining the perspectives of the leaders and key stakeholders and offering analysis by leading global experts. It also works with Newsdesk Media to produce free eBooks and analysis available at G7G20.com.

Compliance Assessments For each summit the G20 Research Group, working with the Russian Presidential Academy of National Economy and Public Administration (RANEPA), assesses each G20 member's compliance with the previous summit's priority commitments. Cumulative compliance assessments are compiled on key issues.

Pre-summit Conferences With a local partner in the country hosting the summit along with a core group of international partners, the G20 Research Group produces a conference in the lead-up to each summit analyzing the institutional workings of the G20 and the issues, plans and prospects for the summit.

Field Team The G20 Research Group sends a field team to each summit and some ministerial meetings to assist the world's media, issue its own reports and analyses, allow students to witness world politics at the highest level at close hand, and collect the documents and artifacts uniquely available at the summit, to build the G20 archives at Trinity College's John Graham Library and online at the G20 Information Centre website.

G20 Information Centre @ www.g20.utoronto.ca The G20 Information Centre is a comprehensive permanent collection of material available online at no charge. It complements the G7 Information Centre, which houses publicly available archives on the G20 as well as the G7 and G8, and the BRICS Information Centre, as well as Newsdesk Media's G7G20.com.

Speaker Series The G20 Research Group hosts occasional speakers in its efforts to educate scholars and the public about the issues and workings of the G20. Past speakers have included senior officials of the International Monetary Fund and the World Bank and scholars and policy makers from Turkey, China, Australia, Brazil, Italy and elsewhere.

Research The G20 Research Group conducts research on the causes of summit and system performance and the G20's relationship with the G7/8, BRICS, United Nations and other formal multilateral institutions.

Publications include:

- *China's G20 Leadership*, by John Kirton (Routledge)
- *The Global Governance of Climate Change: G7, G20 and UN Leadership*, by John Kirton and Ella Kokotsis (Routledge)
- *Mobilising Climate Finance*, by John Kirton (Newsdesk Media)
- *G20 Governance for a Globalized World*, by John Kirton (Routledge) (also available in Chinese)
- *The G20: Evolution, Interrelationships, Documentation*, by Peter I. Hajnal (Routledge)

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Strengthening the G20 System

COMPLIANCE SCORES

The average level at which G20 members have complied with their priority commitments to enhance international cooperation from 2008 to 2014

+0.15 58%

+1 means full compliance, 0 means work in progress or partial compliance, and -1 means no compliance or action antithetical to the commitment. Based on a study by the G20 Research Group

KEY TAKEAWAYS

- The G20 has improved cooperation among central banks
- Decisions made by the G20 helped end the financial and economic crisis

Enrico Letta

Former Prime Minister
Italy

Enrico Letta is the Dean of the Paris School of International Affairs (PSIA) at Sciences Po in Paris and President of the Jacques Delors Institute. He was the Prime Minister of Italy from April 2013 to February 2014. He served as Minister for European Union Affairs (1998–99), as Minister for Industry, Commerce and Crafts (January–April 2000), as Minister for Industry, Commerce and Crafts and Foreign Trade (2000–01) and as Undersecretary of State to the Prime Minister of the government led by Romano Prodi from 2006 to 2008. Between 2001 and 2015 he was member of the Italian Parliament, except between 2004 and 2006 when he was member of the European Parliament.

@enricoletta

The history of the G20

The G20 summit is an international institution born out of a direct and immediate response to a global crisis, which is rare, writes ***Enrico Letta, former Prime Minister of Italy***

It takes a long, sometimes very long, time to organise or even reorganise a multilateral framework.

In the case of the G20, it would be wrong to say that there was nothing new about it. A level of cooperation between representatives of the members' central banks and finance ministers already existed. Today's G20 has very little in common with the highly technical meetings that resulted in no real, serious political commitments before 2008, though.

The G20 summit is the fruit of the economic and financial crisis that began in 2008. The crisis was so overwhelming that it forced leaders to resolve a problem that had been lingering for almost 20 years.

At the beginning of the 1990s the international system felt the need to increase the involvement of emerging powers in the global decisions made by the United Nations. The project to reform the United Nations Security Council to leave behind post-war stability centred on

This year's summit is a chance to implement multilateral innovation


MATTHEW CAVANAUGH-POOL/GETTY IMAGES

George W Bush hosts the inaugural G20 summit in Washington DC, 2008

its five permanent members. It was swept under the carpet by a series of overlapping stumbling blocks. Crisis succeeded where subtle diplomatic negotiations had failed.

