SKOLKOVO
Moscow School of Management

EMERGING MARKETS DECODED:

THE FOUR DOMAINS OF DEVELOPMENT FOR GROWTH

SKOLKOVO Institute for Emerging Market Studies (IEMS)

Contents

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Introduction

Jay Nibbe, Global Vice-Chair, Tax, EY

Over the past few years we have witnessed a dramatic transformation of emerging markets' role in the global economy – from markets that are sources or destinations for global business to markets that are the origin of rising multinationals and other actors who impact the political, economic, social and technical development of the world. The top seven emerging markets already surpassed the G7 in terms of the size of their economies in 2014, while the total population of the emerging world exceeds what of the advanced economies by five times. The dramatic implications on business around the globe come from the transformative nature of what the emerging markets make, buy or sell. In short, economies that we used to call 'emerging' will shape the global economy over the next decades.

EY and SKOLKOVO IEMS work together to help business leaders and entrepreneurs make better decisions in emerging markets. This can be achieved only if we understand the major challenges that companies and individuals face in those markets. We believe that after reading this report, business leaders in advanced economies will have a solid understanding of nature of growth in emerging markets, the diversity of those markets and the various challenges that they are facing today. Our intention is to help them find a better response to those challenges, which is a pre-requisite for long-term sustainable growth.

Executive summary

The essence of the phenomenon of the emerging markets is not a particular bracket of income or other statistical metrics but a certain combination of opportunities and risks for trade and investment defined by a complex interplay of economic, political, geographical, social and other developmental factors. As such, the emerging markets actually represent a moving and not a homogenous target. Thus, it is crucially important for international business decision makers to develop the instruments and competences to both grasp the dynamics of the phenomenon and differentiate between markets.

SKOLKOVO IEMS has been doing complex statistical research on the emerging markets since the late 2000s, through the lens of our Brave New World index, which includes three distinct groups: Advanced Stage, Intermediate Stage, and Early Stage emerging markets.

Growth is seen as a key attribute of emerging markets and it is an attribute that makes them so attractive for international business. Yet maintaining the high growth rates of the 2000s is becoming increasingly difficult. Thus, for a successful business operation it is important to understand the quality of growth by each group.

The **ADVANCED STAGE** emerging markets are entering a period when they need to restructure almost their entire economy to boost productivity and maintain competitiveness in light of their growing cost base. On the other hand, they are opening new opportunities by moving from global manufacturing hubs into increasingly attractive and sophisticated post-industrial markets.

The **INTERMEDIATE STAGE** group benefits from the slowdown of advanced emerging markets while presenting the business prospects associated with mature industrial economies. At the same time, bigger countries from this group like Brazil and India are also attractive markets in the post-industrial consumption era due to the vast size of their middle class.

Finally, the **EARLY STAGE** emerging markets are growing from a really low income level, and would need first to build a solid infrastructural

The emerging markets represent a moving and not a homogenous target. It is crucially important for decision makers to develop the instruments and competences to both grasp the dynamics of the phenomenon and differentiate between different types of markets foundation with most of their business potential lying in this area.

This difference in quality of growth defines the specifics of the development responses to the key global challenges that the emerging markets are facing: growing population, increasing urbanization with breakdown of many traditional habits and patterns, subsequent social tension, increasing geopolitical tensions, climate change, depletion of some key resources, and deterioration of the environment.

We see four key development areas where emerging markets can respond to these challenges: infrastructure development, sustainable development, digital technology development, and talent development. These domains are defined by the necessity to develop systems alongside institutions, to catch up to the level of advanced economies and simultaneously to strive for leadership in development. The strategies and policies pursued in these areas in coming years will define the growth and development of each specific market for the next two decades, up to the year 2035.

The world of emerging markets has truly become multi-faceted, outgrowing anything that we might have once thought possible just two decades ago. The analogy of the "Big Bang" that started our universe comes to mind, with diversity increasing exponentially with the stage of development. The more mature and capable a country grows, the more it turns into a thing of its own, with a very specific set of opportunities – and risks – for local and international business. Handling a portfolio of such markets becomes a task of utmost complexity, requiring strong corporate instruments of knowledge collection and management. The more emerging markets a corporation has in its portfolio, the more sophisticated should be its strategy and approach. On the personal level the leaders and managers of multinational corporations in global and regional headquarters need attentiveness, intuition and often tact to tap into the multi-trillion dollar opportunity that the emerging markets will represent in the coming decades. ■

Infrastructure Development

Infrastructure Development projects within all core types of infrastructure — transport, power, utilities and communications – vary greatly in quality and scope between the different groups of emerging markets. While the advanced stage emerging markets are increasingly investing in "superpower" projects, like building high-speed rail or the world's biggest power generation stations, the early stage markets often strive to achieve just the basic levels of access to electricity, water and paved roads. Yet, communications networks often develop at a quicker pace in these markets; in some places in Africa you can get online with a mobile phone while no running water will be available. In between, in the intermediate group, there is a huge amount of modernization to be accomplished, especially when it comes to roads and electricity. Overall, the infrastructure needs for 25 of the most populous emerging markets can be estimated at about $600 billion a year in investment needed by 2020. The major emerging economies need to find ways to mobilize both public and private investment and find the appropriate institutional formats to run the projects in a way that combines the development perspective with operational effectiveness. The revolutionary new development in the execution of infrastructure projects is "emerging to emerging" cooperation, which involves coordination between and among emerging markets. Additionally the Private Development Agencies are coming to the scene, representing a new type of private actor.

Digital Technology Development

Digital Technology development gradually moves the advanced stage emerging countries closer to the global innovation frontier, as indicated by their role in supercomputers, robotics or artificial intelligence development. The countries of the intermediate group face the dual task of maintaining competitiveness in the use of digital technologies in industrial sectors and, at the same time, striving for digital inclusion of the population. In these markets, international business champions often emerge, which rely on solid operational models and leverage the bold strategic vision tested on their sizeable "home" customer base. The early stage group of markets develops innovative "bottom of the pyramid" solutions. In such a way, "digital" has become the new basic literacy, especially for the younger generations, and digital accounts, not bank accounts, turn into the core accounts of families and businesses. The phenomenon of "leapfrogging" – overcoming the deficiencies of traditional infrastructure through digital systems — creates diverse business opportunities all across the early stage group.

The scale of market opportunity in digital technology is huge in all three groups. Overall, they invest approximately 2-5% of their GDP in the area. For example, China alone is the world's biggest market for industrial robotics, while India is moving tens of millions of people to the Internet annually.

Sustainable Development

Sustainable Development is about addressing the imbalances that were created by previous growth, and also about avoiding new imbalances in the future. it is a dynamic process, which ensures socially inclusive growth in ways that simultaneously protect and enhance the earth's life support systems.

Here the advanced emerging markets are usually stronger on the social dimension – with strong education, elimination of abject poverty, better gender balance and general inclusion of minority groups. Yet, industrialization has had significant environmental impact, especially in countries like China or Russia, and the consequences of past disregard for ecology need to be addressed. The countries from the intermediate group often have a better ecological standing, yet face pressing social issues, while the early stage group has extensive work to be done in basic human development. It is hard to estimate the size of forthcoming investment in sustainable development, as it often involves "soft" issues like improving educational standards or employment practices. Through these investments, the advanced markets need to focus on recovering the ecological damage of the past, as well as upgrading their industrial base to make it environmentally friendly, and reducing individual environmental footprint of the growing consumer class. On the positive side, we see increasing consideration of sustainability of development by local large corporations, which are following the practices of their multinational corporation peers.

The intermediate group needs to make the process of industrial growth both environmentally safe and socially inclusive with special attention paid to the adaptation of numerous minorities. The main challenge of early stage countries lies in the development of an all-encompassing and balanced sustainability strategy that will help them to avoid the mistakes made in the past by the now-industrialized countries. This group should focus their efforts on designing and enforcing national policies and regulation in sustainability, which might employ competence transfer from global business.

Talent Development

Talent Development is an area of vast opportunity, as 90% of global youth live in emerging markets, though less than half of global GDP is produced there. This imbalance currently leads to the lack of educational, social, economic and institutional opportunities, preventing the demographic capital of emerging markets from transforming into effectively employed talent. As a result, demography turns into a liability, not an asset.

In the globally interconnected economy built on knowledge, talent is the key to the global competitiveness of a nation. The emerging markets need to make investment into the infrastructure for talent attraction, assimilation and retention one of their key priorities. The size of this investment has substantial growth potential. In fact, some of the emerging economies are already among the global leaders in the proportion of GDP spent on education.

The advanced emerging economies face the dual challenge of both assimilating the low-skilled immigration and retaining the better educated and skilled part of the native population, which often seeks to migrate to the "advanced world." a combination of economic opportunities and quality of life is required to fulfill the latter task. The intermediate group countries need to focus on developing local technical, engineering, research and managerial personnel required for industrial growth, with the help of the import of knowledge and competences from the more advanced economies of the West and the East. Better gender balance in professional occupations represents an important area of opportunity in these markets. Early stage countries face the very basic challenges at the moment like achieving 100% literacy (including digital literacy), developing a competitive working class, as well as nurturing the national "elites" capable of integration into the global markets. In all three groups the question of leadership is of paramount importance. Engaging and empowering leaders with a clear vision for development and change, often with the help of overseas national diasporas, is a critical task.

GRAPH. 1: The emerging world at a glance

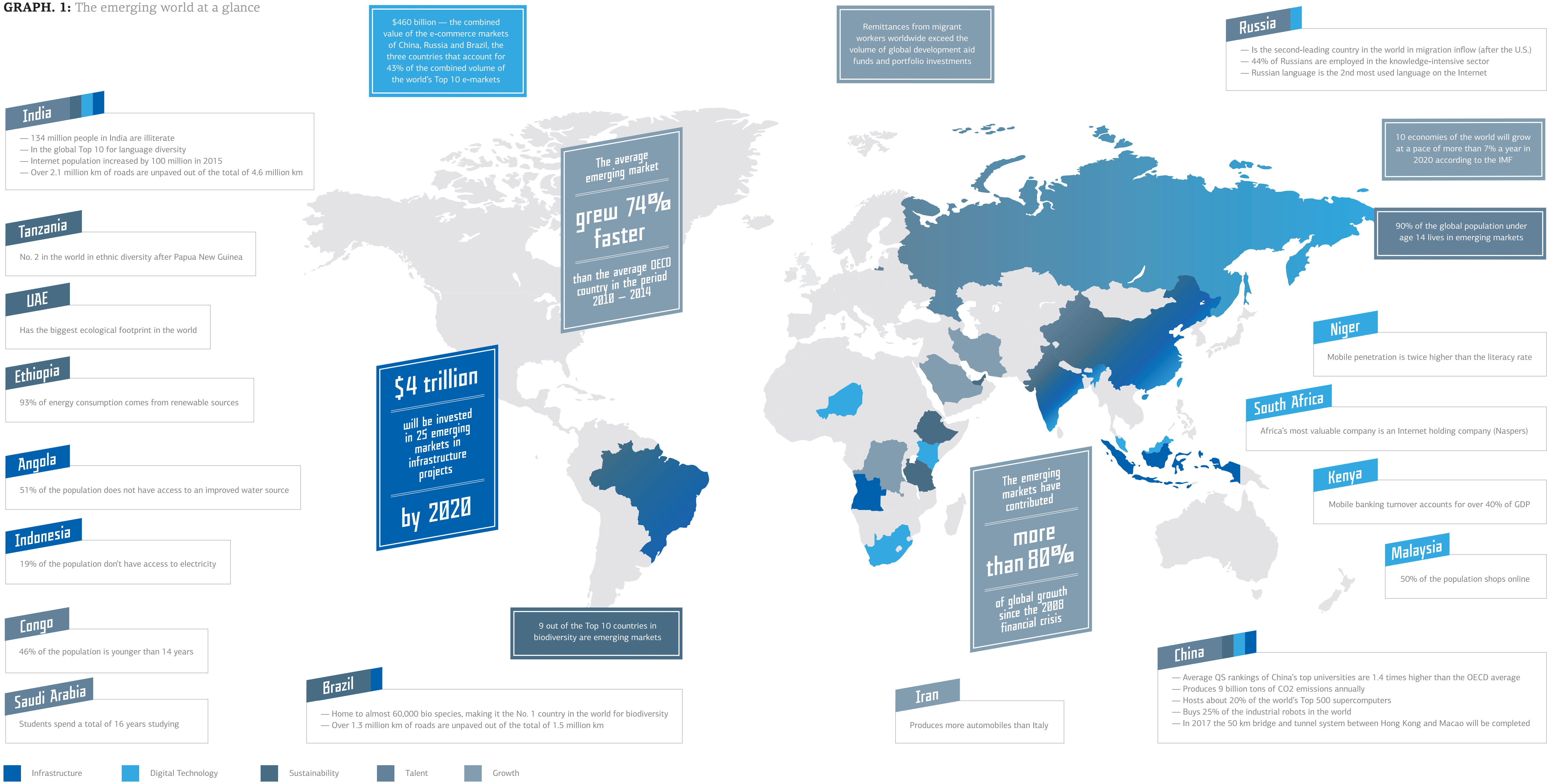


TABLE 1: Three types of business opportunities in the emerging markets

Group	Current income (GDP per capita)	Economy size	Annual growth rate 2015-2025	Predominant type of market	B2B Opportunities	B2C opportunities
Advanced stage	> $10,000	World top 25%	3-5%	Industrial to post-industrial	Advanced technologies, services and technology sourcing	Services Luxuries
Intermediate stage	$1000 – $10,000	World top 50%	5-7%	Infrastructural to industrial	Industrial products and investment, production sourcing	Home appliances Education Transportation
Early stage	< $2,000	World top 50% but not in world top-25%	>7%	Basic to infrastructural	Infrastructural investment, Construction, Low-tech industries	Construction Basic consumer goods

01

The emerging markets: a moving target

A complex, multi-dimensional phenomenon

What are the emerging markets? There would be a quick common consensus around the globe on a few candidates: Brazil, Russia, India, China, South Africa, Turkey, Indonesia... But if you try broadening the list a heated argument may follow. Do the poorer countries of the world qualify? if not — where is the cut-off point? is Nigeria in? Kenya and Tanzania? Ghana? Ethiopia? on the other side of the spectrum — should countries like Israel or the "new" EU members like Romania or Bulgaria be included? if you browse through the business and academic articles on the issue, you are sure to find major discrepancies between the lists. This difficulty may be puzzling, but it properly reflects the very complexity of the emerging markets phenomenon. It is not actually about any combination of metrics like GDP per capita or growth rate. The term is inherently business-oriented: the core of the idea is the specific combination of opportunities and risks for trade and investment in those markets.