Intelligent reaction

The crisis brought about the need to create a 'political G20', an institution where the major G7 members of the West could discuss their decisions and the costs of those decisions with the large powers emerging on five continents.

It was one of the best outcomes of the reactions to the crisis because, unlike many others, it was not a short-lived reaction solely concerned with the demands of publicity. It was an intelligent, long-term solution and exactly what was needed for effective multilateral politics.

That appears to be missing today, with the exception of the success of the climate change conference in Paris last December.

Crossover agreements

The G20 has been useful, particularly during its initial period. Between 2008 and 2011 it made concrete decisions that effectively helped end the financial and economic crisis.

Geographical history of the G20

Year	*Host country*	*Host leader*
2008	United States	George W. Bush
2009	United Kingdom	Gordon Brown
2009	United States	Barack Obama
2010	Canada	Stephen Harper
2010	Korea	Lee Myung-bak
2011	France	Nicolas Sarkozy
2012	Mexico	Felipe Calderón
2013	Russia	Vladimir Putin
2014	Australia	Tony Abbott
2015	Turkey	Recep Tayyip Erdoğan
2016	China	Xi Jinping
2017	Germany	Angela Merkel

The G20's formation was an intelligent, long-term solution and exactly what was needed for effective multilateral politics

For example, the G20 decided upon and managed the effective end of trade protectionism. It was a dangerous reaction by countries affected by the financial crisis.

This was possible because the G20 was designed as an institution in which both states and international organisations are included in debates and decision making at the same time.

Therein lies the answer to another complicated question the international community has been asking for years: how to reach crossover agreements. We have always had to work in silos, subject by subject, without finding the crossover agreements that are the only way to solve some complicated problems.

This was the case, for example, in trade negotiations at the World Trade Organization. There, only parallel agreements in other areas, such as agriculture, development aid, copyright and the environment, could overcome such obstacles.

Reviving innovation

Another case of productive cooperation within the G20 and with other international organisations is the fight against tax havens. The G20 had many of the qualities necessary to create a watershed in the history of the multilateral system.

Until today we have experienced a story that could be described as a partial success or perhaps as a potential success. Recent G20 summits have not had the influence of the very first meetings. The decisions between 2008 and 2011 made history.

We should attach great importance to this year's G20 summit in China. The fact that China was so keen to host the 2016 G20 provides us with a chance to revive the G20, an important and now unavoidable innovation of the multilateral system. **G20**

KEY TAKEAWAYS

- The BRICS consistently supports decisions made at G20 summits
- It conducts informal consultations on the sidelines of multilateral events

Bonding the BRICS and the G20

*More endorsement, encouragement and cooperation are needed in order to improve the effectiveness of how the BRICS and the G20 work together, write **Marina Larionova** and **Andrey Shelepov***

Since its establishment in 2009, the BRICS group of Brazil, Russia, India, China and South Africa has established its identity as an informal global governance forum. BRICS members have consistently strengthened cooperation, expanded and deepened their agenda, and coordinated efforts aimed at economic recovery and growth as well as development in other countries. Major practical achievements include the launch of the New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA).

Shared goals

The BRICS mission includes facilitating strong, sustainable, balanced and inclusive growth, recognising the G20 as the premier forum for multilateral economic coordination and cooperation. The BRICS consistently supports decisions made at G20 summits.

There are two major dimensions of BRICS-G20 engagement: The BRICS cooperates with the G20 to attain shared goals, primarily on stimulating economic growth, reforming international financial institutions, improving financial regulation and addressing global security threats. It also coordinates its members' positions within the G20.

The BRICS has an established practice of organising leaders' meetings on the sidelines of G20 summits. The first was held on the eve of the G20's Cannes Summit in 2011. BRICS leaders discussed joint actions to support global economic recovery, the eurozone debt crisis, reform of the international currency system and other issues on the G20 agenda.

In 2012, in Los Cabos, they agreed that the "process of informal consultations on the sidelines of multilateral events was valuable and contributed to closer coordination on issues of mutual interest to BRICS economies". Emphasising the need for increasing the resource base of multilateral development banks, the leaders committed to increasing their countries' contributions to the International Monetary Fund by $75 billion.