The emerging markets are not about any combination of metrics like GDP per capita or growth rate. The core is the combination of opportunities and risks for trade and investment in those markets

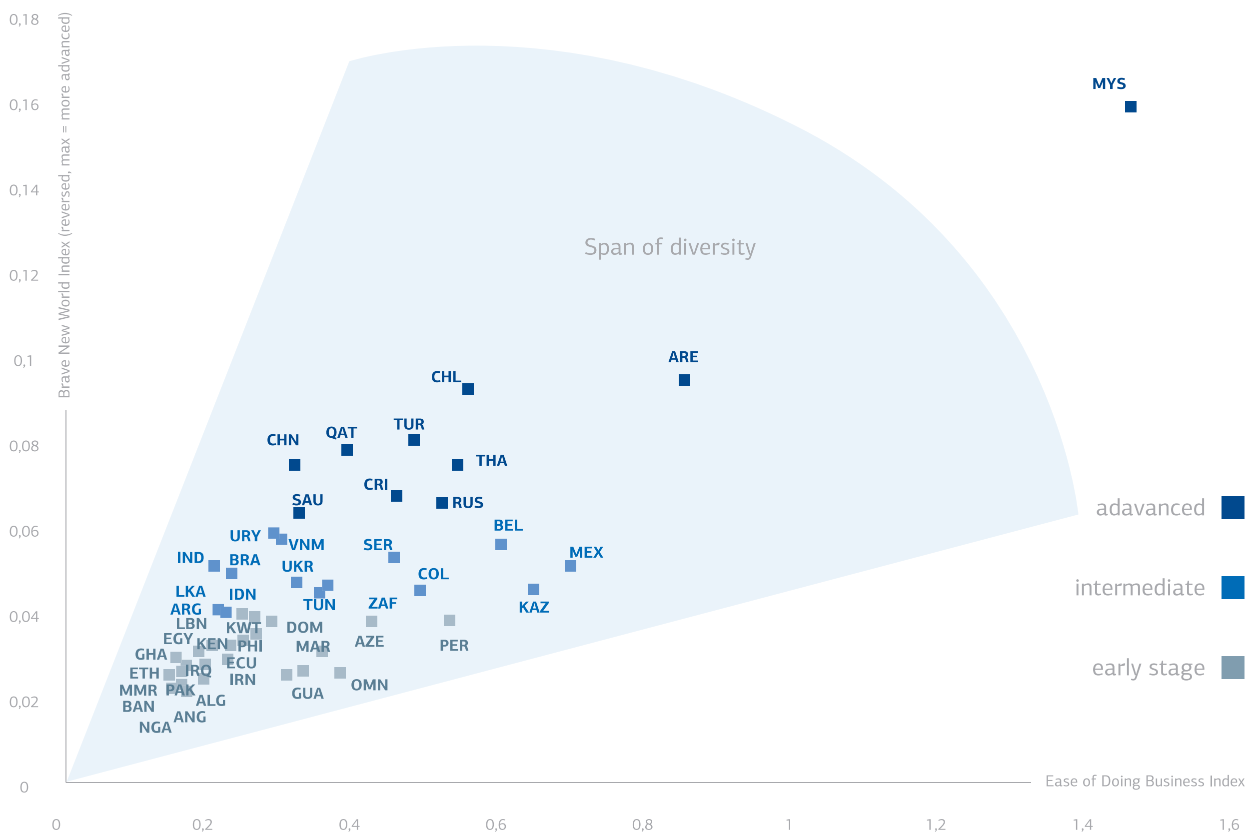
The concept appeared in the late 1980s, reflecting the unprecedented scale of business opportunities in the countries around the globe that were opening to international trade and allowing the presence of multinational corporations after decades of substantially closed and self-sufficient economies. Obviously all the countries of the ex-Soviet bloc were in the category, but this group also included the big independents like India or Brazil, which were reforming their traditionally protectionist market approaches. These countries were massively different from the traditional notion of a "developing economy": they were mostly industrialized, with higher level of human capital, substantial technology potential and the ambitions to be equals and peers in every type of transaction, not just an "export market." It is this set of the qualitative characteristics that continues to define the "spirit" of the emerging markets in today's world. Some twenty-five years have passed since the dramatic international events of the 1990s, and the countries that seemed to form a rather solid group have demonstrated very different development trajectories. Some had stellar growth like China. Many in Eastern Europe used the opportunities of joining a mighty economic union, the EU, with subsequent shifts in trade and investment flows and regulatory paradigm. Others, like some of the former Soviet economies, had more turbulent development with rapid growth of the 2000s coming only after a dramatic fall in GDP in the 1990s.

SKOLKOVO IEMS has been doing complex research on the emerging markets since the late 2000s, through the lens of our Brave New World Index, which includes three distinct groups: Advanced Stage, Intermediate Stage, and Early Stage emerging markets

Three distinct stages of development

To quantify and describe this complexity, IEMS and EY launched the Brave New World index in 2010. The design of the Index was aimed at capturing the multi-dimensionality of the phenomenon, especially from the perspectives of international business. Thus, the Index is based on separate analysis of the strength of the economy and the state of its

GRAPH. 2: **Big Bang Theory**. The degree of diversity increases visibly from the early to advanced stage of market development. The segments of the emerging markets are shown in their correlation with business opportunities (Source: Ease of Doing Business Index)



The diversity of the emerging markets clearly grows with the stage of development, which resembles Big Bang Theory. However, no one single event 'launched' them all: these 'Big Bangs' are continuously happening in the economic World

business environment, together with assessment of the four key domains of development: infrastructure, technology, sustainability, and talent. The key initial finding of the research was the distinction between four groups of the emerging markets:

- **Advanced stage:** These markets come quite close to the internationally recognized developed economies in their per capita income, competitiveness, and capabilities in infrastructure, technology, talent and sustainability. Yet, unlike the developed economies, these markets are still in the process of social and economic transformation, which provides for much higher growth rates and business potential, yet brings a substantial amount of risk;

- **Intermediate stage:** Although these markets may have strong achievements in certain areas of development (e. g. India being an increasingly important force in space exploration), their overall profile is significantly imbalanced with certain aspects falling far short of the level of developed economies;

- **Early stage:** These are the economies that have reached a certain size that makes them important markets for some products and gives enough opportunities for international investment, but their stage of development across all the dimensions is substantially below the level of advanced countries;

- **Dormant:** These economies both have a relatively low development level across most of the dimensions and are too small in size to be important business targets.

The composition of these groups is by no means static. In the few years that have passed since the latest release of the Index we see that the markets that were leading the "advanced emerging" list in 2010 — like Poland and Hungary — have generally fulfilled their transformations and moved on to become full members of the "advanced economies" world in terms of business opportunities and risks. A group of countries has made the leap from "intermediate" to "advanced" stage. This group is a mixture of economies from the former Soviet Union, Middle East, Latin America and East and Southeast Asia. A few intermediate economies, however, were not so quick in their development across all the dimensions, despite certain impressive advancement, including India, Brazil and South Africa, together with a few smaller countries. Finally, quite a number of countries have moved into the "early stage" group out of the "dormant" category. It looks like the economic awakening of Africa is finally here. There is a string of Africa's "lions"[1] are led by Nigeria, which became the biggest economy of the continent and is striving to enter the world's Top 20 economies by the year 2020. In East Africa, Kenya, Tanzania and Uganda cooperate effectively to create a region of development and an attractive market. They have already become a source of world-known bottom-of-the-pyramid innovations like the M-Pesa system of mobile money.
In Asia, countries like the Philippines, Sri Lanka or Bangladesh are

1 See more details in African Lions in the Making. SKOLKOVO Institute for Emerging Market Studies, 2011; and Africa on the Move: Quest For Sustainable Growth. EY, 2013

starting to benefit from the industrial outsourcing by Chinese companies, which saw surging labor costs in their home country. While this group will demonstrate super-high growth rates, a decade should pass before the "early stage" countries will turn into mainstream world economic players. Within this report, we do not analyze the "dormant" category, mostly comprised of the bottom half of the world's economies, many of which yet represent only fragmented business opportunities combined with high risks. (See the map for full composition of the groups).

Big Bang Theory

As the Graph 1 clearly illustrates, the diversity of the markets clearly grows with the stage of development. The picture may remind you of an illustration of the Big Bang – the event that started our universe billions of years ago – in an astronomy book. The more time that passed since the event, the more diverse the objects in the universe became. There is just one substantial difference with the emerging markets — there was no one single event in history that "launched" them all. Actually, these Big Bangs are continuously happening in the economic world with major paradigmatic shifts – like the crisis of 2008 or the new level of commodity prices since 2014 – disrupting and reshaping the picture. For this reason, it is increasingly important for global business leaders to account for the stages of transformation processes of the emerging markets and their qualitative differences. Those differences define the need for specific business strategies and models, tailored in order to capture the maximum of newly available opportunities, and at the same time, to reasonably mitigate the possible risks. ■

CASE

Iran returns to international trade, the last big opportunity of its kind

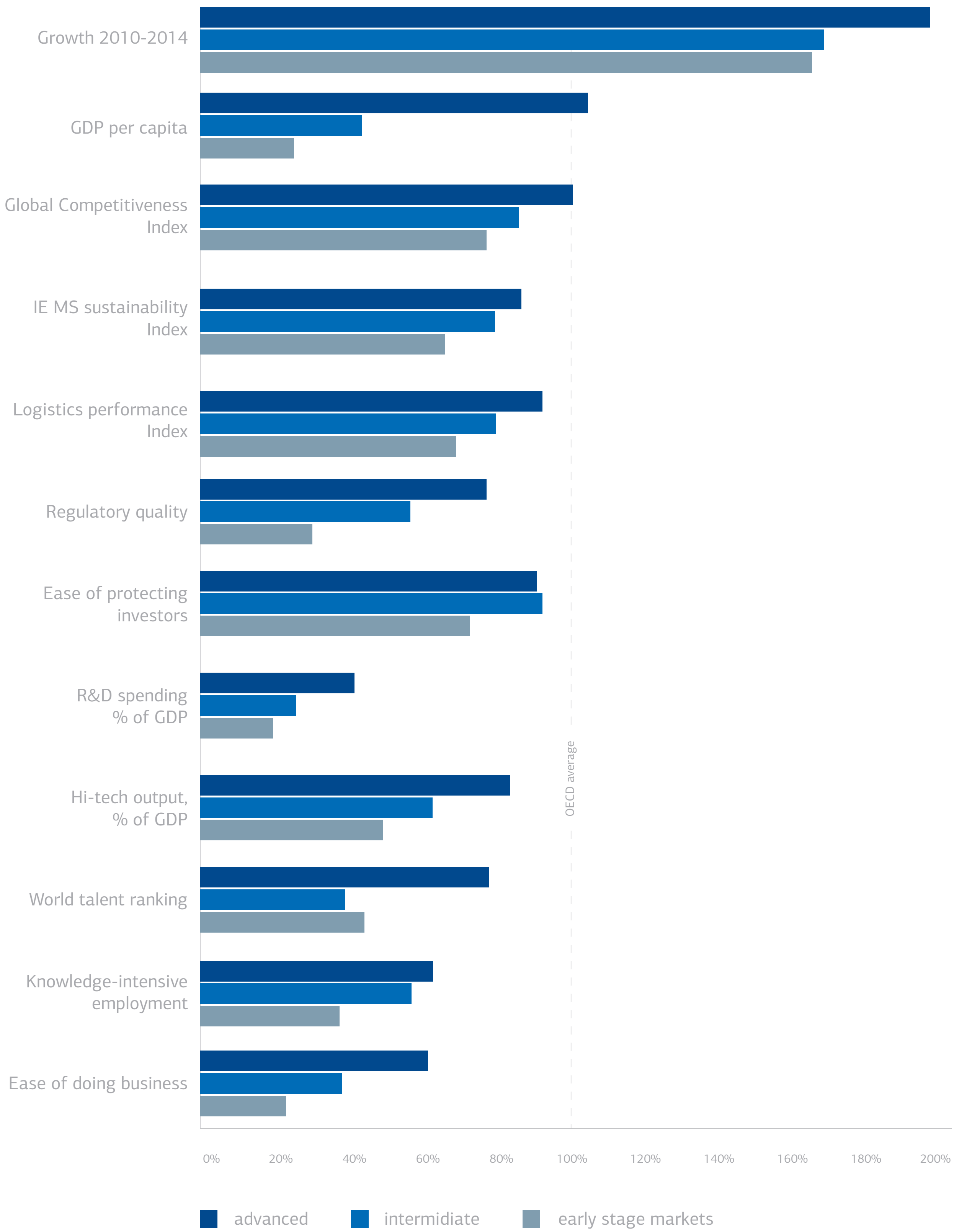
When international trade sanctions imposed on Iran were lifted in January 2016, the business world started re-discovering what might be called the "biggest forgotten economy." if Iran properly handles the emerging opportunities, it can develop itself into a new "industrial tiger" and become an economic force, changing for the better the prospects of the whole Middle East region.

Iran is among the world's Top 20 economies in terms of purchasing power parity, ranking higher than Australia, Poland or Argentina, though somewhat lower than its key regional competitors, Turkey and Saudi Arabia. Its per capita GDP falls into the upper middle category, with the country ranked No. 96 in the world, between Mexico (No. 92) and Brazil (No. 100). The economy is reasonably diversified with oil accounting for just 20% of GDP (but 80% of exports). The country produces over 1 million cars a year, nearly 50% more than Italy. There is a history of self-reliant development of many modern technologies, currently focused more on the military sector, yet probably capable of conversion into civilian use. The economy is currently dominated by the state, yet the private sector never ceased to exist, at least in terms of small and midsize business. The Sixth Five-Year Plan (2016 – 2020) calls for massive privatization and support of the private sector.

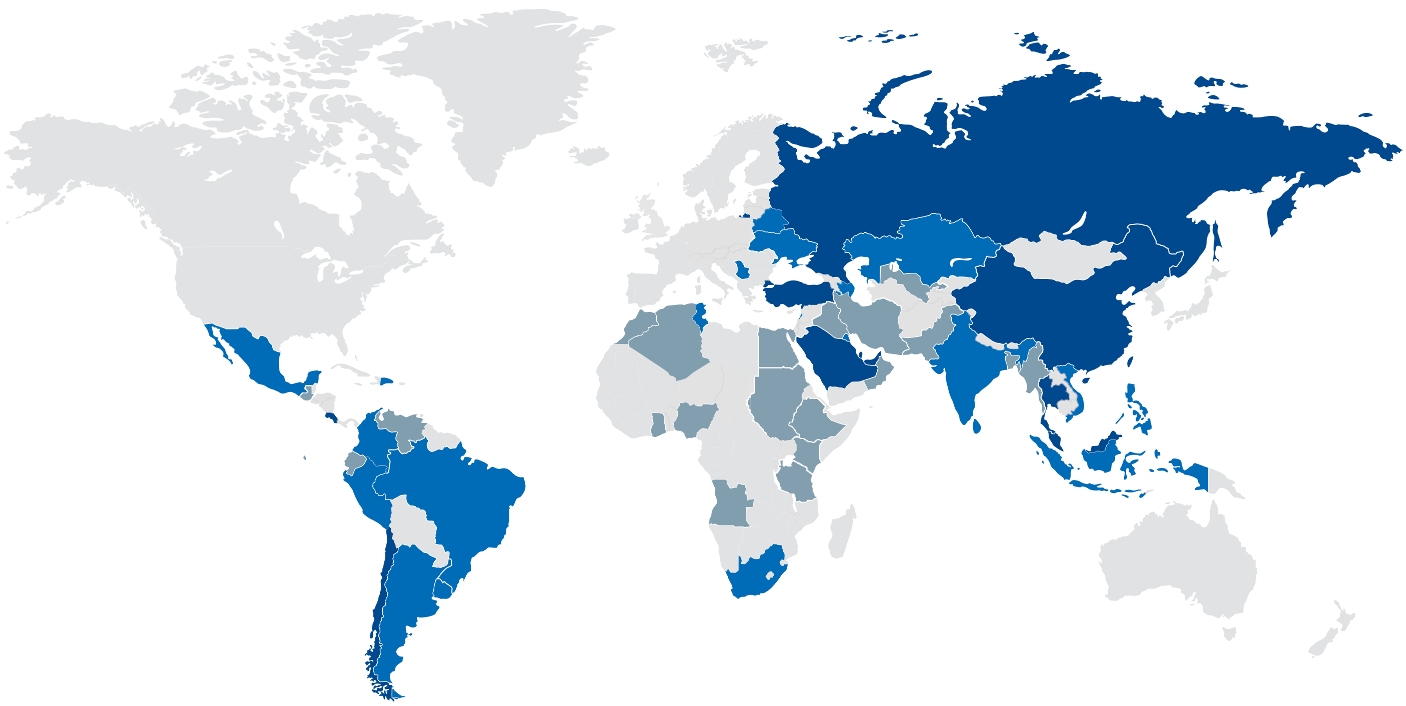
Iran is entering the period of a "demographic dividend," with a median population age of 29 years, high birth rates and long life expectancy. The quality of education is rather high by the standards of the region, with the formal literacy rate over 85% and a tertiary enrollment rate of 18%. Unlike some of its neighboring countries, Iran has never denied education or work opportunities for women, who comprise approximately 40% of the workforce, including many highly-qualified jobs. A few years ago, IT and telecom companies surpassed the oil industry in terms of number of people employed. Graduates with a university diploma can expect a monthly salary of about $350 at the entry level, while an experienced manager can earn about $2,000, according to IranTalent's salary data. The country ranks 26th in the world by the size of its Internet audience with substantial further growth potential; for now, the Internet penetration rate remains around 55%.