The following year in Saint Petersburg, the discussion focused on the practical aspects of the NDB and CRA, including their subscribed capital and size, respectively. The work of the new BRICS institutions also dominated the discussion of the BRICS summit before the Brisbane Summit. Additionally, the leaders discussed the pressing issue of fighting Ebola. On the sidelines of the G20 summit in Antalya, much attention was paid to combatting terrorism, a problem that was particularly

> *The BRICS should shift from declarative support of G20 decisions to practical engagement*

The BRICS typically coordinates its positions at G20 meetings

China can provide the impetus to synergise the BRICS and the G20


MIKHAIL KLIMENTYEV/RUSSIAN PRESIDENTIAL PRESS AND INFORMATION OFFICE/TASS/ALAMY

A BRICS meeting on the sidelines of the G20 summit in Antalya, Turkey, in 2015

acute because of the terrorist attacks in Paris and the desruction of the Russian aircraft over Sinai. BRICS leaders traditionally coordinate positions on a wide range of common objectives, including those prioritised by the G20. It has become typical for the BRICS to coordinate positions at the meetings of G20 leaders and finance ministers on the margins of their meetings.

Proposals for the Hangzhou Summit

The BRICS has always been committed to supporting the G20. Coordination of BRICS positions before G20 meetings has proven effective.

Informal BRICS meetings, especially recent ones, tend to deal more with members' own priorities rather than issues related to the G20. Moreover, the BRICS intention to act in alliance with the G20 remains largely unrealised.

To improve the effectiveness of its engagement, the BRICS should f ind a balance between discussing its own agenda and addressing G20-related issues. It should shift from declarative support of G20 decisions to practical engagement.

The cooperation between the G20 and the BRICS is not reciprocal. G20 documents over a period of eight years contain only one reference to the BRICS, whereas the G20 has been explicitly present in BRICS documents since 2008. This frequency is comparable to references to other institutions that the BRICS actively supports, such as the United Nations or the World Trade Organization.

The G20 should pay more attention to the BRICS. Given the BRICS support of landmark G20 decisions, such as lifting collective gross domestic product by more than two per cent within five years or combatting profit shifting, by endorsing and encouraging BRICS activities the G20 could enhance its own legitimacy and improve implementation.

Increased BRICS contribution to the IMF from 2012

$75BN

With China holding the 2016 G20 presidency and the 2017 presidency of the BRICS, it has a unique opportunity to shift cooperation to a new level. At the Hangzhou Summit China can give a strong impetus to synergies between BRICS and G20 actions. A good example of a reciprocal and result-oriented approach to cooperation between the institutions is the Chinese presidency's call on the NDB to play a greater role in complementing the existing multilateral development system. **G20**

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Head of the Center for International Institutions Research

Russian Presidential Academy of National Economy and Public Administration

***Marina Larionova has been Vice-President of International Relations at the Russian Union of Industrialists and Entrepreneurs since 2015. She is editor in chief of the* International Organisations Research Journal.**

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www.ranepa.ru/eng

KEY TAKEAWAYS

China has invited UN representatives to the G20 Hangzhou Summit

The G20 can use the broad platform of the UN to reach non-G20 members

US President Barack Obama and UN Secretary-General Ban Ki-moon

Cooperation between the United Nations and the G20

The United Nations and the G20 should work together more often and more closely to help implement the 2030 Agenda and other initiatives, writes ***Guo Shuyong***

With 193 members, the United Nations is the largest global intergovernmental organisation. It features great global representativeness, standardisation, authority and legitimacy. It is the fundamental institution for the global governance of security, the economy, culture and society, and plays a role as a global constitutional institution.

In contrast, the G20 consists of a limited number of members. Nonetheless it represents two-thirds of the world population and 85 per cent of its gross domestic product. It has become the hub of the global economic governance network and developed into a new type of coordination mechanism in the North-South relationship. G20 members are core members of the UN, significant in economic affairs as well as politics and culture.

Mutual support

The United States is a major creator and policy implementer of the UN and the G20. It dominates both organisations. The UN works to safeguard the international order, while the G20 works to coordinate and protect the order in a specific field.

The UN's advantages are its legitimacy, institutionalisation and power of international mobilisation; the G20's are its flexibility, efficiency and feasibility.