If Iran fulfills its growth target of 8% a year until 2020, it can turn into a new "industrial tiger," with a chance to surpass both Turkey and Saudi Arabia and turn into the biggest economy of the Middle East. Geographically the country is at the crossroads of transport corridors from the Black and Caspian Seas to the Indian Ocean, with possibilities to integrate into the Silk Road Belt developed by China. Thus, Iran is already opening whole new opportunities for the South Caucasus countries of Georgia, Armenia and Azerbaijan, as well as for Kazakhstan and Turkmenistan from Central Asia.

GRAPH. 3: : The distance from the OECD average for the three groups of emerging markets. The advanced group is on par in terms of per capita GDP and global competitiveness. This group grew at a rate that was almost two times higher. Yet, there were substantial gaps in all other dimensions. The intermediate and early stage groups are significantly below the level of the advanced group on most dimensions



GRAPH. 4 : a Top 90 economy (upper half of the world's economies), which is not recognized as an advanced economy by the World Bank or IMF and which is not a member of the EU, Libya is not present due to lack of statistical data



advanced | intermidiate | early stage markets

Costa Rica, Chile, China, Malaysia, Qatar, Russian Federation, Saudi Arabia, Thailand, Turkey, United Arab Emirates

Azerbaijan, Argentina, Belarus, Brazil, Colombia, India, Indonesia, Kazakhstan, Kuwait, Lebanon, Dominican Republic, Peru, Philippines, Serbia, South Africa, Sri Lanka, Mexico, Vietnam, Ukraine, Uruguay, Tunisia

Algeria, Angola, Bangladesh, Ecuador, Egypt, Arab Rep., Ethiopia, Ghana, Guatemala, Iran, Islamic Rep., Iraq, Kenya, Morocco, Myanmar, Pakistan, Oman, Nigeria, Sudan, Tanzania, Uzbekistan, Venezuela

02

Growth patterns in emerging markets

To super-growth and back: Will the emerging markets continue to drive the global economy?

It is hard to believe now, but the idea of very high growth was not a part of the initial intuition that defined the concept of "emerging markets." Indeed, the countries of the ex-Soviet bloc, India or Brazil were not at all known in the early 1990s as star growth performers. The hopes of those times were rather modest: to overcome macroeconomic turbulence, restructure domestic industry in a globally competitive way and ensure a better quality of life for their citizens.

It was over a decade later, in 2004, that Goldman Sachs, an investment bank, noticed that some of the emerging markets not only grew with rates much above the global average, but also turned into the biggest world economies through this growth. That's when the term BRIC(S) was coined, and it became common to expect all sorts of economic miracles from its members. Currently, there are some signs that the growth in important emerging markets is slowing down — and these signs are causing real worries about the future of the global economy as a whole. How grounded are those concerns, and what is the realistic growth outlook for the emerging world? What will be the drivers of growth and the business opportunities resulting from them?

The growth in important emerging markets is slowing down — and these signs are causing real worries about the future of the global economy as a whole. How grounded are those concerns?

A brief review of the history of global economic growth since the 1960s

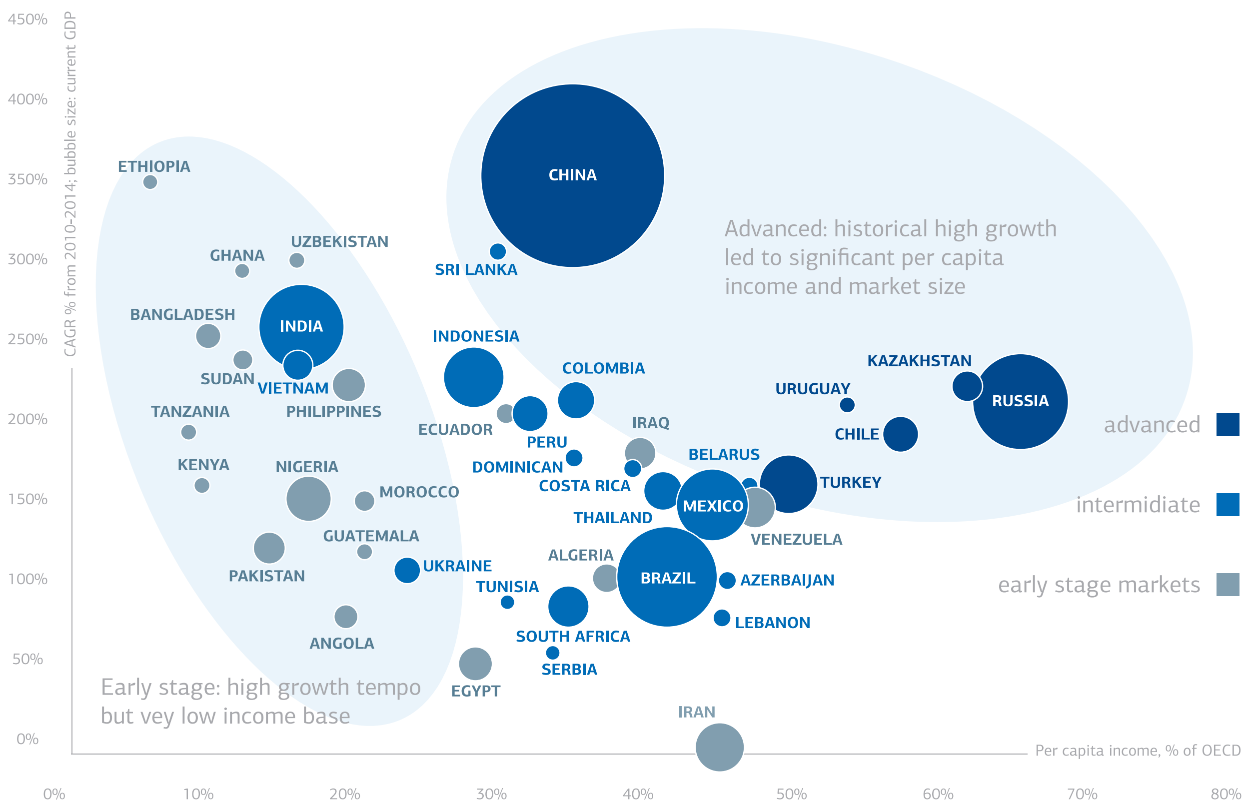
If we look at the past 40 or 50 years of the global economy, we will see that economic growth is an evolving phenomenon both qualitatively and quantitatively. The 1960s were arguably the decade of the most rapid global growth in human history and much of the 1970s kept up this growth momentum. In those years, even the laggards were posting GDP per capita increases of 3-5% each year — a graph that would constitute respectable economic performance nowadays. It was not unusual for the leaders — and those were the countries like Japan, South Korea and the U.S., together with a number of European nations, to have years with growth rates in the double digits.

What was behind this growth spurt? Rapid industrialization, fuelled by low commodity prices and the system of fixed exchange rates (known as the Bretton Woods system), provided an important foundation.

In the developing world those years were the heyday of "import substitution," when every nation strived to have its own production of cars, electronics, industrial equipment, etc. Two global shocks led to the demise of the system: the oil crisis, which escalated the costs of industrial production, and the rejection of the Bretton Woods system and the switch to floating exchange rates, which made it impossible to use the value of the national currency as an instrument of cost competition on the international arena.

The economic growth is an evolving phenomenon, both qualitatively and quantitatively

GRAPH. 5: The growth universe of emerging markets. Bubble size: current GDP



Rapid industrialization in 1970s, de-industrialization in 1980s, restructuring of Soviet Block economies in 1990s and new re-industrialization in 2000s. What is next?

TABLE 2: The new wave of emerging markets to come in the future: The world's Top 20 markets by growth in 2020 (Source: IMF)

	Country	GDP growth rate in 2020, %
1.	Sierra Leone	11.37
2.	Cote d'Ivoire	11.08
3.	Ethiopia	9.92
4.	Togo	9.59
5.	Myanmar	9.24
6.	Iraq	8.93
7.	Laos	8.19
8.	Congo	8.11
9.	Qatar	8.03
10.	Rwanda	7.48
11.	Zambia	6.95
12.	Mozambique	6.82
13.	Cambodia	6.79
14.	Tanzania	6.72
15.	Bangladesh	6.70
16.	Sri Lanka	6.53
17.	Vietnam	6.40
18.	Senegal	6.39
19.	Tajikistan	6,33
20.	Pakistan	6.19

Thus came the decade of de-industrialization, stagflation, macroeconomic turbulence and debt crises in the weaker economies (Latin America and some Asian countries suffered most). Very compact service-oriented economies — like the Caribbean nations — managed to grow rapidly in this decade.

There was one important exception, which was not noticed at the time: after the radical reforms of Deng Xiaoping, the Chinese economy started to grow at a very high rate. These higher rates came from a low base and the country had to travel a long road to become a prominent economic player, yet the trend was born of emerging markets outpacing

CASE

Nigeria: a global growth generator from Sub-Saharan Africa

If the entire history of the African continent were to be represented by just one country, Nigeria would be a strong candidate. Home to the great medieval kingdoms like Nri, Oyo and later Benin (which gave the world famous bronze art works), it later fell under colonial rule, which mixed several important ethnic groups into one administrative territory. The country gained independence in 1960, the year of high hopes for the new modern Africa. Later it had to pass through a devastating civil war and a series of military dictatorships and returned to democratic rule at the very end of the 20th century. Since then the country has been making rapid progress in economic and social development, making it into the group of lower middle income countries, according to the World Bank.

Now Nigeria is making a bid for a new level of development. In 2009 the new National Strategy[2] was adopted, with the aim of becoming one of the world's Top 20 economies by 2020, i.e. jumping by 10 positions from 2010. The strategy is built around the following vision statement: "By 2020, Nigeria will have a large, strong diversified, sustainable and competitive economy that effectively harnesses the talents and energies of its people and responsibly exploits its natural endowments to guarantee a high standard of living and quality of life to its citizens." in quantitative terms, the aim is to have GDP of not less than $900 billion and per capita GDP of at least $4,000. Achieving these goals would require sustaining an average 13.8% GDP growth rate across an entire decade – a feat that would be something of a record in global economic history.

Some important reforms followed, with the government stimulating the development of national industry, and also upgrading the state of the financial and banking system. For example, in the latter sphere, the country made some radical steps to promote non-cash payments. The proceeds from the exports of natural riches like oil, bauxite or tin were used to stimulate development of domestic manufacturing. There is already an auto manufacturing company, Innoson Vehicles, which assembles buses, trucks and SUVs and plans to introduce a national car soon. Another important industry is electronics, with the company Zinox producing branded PCs and mobile gadgets. Overall, natural resources currently account for just 14% of GDP, while the wholesale and retail trade sectors are the key contributors to growth. The country's consumer class is already about 40 million people; if the 20:2020 goal is achieved, this graph is about to quadruple.

Is the country on track to meet its target? According to the World Bank, it achieved 8% growth in 2010, but then slowed down to 4-5% from 2011 to 2013, with an increase to over 6% in 2014. Though very respectable in themselves, these growth rates are obviously far short of the established target. Thus some of the experts have come with a more conservative timeline for entering the Top 20 club, pushing back the target date to 2030. However no one currently doubts that the country's growth is not just strong at the moment, but also will be sustained over a prolonged period of time. In 2011, Citigroup included the country into the group of 30 "Global Growth Generators" — the only entrant from the Sub-Saharan region.

2 Nigeria Vision 20: 2020. Economic transformation blueprint. — Nigeria National Plan

It is no longer about using advanced stage countries as global manufacturing hubs. They are turning into increasingly attractive and sophisticated post-industrial markets

the growth of advanced economies, gradually picking up buying power that could be reinvested in technological development.
This trend was blurred in the early 1990s with the dramatic international event of the "socialist camp" turning to the free market as its economic model. The restructuring of Soviet-type economies in Russia, Eastern Europe and Central Asia led to a period of sharp GDP decline, which came mostly through the drop in industrial output due to low international competitiveness. Thus, the signs of de-industrialization of the global economy were visible by the first half of the 1990s, supporting many theories that associated the "growth of the future" with "post-industrial" services.
However, industry made a mighty comeback in the 2000s, not only through the ever increasing rate of industrial value added in countries like China, India or Brazil, and the launch of manufacturing across almost all of Asia (Vietnam, Laos, Indonesia, Philippines, Bangladesh), but also with the re-industrialization of the post-socialist economies and even the EU and the U.S.
This was a new type of industry though, not aiming to "substitute" the end products, but rather, working in the middle of complex international value chains, seeking to leverage there the competitive advantages like cheap labor or energy or high productivity. This industry-based growth shaped the "decade of the BRICS" of the 2000s. But now the picture is changing once again.

Advanced emerging markets: From industrial growth powerhouses to post-industrial markets

The group of advanced emerging markets countries like China, Russia or Turkey have progressed to a point where their income levels are quite close to the OECD average, which means that cheaper labor costs are no longer an important competitive advantage. At the same time, the global commodity markets, including oil, fell into the trough of a pricing cycle, diminishing the value of possessing vast natural resources. This trend plays a bit in favor of the Chinese economy, but clearly against Russia and the Gulf oil exporters. Overall, the "advanced stage" group faces the need for massive investment into a new generation of manufacturing assets (see the chapter on digital technology) to boost productivity and stay competitive in the international markets. Outsourcing some parts of production to regional neighbors with low income levels (e. g. China to Vietnam, Lao and Cambodia, and Russia to Belarus) is an important strategy. There is a positive side to the slowdown in the advanced markets, however: the underlying restructuring of their economies will make their growth more transparent to the business world.
The global investment community was particularly nervous about Chinese growth rates, suspecting the existence of hugely inflated "bubbles" (e.g. In construction, with the much discussed "ghost cities") that will inevitably burst. The growth of 4-5% per annum on a more solid and understandable industrial foundation for the "advanced emerging" markets will probably contribute more to the business climate in the world than the accelerated growth rates of the past decade.
The slowdown and restructuring of the economies of the advanced stage emerging markets also means important changes in the nature of business opportunities associated with these markets. It is no longer about using the countries as global manufacturing hubs. Instead, they are turning into increasingly attractive and sophisticated post-industrial markets, eager to con-

sume modern services like finance and education and luxury goods. What they buy will more and more define their importance to the global economy. There is a growing self-awareness in the leading emerging markets of this importance, and this awareness boosts their bargaining power. “Give us the best you can — but for a competitive price” seems to be the motto.

The markets of the intermediate group will largely present the opportunities associated with industrial economies, while early stage markets would need to build a solid infrastructural foundation for their development

Intermediate emerging markets: Picking up the banner of global growth with more industrialization

The intermediate stage group currently benefits from the slowdown in the advanced markets. Many economists believe that India will firmly outpace China’s growth rates in the late 2010s, something that it failed to do in the 2000s (see the chart). The future performance of Brazil and South Africa is more of a question mark. The former is currently experiencing a significant economic contraction and the latter is growing quite modestly. Yet, both countries have potential for much more rapid development. The markets of the intermediate group will largely present the opportunities associated with industrial economies: productive assets and finance in the B2B sector and products like home appliances and cheap transportation vehicles in the B2C sector. However, due to the vast size of their middle class, countries like Brazil and India will also provide important business opportunities for post-industrial consumption.

Early stage emerging markets: Super-high growth to establish the base for future global competitiveness

Finally, there are the early stage markets. The IMF projects that by 2020 about twenty countries of the world will grow faster than 6% a year, and the list includes a few exceptional performers from the current “early stage” group, among them Iraq, Myanmar, Sri Lanka, Ethiopia, Tanzania, and Bangladesh. These countries are growing from a really low income level and some of them have a very recent history of political turbulence.

Overall, then, they would need to build a solid infrastructural foundation for their development. This need will be generally shaping the business opportunities in these economies with consumer markets still relatively small and focused on basic products, construction, utilities and communications.

CASE

Dangote Group: Building a multinational company from Nigeria

Probably not too many people outside of Africa had heard of Aliko Dangote or were aware of his company Dangote Group before Forbes magazine named him the African Person of the Year in 2014, out of a respectable shortlist of politicians and business people. However Mr. Dangote is not only the richest person of African descent in the world and and the founder of one of the continent's most diverse and well-capitalized companies. He is also a person with a strong vision of both business strategy interrelated with a social mission to "touch the lives of people by providing their basic needs.".

Building a really big business is a challenging task in an emerging market, especially in one that is below the global average in terms of income. While the classic Western strategy is "concentrate and focus," a smaller and poorer economy like Nigeria puts strong limits on the possibilities of vertical integration in any industry. The "Eastern" way of doing business is also strongly associated with networks of personal contacts — the wider, the better. Probably for these two reasons the prominent "emerging multinationals" — like Tata from India or Koc from Turkey — are highly diversified. Dangote follows the same approach.

The company started in the late 1970s as a trading business, as there were virtually no opportunities for investment in production under the military regime of Nigeria of those times. However, with the transition to democracy since 1999, significant opportunities for industrial investment started to emerge and were enthusiastically pursued by Mr. Dangote. His major business move of that period was the successful bid for privatization of the Benue Cement Company in 2000, and later the purchase of the country's Obajana cement plant. Further investment into fully integrated cement production led to the creation of the biggest player in the industry in Africa, with a market capitalization of over $20 billion (and a listing on the Lagos Stock Exchange, which is now known as the Nigerian Stock Exchange).

The cement business accounts for about 70% of Dangote Group's profits, but there are other important areas of investment. The company is involved in agriculture and food production with manufacturing and refining of sugar, refining of salt, milling of flour and semolina and production of pasta and noodles. The Dangote Agro Sacks division produces essential agricultural packaging. The group is a major investor in logistics (ports and truck fleets) and real estate. It also has expanded into modern infrastructure with over 14,000 km of fiber optics laid all across Nigeria to ensure the country's access to the world of modern communications. Now Dangote Group has started to become a pan-African player. It has recently acquired a 64% stake in a South African cement company, the biggest single direct foreign investment in the country. The expansion strategy includes building further plants in Cameroon, Republic of Congo, Ethiopia, Ghana, Ivory Coast, Kenya, Liberia, Senegal, Tanzania and Zambia, as well as import and packing facilities in Ghana and Sierra Leone.

Development groups, growth and business opportunities

In summary, the overall change of GDP growth rates is based on the type of qualitative transformation taking place in the emerging economies. Depending on their stage of development, they are displaying very different growth characteristics.

The more advanced markets are slowing down, but at the same time, they are moving from an export-oriented model to one based on the value of the domestic market, driven by an increasingly affluent middle class and industrial workers. The consumption of modern, Western-quality products, luxuries and services is an important component of their business attractiveness. The other component is the increasing volume of purchases of modern industrial technologies, and also the hunger for industrial investment finance.

The intermediate group demonstrates both rapid industrial development, with lots of opportunities for sourcing strategies, together with growing post-industrial consumption, especially in the countries with a vast middle class, like Brazil or India. The early stage markets are more associated with super-high growth in infrastructural projects, together with basic industrialization and private consumption. ■

VIEWPOINT

Sergey Novikov, Minister of Economic Development of the Republic of Bashkortostan in Russia

A Russian region in the center of the Silk Road Economic Belt: Opportunities for Growth

In 2015 Ufa, the capital of Bashkortostan, became the "unofficial capital of the BRICS," as it hosted the BRICS Summit together with the summit of the Shanghai Cooperation Organization. What was the legacy of the BRICS Summit in the sphere of trade relations, and what are the perspectives of strategic business cooperation with BRICS countries?

The Ufa Summits were really a big step forward for our Republic; we can say that they advanced the international awareness and image of Bashkortostan. We had a chance to present our achievement and investment opportunities to heads of state and business representatives of 15 countries. The work within the BRICS and SCO allows us to solve many tasks of foreign economic relations, like attracting major investors, boosting exports, as well as setting benchmarks for our own growth. A key achievement of the Summit was in signing agreements on new joint business initiatives. We already see them turning into concrete projects.

What are the initiatives of the government of Bashkortostan in stimulating the foreign relations of its business enterprises with the emerging markets, particularly with the BRICS countries?

The government see the overall atmosphere of doing business in the region as the key component of the development and strengthening of existing and potential relations. For this we use instruments like tax concessions for Russian and international investors. In addition, we attempt to minimize administrative barriers, while building up the local investment infrastructure. Today we have a range of investment agreements within the BRICS and SCO organizations. We have launched the production of BRAVIS buses through a joint venture with Brazilian partners. Businessmen from China have invested into a steel rolling plant, poultry farms and greenhouses. The NEFAZ plant has launched the production of Bell dumpers in cooperation with South Africa. More investment ideas are under development. We have an extensive program of international visits aimed at finding more opportunities for enterprises of the region. A visit of our delegation to India in January 2016 is a good example. We met companies from the machine building, industrial engineering, medicine, IT and electronics manufacturing sectors. We also discussed the perspectives of joint projects in agriculture, mining and the aviation industry. By these steps, you can see the potential range of cooperation; we have selected strong partners and are now working on the design of specific projects.

Bashkortostan lies on one of the routes of the Silk Road Economic Belt project, almost right in the center of its Northern land corridor. What opportunities do you see for the economic development of the region in this context?

Indeed, today we are actively participating in this major international cooperation project. The route from Europe to Western China will include the territory of Bashkortostan. It will not be just another highway. It will create a whole cluster of business activity with manufacturing and service enterprises together with complex infrastructure. For us this project means a new impulse for economic development. We expect sizeable growth of the volume of trade with our Chinese partners and strengthening of the existing contact between China and Bashkortostan.

03

How do you handle a challenge?

Understand the certainties to manage uncertainties

Planning for the future is always associated with managing uncertainties, which are often referred to as challenges. A challenge is a fundamental trend beyond your control, which transforms your business, its customers and its environment. It turns into an opportunity or a threat depending on how you handle it. However, among the global challenges of today's economy, there are some in which one can be quite certain.

Obviously demography continues to be the defining force of economics and culture. Most of the growth of the global population in the coming decades will be happening in the emerging markets, as they combine higher fertility with ever growing life expectancy. This trend is especially evident in our group of "early stage" countries. It is not only about the numbers, the qualitative social transformation is no less important. The young generations from the emerging markets are increasingly globalized in their training and education on the one hand and in their aspirations and life strategies on the other. They have a much stronger grasp of modern technologies, both in a business and private environment.

The challenges of urbanization and international migration come as the most important results of the demographic and cultural shifts, with consequences not only for emerging, but also for the "developed" world. They play a not insignificant role in the new type of geopolitical tensions, which is another major challenge of the coming years.

In the physical world, climate change and environmental pollution will

A challenge is a fundamental trend beyond your control, which transforms your business, its customers and its environment

be increasingly putting a check on industrial development and quantitative economic growth. And the intersection of the human and physical world puts the issue of availability of resources on top of the agenda. Can the planet provide enough to sustain our growing numbers and even more quickly growing demands?
The answer "no" is not acceptable, so the emerging markets have to join proactively the global efforts to exercise the practices of sustainable development. Especially, the infrastructural push in these countries will happen too close to the world's largest reserves of biodiversity. Thus, it is imperative to handle it with full ecological responsibility. As for many important resources — from metals and oil to soil and water — we can do little to boost their reserves, so the ever-increasing effectiveness in their usage is a must.

The challenge turns into an opportunity or a threat depending on how you handle it

The four areas of response to the challenges

What defines the areas for the possible responses to those challenges? We see two principal dimensions here. For one, we have institutions – those that fix the rules of how you do things — and systems, which basically define what is to be done. Then we should differentiate between catching up to the current state of advanced economies and achieving future leadership through innovative growth. The matrix translates into key development domains, within which lie the range of possible response actions:

- **Infrastructure development:** Creating the basis for growth;
- **Sustainable Development:** Ensuring that the growth can be passed on to future generations;
- **Digital technology development:** Advancing the growth to new levels of productivity and resource effectiveness;
- **Talent development:** Developing the people who will be driving the growth within the new, sustainable and highly technological world — and also enjoying the fruits of the process.

	Systems	Institutions
Catching up	Infrastructure development	Sustainable development
Building leadership	Digital technology development	Talent development

Whatever business you are in, the core of any opportunity in the emerging markets falls within those domains, and you need the appropriate strategy to pursue these opportunities. The further chapters aim at providing international business leaders with insights on the "what?" and "how?" of such strategies at the level of nations, companies and individuals. ■

04

Infrastructure development

Three stages of infrastructural development, requiring very difficult approaches to initiation, financing and execution: creating the basic level, achieving international competitiveness, and building "superpower" infrastructure

From basic level improvements to "super-power" projects

Infrastructure is a crucial domain for responding to the challenges of the emerging markets, as even the most advanced of these markets has significant work to be accomplished to catch up with the developed economies. The deficiencies in transport, power, utilities and communications create barriers for trade and industry, undermine the possibilities of technological development and reduce the overall quality of life. Especially dangerous are the inequalities of access to infrastructure within geographically large countries, which at times can lead to virtual exclusion of the internal regions from the benefits created by the broader national economy.

There are three stages of tasks of infrastructural development, requiring very difficult approaches to initiation, financing and execution of projects: creating the basic level, achieving international competitiveness, and building what can be called "superpower" infrastructure like high-speed trains, sea bridges, extremely fast mobile communications networks, etc. The advanced stage countries are increasingly investing in the latter type of projects, often working on the global frontier of engineering solutions. Projects like the Hong Kong — Macau bridge, the Chinese high-speed rail network or the construction of airports on artificial islands (including the recent project in Ordu-Giresun in Turkey) are pushing the boundaries of what's possible with modern construction capabilities.

In the intermediate group there is huge amount of more mundane work to be done to move from the basic to competitive level in infrastructural development. Thus, Brazil has over 1.3 million km of unpaved roads (out of a total of 1.5 million km), and for India, the graph is 2.1 million km (out of 4.6 million km). Power is another problem, and the economies of India and Indonesia, for example, each have about 19% of population without access to electricity[3], translating into tens of millions of people.

In the early stage group the needs are even more basic. A typical country here — like Tanzania — has less than 10% of the road network paved[4], and electrification stays at unacceptably low levels: consider the examples of Myanmar (32% of population with access to electricity), Angola (30%), Tanzania (24%) or Kenya (20%). Yet, interestingly, the less advanced markets sometimes follow a "last in, first out approach" to the types of infrastructure, as the modern systems of communications develop at a much faster pace than the traditional networks of utilities and roads. In some places in Africa you can get online with a mobile phone — but no running water will be available.

There is another, integrated, type of infrastructure, which increases in importance across all three groups of emerging markets: integrated urban environment. Migration to the cities is a universal trend as they offer by far stronger economic opportunities. However, the rapid growth of urban areas has its unattractive side, from chronic traffic jams to polluted air to impoverished districts with unacceptably low quality of housing and sanitation. The advanced stage countries are actively investing into expensive "smart city" systems that allow for better management of transportation and utility grids; for the less rich economies it is important to find "frugal" — cheap and robust — solutions to the problems.

Overall, a recent study by SKOLKOVO IEMS[5] estimated the infrastructure needs for 25 of the most populous emerging markets, finding that they will need over $4 trillion in investment by 2020. This sum comes from $629 billion to be invested in power, $415 billion in water and other utilities, $1.44 trillion for transport and $1.6 trillion for communications. Financing this scale of development is the first challenge, and effectively executing the projects is another. On the finance side, just a few of the smaller markets — mostly in Latin America — are capable of attracting enough diversified funding from both internal and external sources. The major emerging markets economies need to find ways to mobilize both public and private investment and find the adequate institutional formats to run the projects in a way that combines the development perspective with operational effectiveness.

3 World Energy Access Database, International Energy Agency

4 The World Factbook, CIA

5 The Upcoming Four Trillion-Dollar Infrastructure Gold Rush. SKOLKOVO Institute for Emerging Market Studies, 2014

CASE

Private development in Tatev, Armenia

In 2008 the prominent entrepreneur, investor and philanthropist Ruben Vardanyan devised a vision for the project for the revitalization of Tatev, Armenia. The idea was to bring economic development and a better quality of life to a relatively distant and isolated locality in Armenia through the restoration of the Tatev monastery, a gem of classic Armenian architecture. The project – situated in a barely accessible though immensely picturesque part of Armenia's mountains — could succeed only if a number of infrastructural problems were solved.

Overall some $80 million were invested into the development initiative, with 147 donors from 18 countries making contributions. The key milestone of the project was the construction of a unique cableway, which cut across two canyons, significantly simplifying access to the monastery. The project brought a tenfold increase in the number of tourists to the site – up to 80,000 people in 2013, almost 20% of the overall volume of Armenian tourism activity. The cableway became a financially sustainable project, which generates visible cash flows that are reinvested into restoration works and community development initiatives. Eleven new hotels were built in the region and those that existed at the moment of the project 's launch tripled their capacity. As a result, the local unemployment rate fell by 30% and the local administrative budget was boosted by $2.5 million in tax revenues. The project is still under way. Officially, it is designed to last until the end of 2017; however, its legacy will definitely remain for decades.

CASE

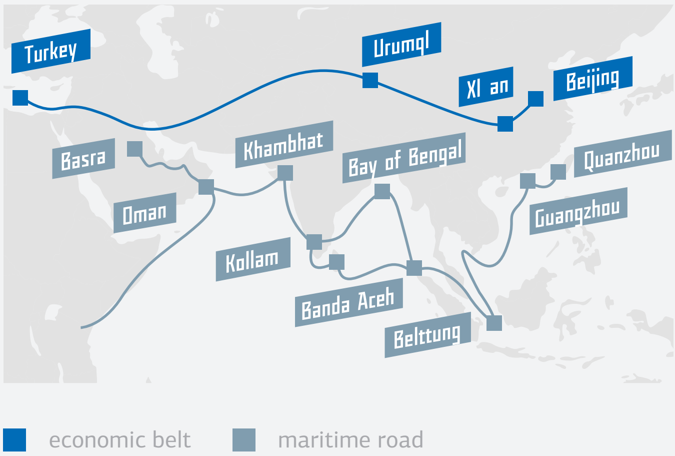
Silk Road Economic Belt: Re-connecting the East and the West

The Chinese government is facing the challenge of declining growth rates. After years of double-digit growth rates, growth fell to 6.5-7% per year. One of the barriers to growth is the deficiency of infrastructure, especially roads – both railways and highways — not only in China, but also in the neighboring countries, which are vital for effective logistics of Chinese exports and imports. Within China there is a striking contrast between the degree of development of the Eastern (seaside and globally integrated) and Western (interior and not globally integrated) regions.