The G20 can use the broad platform of the UN to strengthen ties between its members and non-G20 members to make the sustainable development agenda fit better and guarantee the achievability of its implementation. In turn, because of the G20's financial support and coordinating

The UN can use the G20 to assemble promising powers

G20 members are core members of the UN


WHITE HOUSE PHOTO/ALAMY

actions in economics and finance, the UN can use the G20 to assemble promising powers in such fields as technological innovation to improve efficiency. Cooperation between these two institutions has yielded significant results.

The two institutions are complementary and work together in various ways. The UN deals with security, culture and society, and the G20 concentrates on economic governance. The UN focuses on sustainable development and balanced development. The G20 focuses on growth and innovation in development.

The UN follows general principles, with the G20 joining in discussions and negotiations on special issues when necessary and providing feasible suggestions to solve these issues. One such case is climate change. The UN's conference on climate change was held in Paris in 2015. In September 2016, the G20 Hangzhou Summit will address climate change. The G20 may propose global economic principles and the UN will assemble to support them. Another case is the Seoul Development Consensus, produced at the G20's 2010 Seoul Summit. It was later recognised by the UN and fed into its 2030 Agenda for Sustainable Development.

Suggestions for future cooperation

More intense, practical, grounded cooperation between the two organisations is needed. They should meet regularly and have access to each others' meetings and negotiations on development. Cooperation on early-warning mechanisms should also be strengthened to facilitate timely suggestions for policy coordination.

For the Hangzhou Summit, the G20 could invite the UN's Secretary-General to its session on sustainable development. There he could present the basic preferences and attitudes of developing countries as well as the international world.

G20 coordination could also be made more scientific and standardised with meetings between the UN Deputy Secretary-General, G20 ministers and working groups. G20 meetings should include special sessions on sustainable development with the participation of the International Monetary Fund, the World Bank and other UN institutions. This would create a dialogue between G20 and UN officials, providing decision-making suggestions for the G20 leaders.

On a global level, both organisations should work together to supervise implementing the 2030 Agenda. This agenda stresses implementation, requiring a framework at the national, regional and global levels. It also formulates a monitoring and supervising mechanism, emphasising the importance of partnership and appealing for aid commitments among developed countries. It bestows upon the UN greater power of supervision. The G20 has a unique advantage in establishing a global framework for close supervision and implementation that would facilitate progress at the regional level. The two bodies must establish a global partnership in sustainable development.

One important step is to urge developed countries to deliver on their commitment to provide 0.7 per cent of gross national income in official development assistance. Only then can development be realised in terms of green technology, infrastructure and the 2030 Agenda.

Hangzhou will be the very first time that development will occupy a prominent position in the G20's macroeconomic policy and that the G20 formulates the road map for implementing the 2030 Agenda. In addition, China has invited UN representatives, including UN Secretary-General Ban Ki-moon and several possible candidates for his successor, to Hangzhou.

At Hangzhou, China will actively seek to co-establish the Belt and Road initiatives and the Asian Infrastructure Investment Bank with international society, and explain the importance of the two. It also proposes enhancing cooperation between international organisations such as the UN and the World Bank to share the opportunities of China's development with the rest of the world. Meanwhile, Hangzhou will help all G20 members combine their own targets and development needs with all 17 Sustainable Development Goals. It will help implement the 2030 Agenda through grounded, specific projects and cooperation to upgrade the G20 to a platform of global development governance. **G20**

On a global level, both organisations should work together to supervise implementing the 2030 Agenda

Guo Shuyong

Dean of the School of International Relations and Public Affairs

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IN CONVERSATION

Several advocates have proposed designing a blue economy framework

The Right Honourable Paul Martin, former Prime Minister of Canada, talks to John Kirton about globalisation, multilateral agreements and conserving the ocean and coastal resources

Q You have been quoted as saying that making globalisation work for all must be the goal of the G20. Is this realistic when so many are left out of the benefits globalisation brings?

A While inequality within and between countries is real and must be dealt with, increased globalisation is inevitable. The issue is not whither globalisation but how to deal with its consequences.

From economic interdependence to the spread of disease, from threats to food security to climate change, the most pressing realities the world faces are ones no borders can withstand. These are issues that require responses beyond what even the most powerful governments can provide. Making globalisation work in a world where a self-defeating inward nationalism is making itself felt politically provides the G20 with one of its greatest challenges.

Q You have said that strengthening the great multilateral institutions is important if globalisation is to work for all. Why?

A All too often the great multilateral institutions are the only bodies capable of reconciling national interests with the global good. Adequately funded and well conceived, they are the optimum vehicles by which specific issues can be dealt with sustainably. This is as true for the World Health Organization or the United Nations High Commissioner for Refugees as it is for the International Monetary Fund. Leading the charge to strengthen those institutions, which have universal membership, must be a G20 priority. It is upon this that much of the G20's legitimacy rests.

Q Do you still think the creation of the Financial Stability Board and the London Summit were two of the G20's greatest successes?

A Yes, but the G20 cannot rest on its laurels.

The Financial Stability Board (FSB) was created out of the ashes of the Financial Stability Forum (FSF), which was an earlier initiative of the G7 finance ministers. As we know only too well and maybe are learning once again, there are few economic consequences as great as those that flow from financial sector failure.

When you consider the damage arising from small grains of sand in the global banking system – the early reluctance of Europeans to impose stress tests on their banks, the constant pushback from the financial industry in the United States and the rapid growth of China's shadow banks – the FSB should have full treaty status and full universal membership, giving it the weight it requires to be the fourth pillar of the global economic architecture.

As far as the London Summit is concerned, eight years ago it prevented a trade war that could have led to a 1930s-type depression. Today, given the mounting pressures on the globe's national economies and the World Trade Organization's (WTO's) recent warning that protectionist measures are being reintroduced at an accelerating rate, the G20 must now re-engage.

Q Are new multilateral initiatives needed?

A Yes. For example, while last year's Paris commitment on climate change should be applauded, there are other areas where the climate change consequences are evident but no action has been taken.

The acidification of the global ocean – the world's largest carbon sink – was ignored at Paris. This was short sighted given the extensive damage that continues to be wrought by the impacts of climate change, not to mention overfishing, habitat destruction, pollution and declining biodiversity. Despite the ocean's poor state of health and the distinct lack of a www.paulmartin.ca

Paul Martin

Former Prime Minister of Canada

multilateral approach to dealing with it, the ocean remains one of the least-developed regions on Earth. Yet, in so many ways, it represents the new economic frontier.

The World Wildlife Fund estimates that the ocean economy is the seventh largest, valued at $24 trillion. The Organisation for Economic Co-operation and Development (OECD) predicts that by 2030 many ocean-based industries will have the potential to outperform the growth of the global economy as a whole.

Q Given the necessity to build on Sustainable Development Goal 14, which calls for the conservation and sustainable use of the oceans, seas and marine resources, what is required?

A Several advocates have proposed designing a blue economy sustainable development framework as soon as it is feasible. It would ensure that investment related to developing and conserving ocean and coastal resources are done in ways that allow for a diversity of activities, from traditional ocean sectors to new businesses focused on ocean health – all managed in a coordinated way, within a comprehensive framework of ecosystem-based management.

The OECD recently said that traditional maritime industries are innovating well, but emerging ocean industries are attracting a lot of attention. Those include offshore wind, tidal and wave energy, offshore aquaculture, cruise tourism, maritime surveillance and marine biotechnology. Furthermore, new technologies are developed every day that make it increasingly feasible and economically viable to tap ocean resources, fuelling the search for vast areas of global importance such as food and pharmaceutical security.

I believe the G20 has an opportunity that should not be missed, an opportunity to work towards transforming a global challenge into a global gain, reviving a sick ocean by creating a new economic domain. The G20 should provide the momentum now that is required to get the blue economy underway. **G20**