To answer the challenge, China has developed the "One Belt One Road" strategy, which consists of two parts: the Silk Road Economic Belt (SREB) and Silk Sea Road. The SREB is supposed to be a powerful transportation corridor with corresponding infrastructure, which is developing along several routes. The Northern road starts in the Northwest region of China and passes through Kazakhstan and Russia to Western Europe. The Southern way goes through Central Asia and the Middle East, while the third route links China to India, Bangladesh and Myanmar. The Silk Sea Road includes a traditional route to the Indian Ocean through the Malacca Strait and a daring attempt to link to Northern Europe along the Russian polar coast.

The overall mega-project budget is estimated at $890 billion, which is intended to cover over 900 separate projects in 60 countries. Powerful financial institutions have been formed to manage the funds: the Asian Bank of Infrastructural Investment ($100 billion of capital) and the Silk Road Fund ($40 billion of capital). The project will also involve funds from the New Development Bank (informally known as the BRICS Bank). The effect of the project should go way beyond its impact on transport infrastructure; it will facilitate bilateral and multilateral cooperation in energy, agriculture, trade, information technologies and telecommunications, research and development, and tourism.

GRAPH. 6: Silk Road Economic Belt



Revolution in institutional approaches to development?

Here we are witnessing nothing less than an institutional revolution in the execution of large-scale infrastructure development projects. On the one hand, international cooperation is rapidly turning from the traditional model, in which resources flow from advanced markets to developing markets, to the new model, which emphasizes the vibrant cooperation of emerging markets with other emerging markets.

China in particular is transforming into one of the largest bilateral donors, especially on the African continent. China's main development aid agency is the Department of Foreign Aid of the Ministry of Commerce (MOFCOM). In April 2011, China released its "White Paper on Foreign Aid," which makes a clear commitment to South–South cooperation, stressing however that China's aid is "a model with its own characteristics." China's approach will "help recipient countries to strengthen their self-development capacity, enrich and improve their people's livelihood, and promote their economic growth and social progress."[6] The other advanced stage emerging markets are picking up the example with growing development investment into the emerging world from Russia, Turkey, and the Gulf countries (for a broader picture and more details, see the chapter on Sustainability).

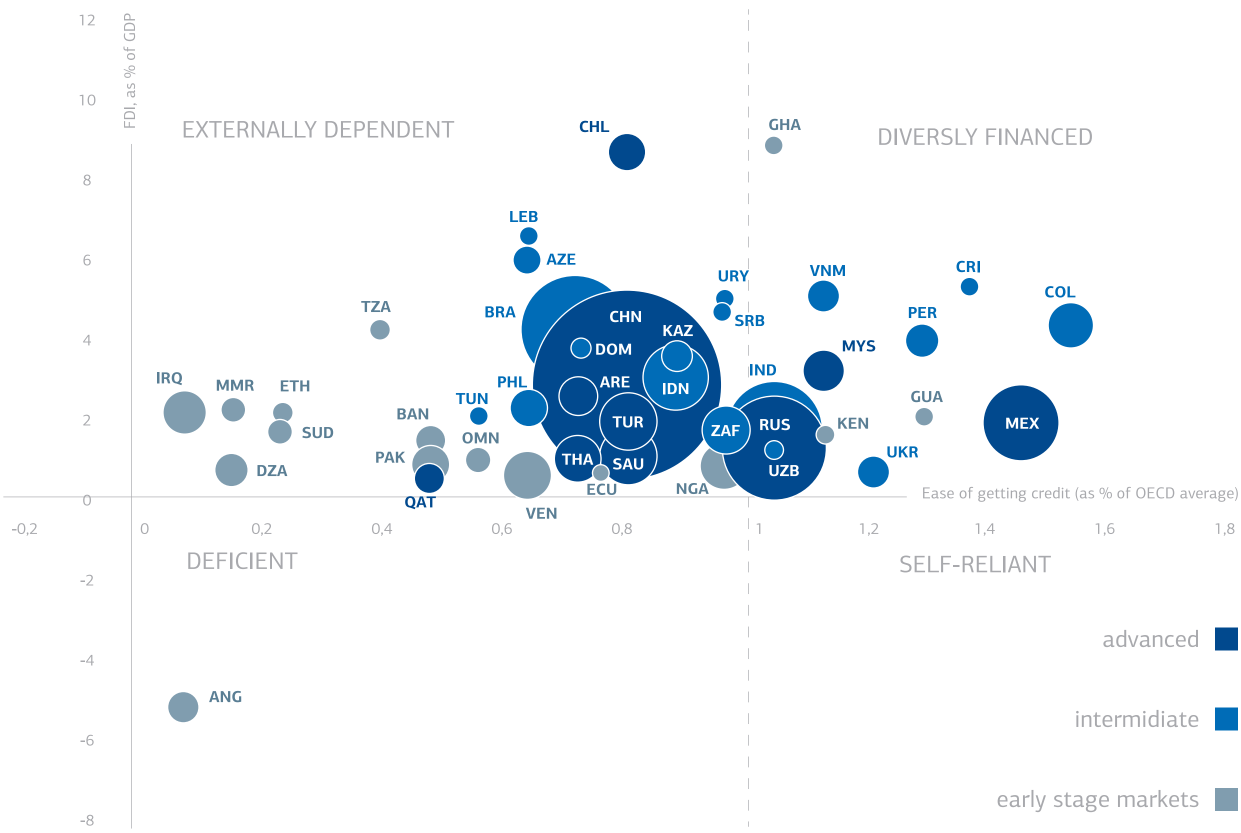
Additionally, a new type of private actor is arriving on the scene: the Private Development Agencies. Those are different from the traditional donors in that they aim at financially sustainable projects that have complex impact on the infrastructural en-

6 Non-DAC Donors and Humanitarian Aid. Shifting Structures, Changing Trends. Global Humanitarian Assistance, 2011

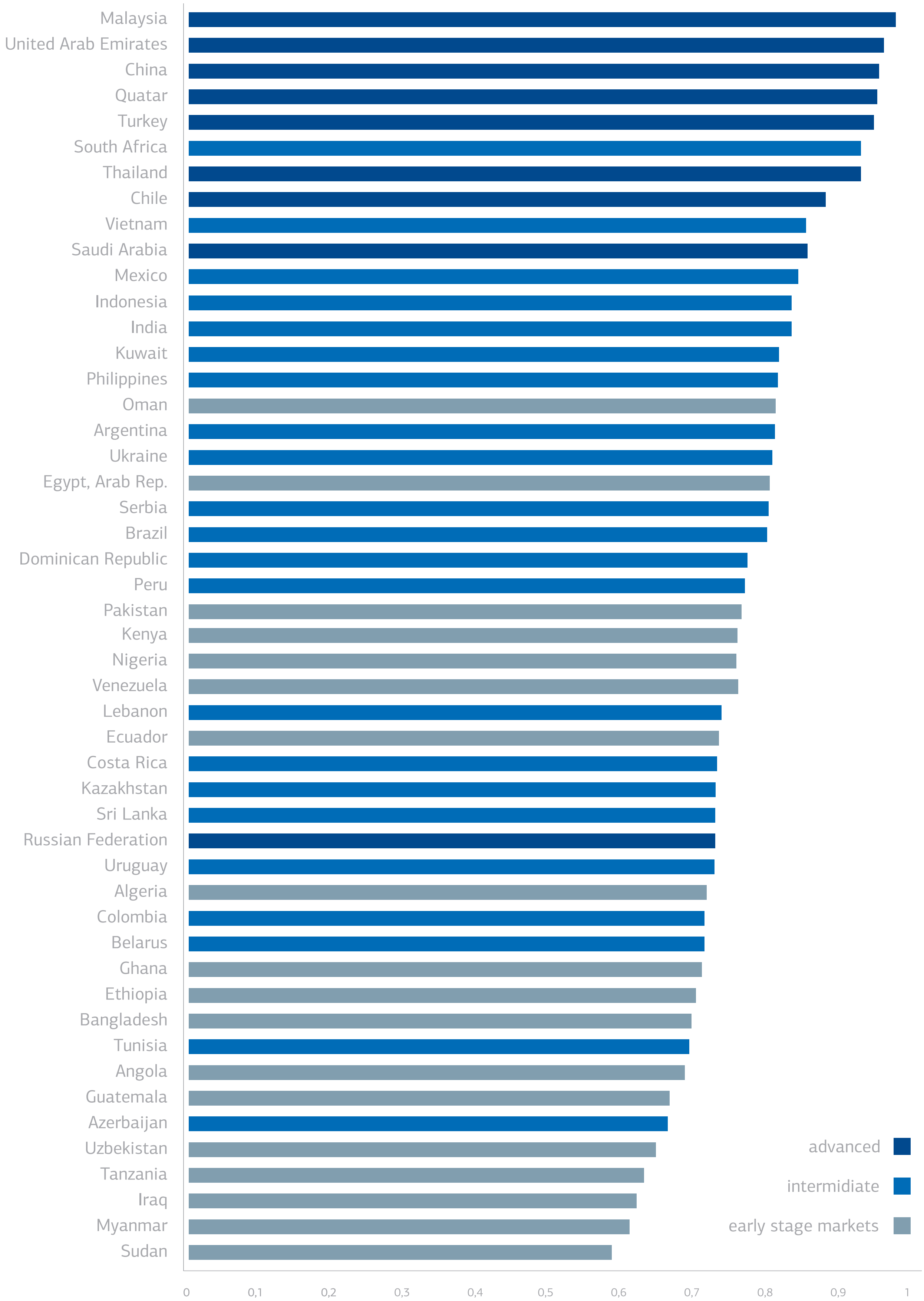
vironment, local business and communities, leaving a lasting legacy of elevated economic capabilities. Ethnic diasporas play an increasingly important role in such initiatives, often employing innovative instruments like "diaspora bonds" intended to fund important projects in their home countries (see the example of the private development initiative of Tatev and the interview with Ruben Vardanyan, the founder of the project).
The benefits of such investment amount to more than just boosting the quality of life in emerging markets. Econometric studies conducted at institutions like the World Bank and Duke University show that the $4 trillion infrastructure investment would create about 20 million jobs. Such investment would yield another 5% of GDP in tax revenue, which could be used by countries in need of funds to provide better health, education and other services to their expanding population. Many – if not most -- of these new jobs will arise in the high-paid service sector. Such investment would also deepen capital markets in emerging markets by $2.5 billion – assuming governments relax regulations. ■

Private Development Agencies – a new type of private actor arriving on the scene of infrastructure development

GRAPH. 7: Advanced markets are generally better financed, as well as some smaller intermediate stage markets. Most of the early stage markets are deficient in infrastructure development financing. Size of infrastructural opportunity and financing capabilities. The size of opportunity is proportional to GDP adjusted by the logistics performance index. Source: World Bank, 2015



GRAPH. 8: Logistics performance index as % of OECD average. A few of the advanced stage countries have achieved a globally competitive level of infrastructure for logistics, yet an average country in the intermediate stage is some 30% below the OECD level, and the early stage markets are even more challenged



Ruben Vardanyan, Russian and Armenian entrepreneur and philanthropist

VIEWPOINT

Private sector investment initiatives for regional development and economic change

You are one of the global pioneers of private development initiatives. What is your personal view on this phenomenon?

Indeed, private companies that take on the function of the development of provinces and countries are the new international trend. There is a strong reason for the existence of such companies. The current international institutions of development are not effective enough: their bureaucracy is obsessed with keeping the flow of funds through the continual reporting to stakeholders. The real long-term objectives of regional development fall prey to such games.

The private companies take the pains to find the right people — both among stakeholders and project managers — who can take the risks in order to accomplish a long-term development vision. This is the key to success. Provided you have the right people aboard, there is no limit to the achievement of your development initiative.

05

Digital technology development

Digital promise to emerging markets: the leapfrogging

Digital technologies have been around for some time, but they have now developed to the point where they have become a major transformational force in the world. Digital technologies affect corporations, living environments and private citizens in many important ways. The emerging markets are no exception from the process, and for them, digital technology development is one area where they can make the quickest advances to the global innovation frontier.

There is a major opportunity in using these technologies to leapfrog the deficiencies of physical infrastructure, achieve greater social cohesion and build the green production assets that will boost their international competitiveness. However, to make these optimistic scenarios come true, the countries should make the right bets in the high-stakes game of the global digital race, in part because they have more limited resources that the advanced economies.

Emerging markets are able to use technologies to leapfrog the deficiencies of physical infrastructure, achieve greater social cohesion and build the green production assets that will boost their international competitiveness

The development of the Internet in early 1990s was a game-changing event. Initially the system worked to ensure global information flows, but soon the global Web became an increasingly important vehicle for commerce, allowing businesses to save on expensive brick-and-mortar retail space and optimize their delivery logistics. Finally, the surge in data transmission speed fostered the introduction of the concept of "cloud computing," which defies the importance of physical location for processing and data storage machines. Today it is feasible to get access to almost infinite computing and storing power from virtually any

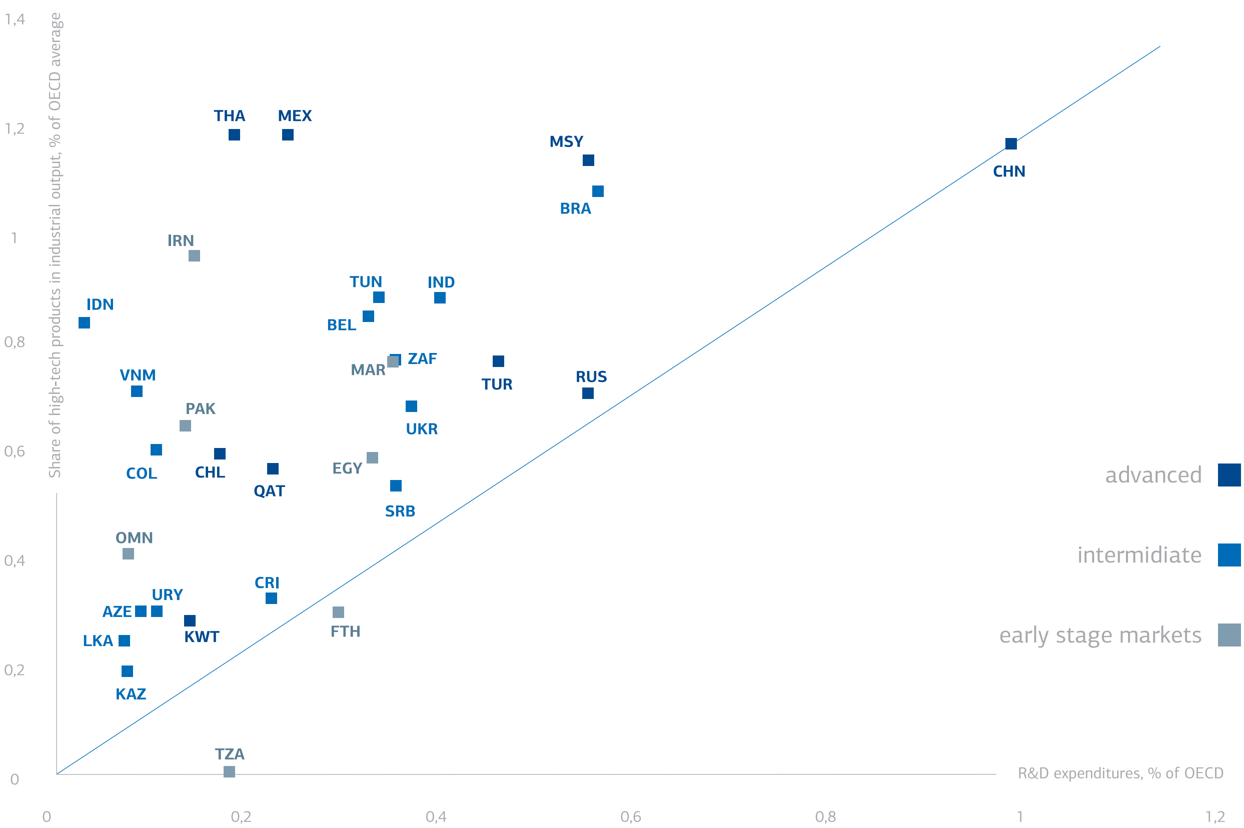
place in the world.
This opened up the era of "big data" – the ability to analyze huge amount of unstructured information in ways that are increasingly close to artificial intelligence. Other globally important trends are mobility and social; these have created complex patterns of interactions between distant people, sometimes total strangers, to solve both personal and business tasks.