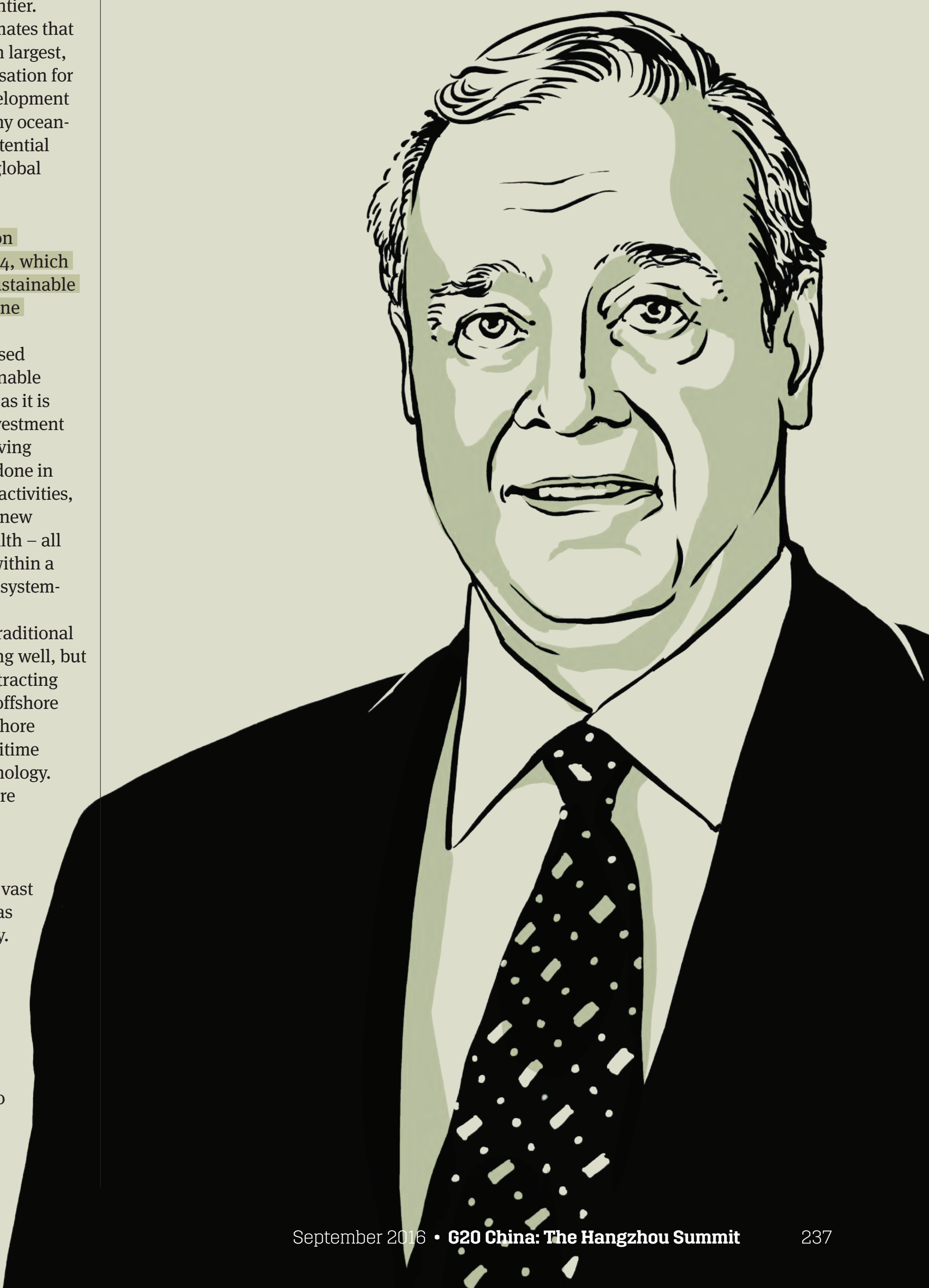

ILLUSTRATION: STUDIO NIPPOLDT

151 commitments made by G20 members from 2008 to 2014

71% is the average compliance rate of G20 members

Improving G20 implementation

*The G20 Research Group has analysed the compliance rate of members since the first leaders summit in 2008. **Caroline Bracht** writes about how more can be done to meet the targets set each year*

Leaders at the G20 summit in Antalya, Turkey, 2015

G20 annual summits are a large undertaking for the host country. The logistics are demanding, extensive security is required, each leader travels with a large delegation and thousands of media from all over the world are given working facilities close to the summit so they report the latest newsworthy updates first.

Summits not only take time, money and supporting personnel, but also disrupt life in the host city. Its citizens must deal with traffic and commute delays, protests, the possible violence resulting from them and an increased security presence. They understandably ask if such summits produce enough of enduring value globally to justify these substantial local costs.

> *Citizens understandably ask if summits produce enough value globally to justify substantial local costs*

Measuring compliance

There is an ongoing hope and occasional expectation that at their summit the leaders will competently address global crises or chronic challenges. But do they? One way to answer that question is to measure the compliance of the members against the collective commitments they make at each summit.