The emerging markets hold almost 30% of the world's top 500 supercomputers

Even the early stage markets innovate in digital

The group of the advanced stage countries is gradually moving closer to the global innovation frontier. The world's most powerful supercomputer has resided in China since 2012, and overall the emerging markets hold almost 30% of the world's Top 500 machines. Some Russian companies — like ABBYY or Yandex — have achieved prominence in the global market of artificial intelligence solutions. Chinese manufacturers Huawei, ZTE, Lenovo and others like them are claiming an ever-increasing share of the international market of computer and telecommunications hardware. A new important area of development could be ad-

GRAPH. 9: Innovative inputs and outputs, R&D expenditures and the share of high-tech and medium high-tech products in industrial outputs. China is clearly leading the group. Although some of the countries have outputs on a level higher than the OECD average, no country comes close to OECD levels of R&D expenditures. Yet, somewhat counter-intuitively, high-tech output precedes R&D, not follows it: only Tanzania and Ethiopia have research spending outpacing high-tech production



CASE

Internet investments build Africa's biggest company: Naspers

Where would you invest to create the most valuable company on the African continent famous for its mineral riches? Would it be diamonds, oil or rare metals? Naspers from South Africa looked in a completely different direction. A media holding company with a history dating back to the early 1910s, the company was looking for new strategic directions at the end of the 20th century. The Internet was a new development globally and many observers predicted that many years would pass before the less developed parts of the world would benefit from it. Yet Naspers became an early investor not only in its home market, where it launched an Internet provider as early as in 1997, but also abroad. In a bold move, in 2001 it invested approximately $36 million in a second-tier Chinese Internet company — Tencent. This proved to be one of the best deals ever, even by the high standards of the Internet industry. The popularity of Tencent's online messenger and WeChat smartphone app surged in the following years, such that Naspers' share of the company is valued at about $40 billion.

This was not just a one-of-a-kind lucky deal. Naspers was deliberately seeking for investment opportunities in the Internet sector of the emerging markets. The other major deal was struck in Russia with a share in DST Holdings, which controls some of the country's largest Web properties, including the Mail.ru Group (the owner of the No. 1 e-mail platform in Russia), two leading social networks, and important game development companies. Now Naspers is valued at over $66 billion on the Johannesburg stock exchange, it is the No. 6 Internet company in the world, and since May 2015, it has held the title of Africa's most valuable corporation.

vanced industrial robotics, which can bring new levels of productivity to manufacturing plants. Chinese industrial giants became the biggest investors in this class of systems, making 25% of the global purchases of robots (over 55,000 units) in 2015. Thus, there are enough opportunities for business coming from the exploration of the technology frontier in the advanced stage markets, due to the relatively low cost of high-quality talent.

As for the intermediate group, these countries — especially the traditionally computer-savvy India, Brazil and South Africa — face the dual task of maintaining their competitiveness in the use of digital technologies in industrial sectors and, at the same time, striving for the digital inclusion of the population. The potential benefits are huge. For example, India already has the 2nd-largest Internet population in the world, over 460 million users. Yet the nation's Internet penetration rate is still only 35%, compared to 71% in Russia or 52% in China. This means that the coming years will most likely see tens of millions of new customers going online. In fact 2015 was already a year for a major breakthrough: according to some estimates, over 100 million Indians gained access to the Internet within the year, probably the world record in terms of the pace of digitalization[7]. In these markets, international business champions often emerge, relying on solid operational models and leveraging a bold strategic vision tested on the sizeable "home" customer base to achieve international success (see the case of Naspers from South Africa).

The early stage countries still have less computing power, slower and more expensive access to the Internet and less sophisticated software, but they often draw a surprising amount from what they do have. Even the "dormant" group, which is far below in capabilities in all other areas, is making strides in digital. Consider the example of Niger, one of the world's poorest and most infrastructurally challenged countries. While approximately 11% of the population has access to vital systems like electricity or running water, and formal literacy rates remain below 30%, mobile phone usage is at 48% of the population, opening up the possibilities for more extensive digitalization. Even in a typical early stage country like Kenya, a household is more likely to have a mobile phone than any furniture.

Of course, the devices used there are mostly less functional than the state-of-the-art smartphones that became so common in cities like London or New York. Yet they can be used within the innovative business platforms that combine technological and social innovations to explore new market opportunities — like the M-Pesa system of mobile money in Kenya and Tanzania.

Thus, among the early stage markets, digital has become the new basic literacy, especially for the younger generations. Digital accounts turn into the core accounts of families and businesses, allowing them to bypass the inert and ineffective traditional banks. Digital exchanges enable small farmers and artisans to sell at better prices and in bigger quantities, or even enter global export markets. This "leapfrogging" phenomenon, in which people use even somewhat limited digital resources to bypass the deficiencies of the more inert physical systems, creates diverse and unexpectedly lucrative business opportunities all across the early stage group.

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7 Internet Live Stats

VIEWPOINT

Sergey Andreev, CEO of ABBYY, a leading global company in machine translation and image recognition

Competing on the technology frontier is not just for global "majors"

Do you envision the presence of emerging markets on the technology frontier growing or declining in the future?

Many emerging markets could rightfully boast a high level of education, including a wide range of technical specialties and extensive human capital. This translates into strong potential to take a noticeable place in the global technological landscape as well as local emerging markets.

The ABBYY success story is that of an independent company from an emerging market competing in artificial intelligence development with the global majors. Do you think it will be an exception or a rule in the coming years?

Certainly, I do not think that ABBYY's success is an exception. There are very fundamental factors that helped our business to achieve success. I expect a few companies from the emerging markets to capture a large piece of the global market in their field due to technological excellence and scientific research.

CASE

Yandex.Money: Digital financial platform for civil society

Yandex.Money is an interesting case of the transition from relatively basic digital payment offerings to complex products built from a social engineering perspective, which extends financial inclusion into the realm of funding of individual civil initiatives. The proliferation of digital technologies in payments has greatly advanced peer-to-peer money transfers. The traditional ways of sending money from one person to another had two major disadvantages: they were expensive and they usually required a visit to a payment system office first by sender and then by recipient. No wonder that e-wallets, which allowed people to send and receive money by the click of a key on a PC and for lower commissions, quickly became popular in all the places where an Internet connection was available.

This revolution led to many important social effects. One of them was the phenomenon of crowdfunding: collection of money from a large group of individuals for a business or a cause. With the advance of digital crowdfunding, it became feasible to obtain collective financing for small pieces of activity, like a micro-business, an art project, or, most importantly, a "micro-cause" – a private initiative aimed at doing something good for society. Such micro-causes vary from building small communal improvements to running private animal shelters to supporting neighbors in need. It would not be an overstatement to say that such projects have become the backbone of the civil society of the 21st century — especially in the emerging markets, where the genuine civil initiative is a relatively new phenomenon.

Yandex.Money, a leading Russian e-payment solution, provides special "plug and play" service for professional and amateur fundraisers, which allows them to use all possible payment channels — from bank cards to e-wallets — to collect funds. The service includes the software application "Collect Money," which allows seamless integration into the content for Facebook and VKontakte social networks, the most important devices for promotion of crowdsourcing projects. The service is also integrated with a sister project, Yandex.Music, which allows fans to send some money directly to their favorite musician or group.

Yandex.Money is one of the most established e-wallets on the Russian market, with over 20 million accounts. In 2015 the company had gross commission income of almost 3 billion rubles (ca. $50 million). According to research by TNS Group, the company leads in Russia in terms of market penetration, with 44% of the adult Russian population making at least one payment a year through Yandex.Money[9].

9 The Popularity of Electronic Money in Russia. TNS, 2015

Overall, the scale of market opportunity in digital technology is huge in all three groups. They invest approximately 2-5% of their GDP in this area, which amounts to a graph of almost $1 trillion per year. China alone accounts for about half of this sum. Among other things, it is already the world's biggest market for industrial robotics with some 55,000 units installed in 2015, about 25% of the global graph.

History: Not all emerging markets were late adopters of digital technology

Some of today's emerging markets have a deeper digital history than one may realize. Russia was among the pioneers of computer design, with an original machine put into operation in 1952 – making it the first electronic computer in continental Europe. It was Russia that helped to launch the first machines in China, and it also contributed to the early steps of Indian computerization in the late 1950s. Countries like India, South Africa and Brazil received their first electronic machines in the late 1950s through imports from the U.S. Or the UK. They later went on to establish production facilities of international companies such as IBM, and then to develop national capabilities in hardware and software production[8]. Brazil was more successful in the former area, with recognized players like COBRA, Prologica or Microdigital, while India created a world-class industry of computer programming with companies like Infosys and Satyam, which launched in the 1980s from scratch and grew to international sales of tens of billions of dollars. Countries like Malaysia, Turkey, Iran, Mexico, Argentina and Egypt also have respectable histories of national computing. ■

8 South Africa's First Computers. Mybroadband, 2015. História dos Computadores no Brasil. MUSEO du Computador, Brazil. History of Computing in India (1955-2000). IEEE Computer Society, 2012.

06

Sustainable development

Not only economic development matters

Though the concepts of emerging markets and sustainability took off at about the same time – in the early 1990s, for quite some time they seemed to exist in parallel worlds. While the advanced countries made quick strides in making their economies "green," the emerging world was leaning on economic and social development within a 'brown' growth model, paying relatively little attention to the consequences of super-high growth rates. Yet, with time the imbalances created by such growth became too pressing, putting a strong check on future development.

Thus, the idea of sustainability is increasingly high on the agenda of the emerging markets, though at times it is promoted more by international organizations and governments than by society or local business. According to The Nielsen Company, consumers in emerging markets already demonstrate more responsible consumer behavior than in developed markets[10]. At the same time, regulation is not always there, which does not make it easier to bring sustainable business models to the emerging world. There are many different views on what makes growth sustainable, what the term stands for and how it can be achieved. Historically, the concept started to take shape after the Limits of Growth report (Club of Rome, 1972) and penetrated into global common language after the world's first Earth Summit in Rio de Janeiro in 1992. In that 20-year

While the advanced countries made quick strides in making their economies "green," the emerging world was leaning on development within a 'brown' growth model, paying relatively little attention to the consequences of super-high growth rates

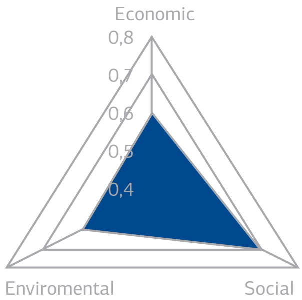
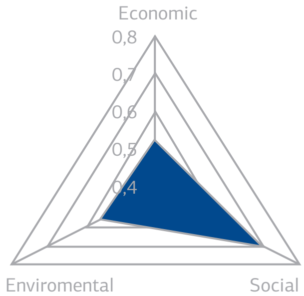
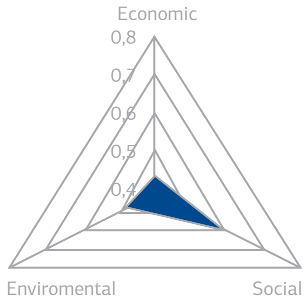
10 Doing Well by Doing Good. Nielsen, 2014

Sustainable development is a dynamic process that ensures socially-inclusive growth in ways which simultaneously protect and enhance the earth's life support systems

period, an important evolution of meaning happened: the initial focus on the scarcity of resources and environmental pollution was enhanced by the social inclusivity dimension. Today, SKOLKOVO IEMS defines sustainable development as "a dynamic process that ensures socially-inclusive growth in ways which simultaneously protect and enhance the earth's life support systems."

In the Global Sustainability Index introduced by SKOLKOVO IEMS in a special report,[11] the emerging markets are mostly concentrated in the middle of the spectrum. The top emerging markets performer — Uruguay — ranked No. 23 in the world (out of 142 countries); in contrast, Angola is situated on the edge of the bottom decile of the list. However the average scores blur important qualitative differences. These differences become visible if a separate analysis is made along the three dimensions of sustainability: environmental, social and economic.

GRAPH. 10: Summary of analysis across the three dimensions of sustainability by the three groups of emerging markets

	Advanced	Intermediary stage	Early stage
			
Average IEMS sustainability score	0.65 (Ec.0.6/ S.0.75/ En.0.59)	0.60 (E.0.51/S.0.74/En.0.56)	0.51 (Ec.0.44/S.0.59/En.0.48)
Footprint industrial	From high to medium high due to modernization	**From medium to high**	**From low to medium**
Footprint individual	**From high to very high**	From low to medium	Low
Major goal	Reduce environmental footprint and ensure further economic growth	Ensure intensive economic and industrial development following green economy models	Address basic needs and avoid environmental trap in future
Strategic focus	**SUSTAINABILITY AWARENESS**	**SUSTAINABILITY INNOVATIONS**	**SUSTAINABILITY POLICIES**
Type of action	Sustainability awareness from zero age, social efforts, business involvement	Sustainability innovations for industrialization, e.g. precision farming	Developing and implementing advanced sustainability policies and regulation

11 Sustainable Russia. SKOLKOVO Institute for Emerging Market Studies, 2016

Closing the sustainability gap

The advanced stage group has achieved significant economic progress and much of it was reinvested into the strengthening of the social fabric. Countries like Russia and China have the heritage of highly inclusive societies with developed educational institutions and basic healthcare systems. Thus their social scores are close to the levels of the leaders of the ranking. Yet, there is substantial weakness on the ecological dimension, as the accelerated growth of the previous periods often came at the expense of investment into even basic environmental protection (coal-based electricity generation in China is an example). Now the industries in the advanced stage emerging markets have become more environmentally conscious, investing into the modernization of productive assets, often due to stricter governmental actions.

However, a new challenge emerges from the sum of the individual footprints of the growing consumer class. Chinese or Russian consumers increasingly aspire to the lifestyles of the Western countries, with their high energy consumption and extensive usage of personal transportation vehicles. Creating the behavioral models that would provide a quality of life on the level of the EU or U.S., yet imply a much smaller individual environmental footprint, is the true challenge for advanced stage emerging markets. In general, any sustainability strategy should focus on raising social awareness of both target groups – producers and consumers. Various stakeholders – think tanks, media companies or opinion leaders — can be engaged in realizing this strategy as change agents.

The countries on the intermediate stage are probably exposed to the most critical sustainability problems as they face a challenging legacy on all three dimensions. On the social side, inclusivity is still an issue, even among the leaders of the group — Brazil, South Africa and India. They still have the need to address explicitly the possibilities of indigenous tribes, castes, religious minorities, women, etc. While the ecology scores of the intermediate group are on par at the moment with those of advanced stage emerging countries, significant investment is necessary to maintain and improve it, as the group is still in the stage of extensive industrialization.

At the same time, the countries are considerably restricted in their economic capabilities to address the issues. Thus society, business and governments face a very broad sustainability agenda, which spans the spectrum from improving basic health, education, and even sanitation to maintaining high GDP growth in a "green" way. Solving the task will require a lot of innovation around sustainability issues, with the adept usage of modern digital technologies, especially in terms of their mobile and social capabilities.

The countries that are classified as early stage generally have lower scores on all three dimensions, with the social issues often being the most pressing ones. However, due to their low current industrialization level, these emerging countries have a unique chance of learning from the historical mistakes of more mature peers to avoid the practices of the unsustainable, "brown growth" trajectory historically followed by advanced economies.

The main challenge of early stage countries lies in the development of an all-encompassing and balanced sustainability strat-

The cooperation between and among emerging markets has become increasingly important. Neighboring countries are inevitably in the same boat in terms of ecological issues; at the same time, the impact of social inclusion can go far beyond the national borders

CASE

Grameen Danone Foods: a social business initiative with financial returns for shareholders

Founded in 2006, Grameen Danone Foods Ltd. (GDFL) is a joint social business initiative of Danone and Grameen Bank focused on the social mission of fighting malnutrition in Bangladesh. The sustainability is embedded throughout the entire project's business model, as benefits exist along the whole value chain. The core product offered to consumers is of a sustainable nature and affordable price. The company produces 'Shokti Doi' ('Energy Plus' in Bengali) yogurt with high nutritional value addressing dietary deficiencies of the local population and sells it for 6 euro cents. Solar energy is used for some manufacturing processes and the product is supplied in biodegradable packaging. In addition, the initiative positions itself as a social business, as it has been designed to contribute to local development and provide employment. The company employs female vendors who sell the yogurt door-to-door, thus earning commission fees on each sale. In total, the project has created approximately 1,600 jobs within a 30 km radius around the production site, supported about 500 farms[12] and ensured positive dietary changes and social impact.

The partnership is structured as a 50/50 joint venture, where both parties contribute complementary inputs towards the fulfillment of one shared goal. Being an active grassroots actor, Grameen Bank has granted access to its wide network of branches throughout the country, enabling the product to be distributed to Bangladesh's rural communities. Danone has brought its technological know-how in nutrition and production. By 2011 Danone and Grameen Bank had invested the total of $2.3 million, excluding additional R&D expenses and direct subsidies[13]. In addition, GDFL benefits from special terms offered by external partners, such as international suppliers of nutrients (e.g. BASF SE) and packaging materials (CAPEX), as well as international organizations -- the Global Alliance for Improved Nutrition (GAIN) and the country office of CARE International. In turn, the project enables a number of local milk suppliers to expand their operations and have more stable sales.

GDFL was initially designed as a 'no loss, no dividend' business model based on the promise of a nominal 1% return, but in 2009, the company waived any financial returns in the form of interest, dividends or capital gains for its shareholders. All abnormal profits are to be reinvested, with no dividend being paid to the partner businesses. Even though the initiative has not always been financially viable in the past, it can be considered as an interesting business model with strong potential of generating future financial benefits. The social investment has had a positive impact on the local communities in terms of health, nutrition, employment and the empowerment of women; in addition, it has created strong brand loyalty that could be rewarded once standards of living gradually increase.

12 Grameen Danone Foods LTD. The yogurt that makes you stronger. Innovative Social Investor, 2011

13 See details in Grameen Danone Foods Ltd.: Fortified Yogurt for the Poor

egy, as these countries have to progress along all three dimensions of sustainability simultaneously. The positive news is that international businesses will most likely transfer their corporate standards to the local setting, and those standards are likely to be higher than the national regulatory requirements in effect. Based on this knowledge and competence transfer, the early stage countries should focus their efforts on designing and enforcing national policies and regulation to fulfill the objectives of biodiversity conservation, transforming the archaic practices of agriculture and mineral extraction (e.g. slash-and-burn techniques), alleviation of poverty, elimination of hunger, while at the same time, achieving rapid progress in economic development and the quality of life.

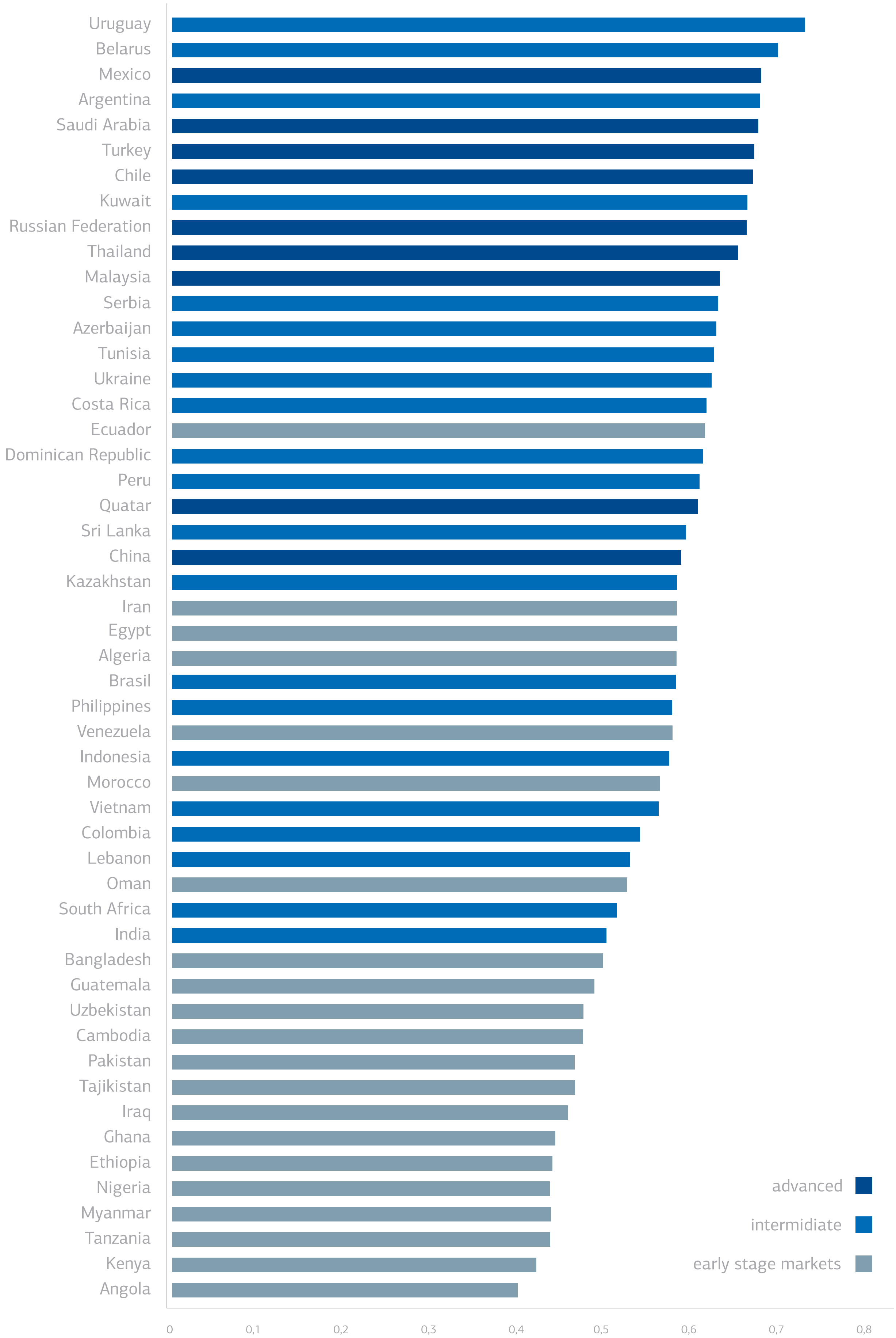
Who is in charge of sustainable development?

In the past, many of the actions needed to achieve sustainability were associated solely with the activity of governments or international organizations. Yet, two important new trends have emerged, both of which largely resemble the ones with infrastructural projects.

On the one hand, the cooperation between and among emerging markets has become increasingly important. Neighboring countries like Russia and China are inevitably in the same boat in terms of ecological issues; at the same time, the impact of social inclusion (or exclusion) can go far beyond the national borders as demonstrated by Europe's migrant crisis, which affects not only the EU, but also many of the emerging markets in the Middle East, the Maghreb (the region of western North Africa, west of Egypt), and Sub-Saharan Africa. We see the increasing efforts of countries like Russia, China, Turkey, Saudi Arabia, and the UAE to help their less affluent peers in the emerging world to address their pressing sustainability issues.

On the other hand, private companies, both multinational and local, are becoming increasingly important actors in the universe

GRAPH. 11: The IEMS Sustainability Index for the emerging markets. On this scale (0=low, 1=high), the world's top performing country (Norway) has a score of 0.95, while the worst performer the Democratic Republic of Congo, has a score of 0.26



Private companies are becoming increasingly important actors in the universe of sustainable development initiatives

of sustainable development initiatives. The examples of effective major private public partnerships range from the Gavi Vaccine Initiative to the Grow Africa program. They blend the funds and efforts of governments, NGOs and leading corporations and often represent significant business opportunities for those who are capable of developing a long-term strategic vision. ■

CASE

Jibu: An innovative approach to the world's most ancient problem[14]

Getting fresh and clean water is one of the world's most ancient problems. It has now become an increasingly important issue in most of the emerging markets due to the trends of population growth, climate change, increasing urbanization and more extensive agriculture. There are many governmental and charity efforts that target the issue all across the globe, yet Jibu is a relatively rare case of a successful for-profit business in the area. It was founded in 2012 by Randy and Galen Welsch, a father and a son team that developed a visionary business model that could make a social impact.

The model is franchising. Jibu (headquartered in Kampala, Uganda) is providing entrepreneurs in East African countries with equipment for filtration and bottling of water, together with retail equipment and operational know-how. The technology enables entrepreneurs to sell a 20 liter bottle of pure water for less than $1, which is a very competitive price that brings the product into the range of affordability for the mass market. The ensuing volume of operations allows both the franchisees and the franchiser to operate on a solid foundation of profitability.

There is a new angle to the traditional model of franchising when applied in Africa. Most potential franchisees don't have the capital to start the business — and bank loans are not easily available. So Jibu takes on the role of a bank in addition to the classic franchiser functions, providing initial capital to start the operations. The resulting blend of finance, technology and marketing support is really unique in the part of the world where the company operates. This powerful combination works simultaneously across all three aspects of sustainability — environmental, social and economic — to achieve Jibu's bold vision: "We unleash the latent economic potential of co-invested, emerging market entrepreneurs to raise up a network of self-propagating and scalable drinking water businesses designed to serve the greatest number of people quickly."[15]

14 See details in Citizen Today. EY, December 2015

15 Jibu: Franchising Water Treatment: Jibu is Building a Global Network of Safe-Water Franchises. Galen Welch, Changemakers

VIEWPOINT

JV Raman, CEO of Unilever Russia, Ukraine and Belarus

Transformational change as a Unilever concept

What is the role of multinational corporations in promoting the sustainability agenda in emerging markets? How can they make a difference?

For many multinational corporations, emerging markets constitute a big part of their sales portfolio. This is also the case for Unilever, as emerging markets now account for approximately 58% of the company's business. Unilever has always believed in inclusive growth. Hence, in addition to the business aspect, we have a big interest in the prosperity and welfare of these key markets. For example, Unilever has a long-lasting presence in some emerging countries for many decades, such as Malaysia, where the company opened the first Lever Brothers soap and margarine manufacturing plant in 1947.

Unilever has traditionally made social investments in the regions where it operated, as the company always believed that, if we are to be successful, the communities around us need to be prosperous. Hence, Unilever always tried to play a key role in engaging with the community in an appropriate way through our brands. From this long experience, it was clear that, to be successful, we need 'transformational change,' which is a change in the whole ecosystem, not simply incremental improvements.

The company focuses on three areas where it has the scale, influence and resources to make a big difference. These areas are women's empowerment, sustainable agriculture and health and hygiene (through hand washing, safe drinking water and sanitation). We do realize that all emerging markets are faced with different material threats and challenges. Hence, we attempt to localize our global agenda; our framework of the Unilever Sustainable Living Plan helps enormously to do this.

Is sustainable development a liability or an opportunity for the private sector?

There is absolutely no doubt that sustainable development is a huge opportunity for everyone. It is non-negotiable and the only viable way forward. We have enough evidence that it is not only the right thing to do, but also something that makes perfect business sense! When more companies start believing in this, it is only going to make the total system (in terms of cost and acceptance) even better.

At Unilever, sustainability is integrated in the core of the business — in our brands, in our supply chain, as well as in other parts of business operations. The success of the zero-waste-to-landfill initiative in Russia is a good example to demonstrate how a sustainability initiative is also a wonderful business opportunity to be able to sell the industrial waste. There are similar other examples with our brand initiatives.

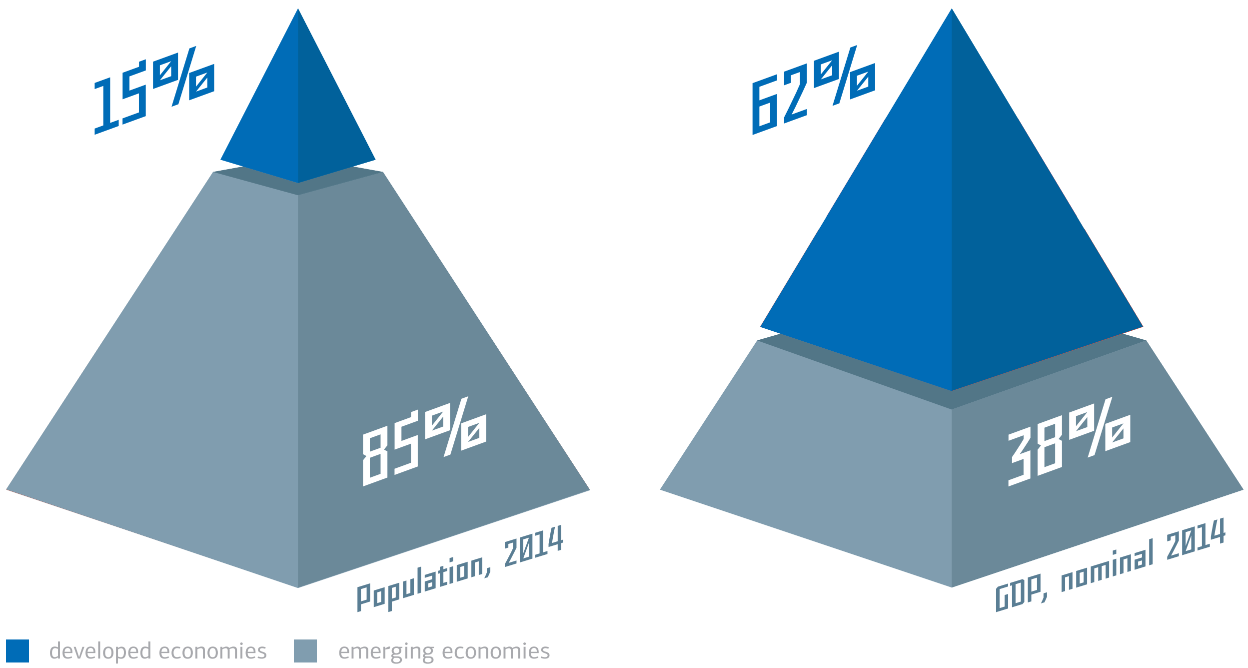
07

Talent development

Demographic liability or demographic advantage?

Over the next decades, global talent will come from emerging markets. 84% of the world's population already lives there, including 90% of the world's people under 14 years old, while this part of the world contributes only 38% to the world's nominal GDP. This demographic dividend is by far the greatest resource that they have in order to tackle the challenge of growth and create tangible benefits for economic and societal development.