The G20 Research Group, a global network of scholars, students and professionals based at the University of Toronto, has produced annual compliance reports on the G20 since the first leaders' meeting in 2008. These reports measure the extent to which members implement the priority commitments made at each summit on a range of issues. The reports rely on publicly available information, and are distributed to a broad stakeholder community for feedback to ensure comprehensive and accurate data collection and assessment.

The G20 Research Group has assessed 151 commitments made across all issue areas and all members from 2008 to 2014. The average compliance was 71 per cent. This is lower than the overall G7/8 average of 76 per cent and slightly lower than the BRICS average of 73 per cent. The G20 summits with the highest average compliance were the 2011 Cannes Summit and the 2012 Los Cabos Summit. The highest compliers within the G20 were the G7 members, who have years of summit experience, commitment crafting and implementation processes.

The G7/8, BRICS and G20 each excel in different areas. G20 members implement their labour and employment and

KEY TAKEAWAYS

The G20 Research Group produces G20 compliance reports

The highest compliers within the G20 are the G7 members

Commitments should include a single-year timetable to increase compliance

23 possible compliance catalysts within a commitment

ONLINE Read G20 compliance reports at www.g20.utoronto.ca

KAYHAN OZER/ANADOLU AGENCY/GETTY IMAGES

macroeconomic policy commitments to a high degree. They also perform well on the two health commitments that are monitored. Their weakest performances are in the areas of crime and corruption, international cooperation, trade, climate change and development.

Possible catalysts

The G20 Research Group has also analysed whether the presence or absence of compliance catalysts – words, phrases or factors that are embedded in and guide a commitment – increase the likelihood of compliance.

There are 23 possible compliance catalysts that can appear within a commitment. At times, more than one does. We have found that a reference to a single-year timetable in the text of the commitment has a positive effect on G20 compliance.

However, there are also catalysts that might interfere with compliance. Setting a distinct target or goal, identifying a specified agent or an actor through which the G20 will work and identifying an international organisation other than the core international organisation for the issue all hinder compliance. Therefore, to potentially increase G20 compliance, commitments should be crafted so they include a single-year timetable and avoid incorporating a set target or specified agent or secondary international organisation for that issue area.

While the G20's overall average compliance is moderately high, there is room for improvement – especially by the non-G7 members. Several countries have a long way to go to increase their implementation. Is their poor performance because of a lack of experience at summits? Or is it a lack of willingness to comply that hinders implementation?

At the Hangzhou Summit, China holds the pen and has the potential to shape the narrative in a way that highlights the perspective of an emerging country. This may bode well for more implementation from other emerging economies by the time of the next summit, hosted by Germany in Hamburg, in 2017. **G20**

Caroline Bracht

Co-director of Research
G20 Research Group

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KEY TAKEAWAYS

Continued dialogue is needed between disparate countries

G20 sherpas sometimes broker deals at summits

5

Number of G20 sherpa meetings in China in 2016

Sherpas lead to coordinated actions

*A former G20 sherpa of the President of the United States, **Caroline Atkinson** explains the unique role sherpas play in negotiating solutions at summits*

WHAT IS A 'SHERPA'?

A 'sherpa' is the official who represents the G20 leader in the preparations for the meeting of the heads of state and government. The term, coined in the G20 in the 1970s, is borrowed from the Nepalese guides who carry the bags for mountaineers climbing to the summit of Mount Everest. It reflects the G7 ideal that these individuals are the leaders' personal representatives, distinct from the other officials in the government bureaucracy. They also provide only practical support as the policy comes from the leader alone.

As leaders of the G20 gather in China in September, real problems remain in the global economy. The recovery from the great recession of 2008 continues, but its pace still disappoints. Inevitably the question arises of what can and will the G20 leaders do.

I participated in many summits behind the scenes, most recently as the sherpa to US President Barack Obama from 2013 to 2015. I am therefore familiar with that question and with the scepticism behind it.

It is true that bringing the leaders together once a year cannot achieve much on its own. While governments acted together with speed under the pressure of the crisis in 2008–09, there has not been concerted action on that scale since then. Instead, there has been agreement on the need to promote jobs and growth, but not on how best to do that.

Is the G20 out of steam or a waste of time? I do not believe so. The lack of coordinated action on macroeconomic policy has happened for two reasons, which both argue for the importance of continued dialogue within this disparate group of countries.

Calming tempers

First, countries have faced distinct challenges since the worst of the global crisis passed. For a time, emerging markets remained relatively strong, with commodity exporters helped by China's decisive action to support its growth by investing heavily in domestic infrastructure. For these countries, measures to support growth in advanced economies, particularly with unconventional monetary policy, often seemed destabilising to their own currencies and economies. Meanwhile, a renewed crisis in Europe in 2011–12 exacerbated the divide between developing countries and advanced economies. While circumstances differed, the many debates among G20 sherpas, finance ministers, central bank governors and eventually leaders helped calm tempers and promote understanding, albeit without resolving to act together on a macroeconomic level.

The second cause of a lack of coordinated action is that it has proved difficult to repeat the efforts from 2009 to 2012. Views among G20 members differed about how to get beyond the crisis. Almost as soon as fiscal stimulus was put in place in 2009–10, some countries began to call for renewed consolidation, fearing that large fiscal deficits risked another crisis.

The United States argued for a focus on jobs and growth, rather than fiscal austerity. Germany and others, including some emerging markets, believed that the euro crisis could only be overcome by a sharp contraction in borrowing by highly indebted countries and a general return to fiscal rectitude. These contrasting views battled behind the scenes.

The G20 encourages countries to take difficult decisions in a global context

34

Number of sherpas attending the Hangzhou Summit

In 2012, under Mexico's G20 presidency, there was a decisive moment. All eyes were on the financial crisis in Europe that had spread beyond Greece, Ireland and Portugal to threaten Spain and Italy as interest rates shot up and financial markets wondered if the eurozone would break apart. In a heated session, sherpas brokered a deal between Germany and its southern European neighbours, and backed by emerging markets, to have the leaders' communiqué refer to the dangers of financial instability in Europe and the importance of breaking the feedback loop between bank debt and sovereign debt. This was code for supporting the rescue of troubled banks that would alleviate some pressure on their sovereign governments.

G20 leaders outside Europe made clear their concerns that if Europe's problems were not resolved effectively, the rest of the world economy would suffer. Overnight, the agreement almost broke down when those Europeans not at the summit complained. Some emergency tweaking of the language enabled leaders to agree. This did not resolve the European crisis, but it helped pave the way to the actions in Europe that did calm markets.

At each subsequent summit, leaders grew closer to agreement that the recovery needed to be bolstered, although gaps on fiscal policy remained.

Historic agreements

Other important agreements helped to set the world on a better path than would have been possible without the G20.

In 2013, in Saint Petersburg, while leaders grappled with Syria, their sherpas discussed issues such as climate and managed to take the first steps towards an agreement on curbing the use of hydrofluorocarbons. There had hitherto been disagreement and distrust between many emerging markets and advanced economies, including the United States and Europe.

Officials from countries with differing views huddled for several hours, using the the leaders' meeting to drive compromise. The stage was set for a successful outcome on trade at the Bali ministerial meeting of the World Trade Organization later that year, when one sherpa from a key emerging market broke into the tired debate to say "let's take off our trade negotiator hats and put on our G20 hats" to find agreement.

The following year at the G20 summit in Brisbane, India – the last remaining holdout on the Bali deal – announced that its conditions for joining the consensus were met. This was another example of the G20's power to encourage governments to take difficult decisions in the context of a global agreement that compromise is in the interests of all.

Leaders responded to the Ebola crisis by agreeing to a special statement and actions to support better health systems in vulnerable African countries. Sherpas worked on the statement in the understanding that it was for health experts to take the work forward, but with the support of G20 leaders to help to get action.

Bringing countries together

The 2015 G20 summit in Antalya, Turkey, ahead of the Paris climate meetings, proved important for bringing together India and the United States, China and Argentina, Europe and Korea – countries that among them account for the bulk of carbon emissions. The experts on climate were not there but were mostly on the end of a telephone line. The determination to forge agreement expressed by leaders when they met enabled sherpas to find a path to support a good outcome in Paris a week later. **G20**

Caroline Atkinson

Head of Global Policy
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***Caroline Atkinson is the Head of Global Policy at Google. Prior to joining Google, Caroline served as President Barack Obama's Deputy National Security Adviser for International Economics. She supported the President at international economic summits and coordinated the policymaking process for international economic affairs. Before working directly for President Obama, she held senior roles at the International Monetary Fund, the US Treasury and the Bank of England. Atkinson was also previously a journalist for* The Washington Post, The Economist *and* The Times of London.**

Sherpas managed to take the first steps towards an agreement on curbing hydroflurocarbons

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