GRAPH. 12: Global talent will come from emerging markets



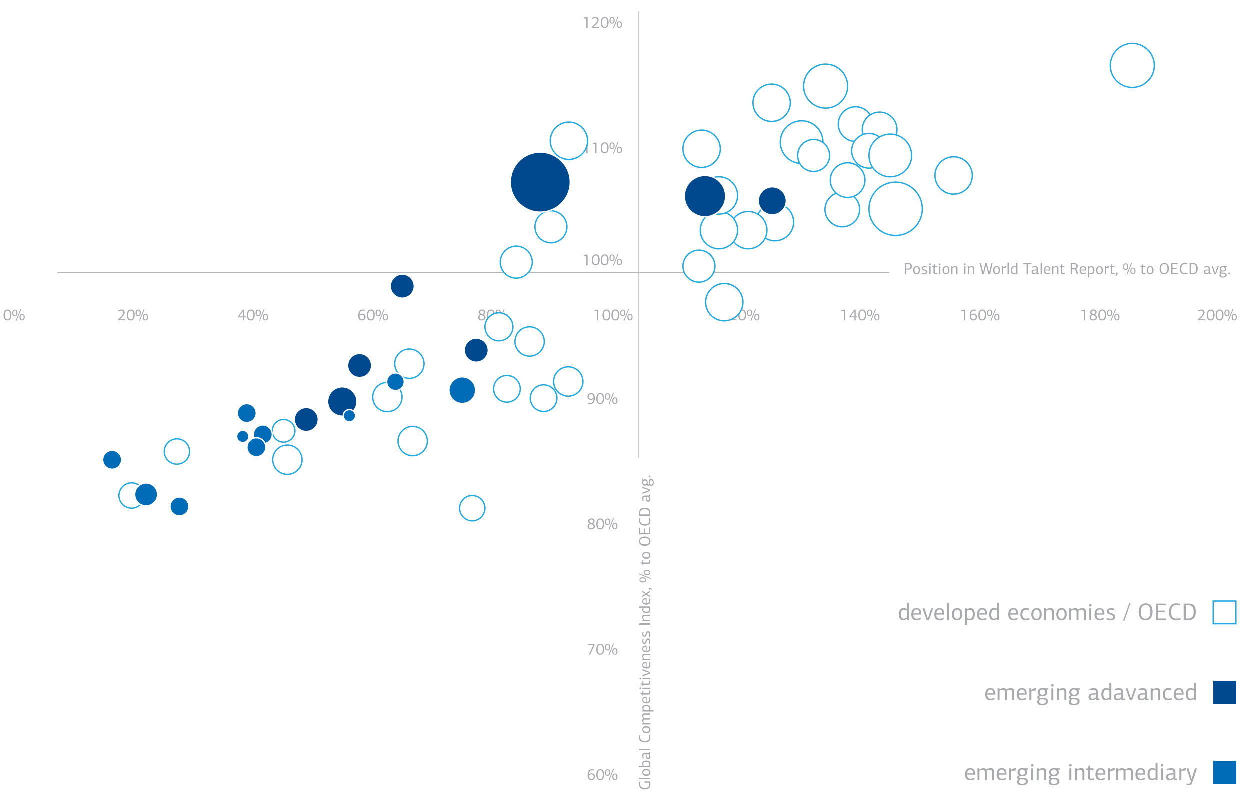
Having talent means being competitive: There is a direct correlation between talent, competitiveness and GDP per capita for advanced and leading emerging economies. However, having demographic capital does not mean having talent. Talent is not about massive population, it is about education and skills. Developing this talent requires building the corresponding social institutions. Not many emerging markets are effective in making this a reality so far; as a result, they are losing in the competition for talent to more advanced economies. How can they improve the situation and take advantage of their vibrant youth without the risk of losing it in the globally connected world built on knowledge? First of all, emerging markets face the challenge of their increasing population, which they have to develop and educate. More than 700 million people in emerging markets are still illiterate, nearly ⅔ of them women and ⅙ of them young people. The gap in quality of educational institutions between emerging and advanced economies is only increasing, the infrastructure to develop work skills is not in place, and gender equality is still an issue. Absorbing demographic capital and transforming it into talent that is ready to respond to the challenges of tomorrow is a crucial task for emerging markets today. If they fail, they risk having a demographic liability, not a demographic advantage.

84% of the world's population lives in emerging markets, including 90% of the world's people under 14 years old

Securing talent in emerging markets

The level of potential investment in the development of human capital in emerging markets is enormous. The simple increase of educational expenditures by 1% of GDP in emerging markets would require up to $300 billion globally, which is more than two times higher than

GRAPH. 13: Competitiveness, Talent Ranking and GDP per capita for selected countries



the total U.S. budget for education in 2016. Emerging economies might not receive these investments, so they have to be very efficient. Thanks to wide development of open education technologies, today's skill and education gap can be closed more efficiently than just a decade ago.

TABLE 3: Talent development priorities for emerging markets

	Talent Development Gaps	Talent Development Objectives
Advanced Stage	• Gap in higher education development, low rankings of universities compared with international peers • Insufficient employment in knowledge-intensive sectors • Lack of international experience of managers and employees • Gaps in skills required for the future	• Bring higher educational institutions (including universities) to the next level, competitive with the global leaders • 'Import' competencies and skills from advanced markets • Develop innovation ecosystem, create demand for innovation and high-skilled jobs
Intermediary Stage	• Tertiary school enrollment is not enough to support development of knowledge-intensive industries • Gaps in engineering and managerial skills • Social and gender equality	• Develop local technical, engineering, research, managerial personnel, including 'import' of knowledge and competences from both advanced economies and from emerging leaders • Ensure inclusion of the underprivileged groups in talent development (ethnic minorities, women) • Achieve quality of secondary education • Expand mass tertiary education into the middle class
Early Stage	• Literacy rate below world's average, specifically within the female population • Insufficient primary school enrollment: lack of teachers and facilities • Lack of skilled workers for industrial jobs	• Achieve 100% literacy, including digital literacy • Develop competitive working class • Create national elites capable of integration into the global markets and exchanges

Talent retention in emerging markets is an issue, and the problem of a "brain drain" severely damages their ability to sustain long-term growth. In 2015, more than 30 million people left emerging markets, searching not only for asylum and personal security, but also for economic, social and institutional opportunities that they could not find in their countries of origin. In today's world, human capital has very little restrictions on its movement, and even has an opportunity to exit the country virtually through outsourcing. As the examples of Sergey Brin and Elon Musk demonstrate, that talent is always looking for an environment where it has maximum potential for self-realization and success. Creation of such environment is one of the key objectives for emerging markets that are interested in retaining their talent.

In 2014, EY surveyed professionals in BRICS countries[16] and identified five strategies for talent attraction and retention at the corporate level. Extrapolating them to the country level creates five strategies that emerging markets can apply.

TABLE 4: Talent retention strategies for emerging markets

Corporate level (EY BRICS Survey 2014)	Country level (SKOLKOVO 2016)
Accommodate different career goals across countries and professions.	Create environment for self-realization and fulfilling personal and career aspirations through creation of demand for high-skilled jobs
Build a differentiated employer brand by country and profession, internally and externally.	Build positive image of a country through improving living standards and social conditions
Develop the behavioral styles of co-workers and leaders to enhance engagement.	Engage leaders and talent with clear vision for development and change, including national diasporas currently living in other countries
Craft work environment to match country preferences.	Ensure positive dynamics with personal security, human and property rights, changing perceptions of corruption, governance efficiency and development of institution.
Tailor compensation and benefits to individual and cultural differences.	Ensure fair distribution of national income and equality

The increase of educational expenditures by 1% of GDP in emerging markets would require up to $300 billion of annual spending globally

While educated and innovation-focused members of a population tend to leave emerging markets, at the same time, those markets face the challenge of wide-scale low-skilled immigration. According to the Migration Policy Institute, the global population of migrants in 2013 was 232 million people, and 13 out of the top 25 countries with the largest migrant populations belonged to emerging markets, with Russia, Saudi Arabia and UAE on top of this list. Millions of people seeking jobs and higher living standards have to be assimilated and integrated, and emerging markets still have to develop appropriate social institutions for this.

16 Differentiating for success. Securing top talent in the BRICS. EY, SKOLKOVO, 2014

Kazakhstan: Developing talent to overcome the natural resource trap

Thanks to an abundance of natural resources, Kazakhstan's GDP posted a CAGR of 5.4% in the period 1991-2014, making it one of the fastest growing post-Soviet countries.

However, since the very early years of independence, the country has also placed a bet on the development of human capital as the core driver for future growth.

Already having a well-educated and skilled population (100% adult literacy rate, and 50% of labor force with a tertiary education), the country needed a cohort of leaders with a new set of skills. In 1993, the state-funded national scholarship program 'Bolashak' was launched, aimed at sending bright students to the best international universities. Since then, over 11,000 graduates have passed through it and come back to the country. Since 2012, the program has supported only Ph.D. students, since currently, Kazakhstan has shifted its focus to developing its own scientific and research potential.

Starting from 2005, five-year state programs for education development have been developed and renewed. Kazakhstan joined the Bologna educational system, opened Nazarbayev University in Astana in partnership with leading global institutions, and also introduced trilingual education in primary schools (Kazakh, Russian and English). The next tasks on the agenda are ensuring equal access to education, introduction of an educational quality management system, stimulating universities to participate in global rankings, establishment of supervisory boards in universities and opening of 'intellectual' schools for talented kids with a special focus on physics, math and chemistry.

In 2009, Kazakhstan broke into the World Talent Report, making it to the 37th position globally (out of 57), higher than all the BRICS countries and most other emerging markets. Efforts in improving the functional literacy of schoolchildren increased Kazakhstan's standing by 7 places in math and 12 positions in global PISA tests from 2009 to 2012. The country is not going to stop with these achievements; it is now implementing a plan for expanding the school curriculum with art classes, information and communication technologies, science classes and global trends. The objective is to nurture initiative, creative thinking, problem solving and the desire for life-long learning by students. Starting from 2017, mandatory state accreditation for universities will be completely abolished and substituted with optional international accreditation. At the same time, universities that will not obtain this international accreditation will not be eligible for state-funded educational programs.

At the same time, Kazakhstan is still experiencing the problem of a brain drain: thousands of highly-skilled specialists leave the country every year. Educational spending remains at a level of 3-4%, which is below most of the developed countries. So this landlocked country in the middle of Eurasia still has to find its way to a new economic model and maximum utilization of its rich human capital.

It is all about leadership

No change or growth can be achieved without proper leadership. Emerging markets are famous for their political leaders: South Africa's Nelson Mandela, India's Mahatma Gandhi, China's Deng Xiaoping, Myanmar's Aus San Suu Kyi, just to name a few. However, the world still does not see many examples of business and entrepreneurial leaders who came from emerging economies. We believe that the world will change when we have more people like Jack Ma, who dare to make a difference within their countries first and then replicate that success at the global scale. Developing such leaders, retaining them through creation of an environment for growth and then helping them eliminate institutional barriers, are prerequisites for economic growth of emerging markets in the 21st century. ■

VIEWPOINT

Andrei Sharonov, Dean of the Moscow School of Management SKOLKOVO

Developing a new generation of leaders for Russia

What challenges do emerging markets face with regard to talent development? Are they global or local ones?

First of all, I would like to stress the fact that the term “global challenge,” which has become a common buzzword nowadays, is not really applicable to emerging markets. Despite the popular notion that the world is becoming flatter and more interconnected, we see an ever-growing fragmentation. Solutions that are successful in one region of the world more and more often tend to fail in another. Different parts of the planet do not reflect a unified whole, and if there are any similarities between them, they do not contribute to a sense of global community. Challenges carry both threats and opportunities, while successes or failures depend on the response of an actor – be it a human being, or an organization driven by a human being. The more ambitious the goal, the greater is the challenge and the higher the demand for integrity, strategy, resources and leadership. Thus, the challenges for talent development greatly depend on the context where leaders operate, and each emerging market has its own set of challenges to respond.

So you are saying that requirements for business leaders in emerging markets differ from ones in developed economies?

Yes, we believe that no matter in which part of the world they are, all the emerging markets have more similarities than differences. The major one is that, along with rapid economic growth, emerging countries have to fight for equity and the environment, aiming for long-term sustainable development and growth that benefits all members of the population. Unlike ‘old’ and developed economies, emerging markets often have a lack of sufficient institutions of civil society that would ensure this balanced development. So the whole responsibility goes to business and we believe that the business leaders in emerging markets should bear a specific code of values, qualifications and behaviors that would allow them to maintain growth along with broader responsibility for social development and environmental consciousness. This is what we call the emerging markets mindset.

Are there any Russia-specific challenges in talent development that you observe as the Dean of the largest privately owned school in Russia?

In addition to the well-known challenge of fostering entrepreneurship in Russia, which SKOLKOVO has been focusing on for 10 years, I believe that one of the major issues for us today is the development of the next generation of leaders. The point is that most successful Russian entrepreneurs founded their businesses in the 1990s, and now they face the challenge of handing it over to the new generation. The massive generation of managers, who are in their thirties today, learned to lead in a very different business environment: the steady 15-year growth since the 2000s cannot be compared with the severe transformational crisis of the 1990s. Because of that, the newcomers have a very special set of ‘growth’ competencies and skills, which might not help them lead change in a volatile, uncertain, complex and ambiguous world. Closing this gap is one of our major objectives, and we, as a school, have to be relevant to this challenge if we hope to remain the leading business education institution in Russia.

Teach for India: Private initiative to fight a national issue

In the first quarter of 2016, India became the largest and fastest growing market in the world. Within five years, it might overcome China as the most populated country. One-fifth of all people younger than 14 years old already live there, making India a global supplier of talent for the next decade.

However, the ability of the country to ensure high-quality mass education is put into question by statistics that show India may not be doing enough: the adult literacy rate is only 74% (and only 64% for women), 4% of Indian children never go to school, 58% never complete primary school, 90% do not complete secondary school, and less than 10% go to college.

One of the reasons is lack of teachers in schools: the average pupil to teacher ratio in India was 35:1 in 2011 and keeps growing, while national expenses on education were rarely higher than 4% of GDP since 1950. Moreover, 22% of the population lives in poverty, and the caste system also plays its role, leading to higher dropout rates and low enrollment rates.

In order to fight the challenge, the Teach for India (TFI) initiative was launched in 2009. The organization recruits talented graduates from the leading Indian universities and place them as full-time teachers in low-income schools for two years. Started with 78 fellows, Teach for India now employs more than 900 fellows and impacts more than 31,000 students in 8 cities and more than 200 schools annually.

In 2013 Teach for India received more than 13,000 applications, and only 7% were accepted. After a two-year term, the brightest fellows have a chance to apply for a job with many corporate partners of the initiative, or to continue their education in leading national or international universities.

The first evaluations of the impact of TFI are encouraging: schoolchildren of 2nd to 8th grade who attended classes taught by TFI fellows improved their results in math by 60-160% and in English by 30-110%.

TFI recognizes education as one of the core drivers for the country's development. As such, it fulfills a critical role in making education accessible and relevant, while responding to the national challenge of a teachers shortage and the need to shape tomorrow's leaders. If successful, TFI has all the potential to help alleviate poverty, increase religious and cultural tolerance, deconstruct the caste system and decrease the appeal of radical ideologies. In short, its impact for the country spreads far beyond improved grades and academic evaluations.

Conclusions and Implications

The emerging world is the domain of increasing diversity, and, going back to the Big Bang analogy, we expect the degree of this diversity to grow with time. Each of the important markets is likely to pursue its own strategies and agendas in the four domains of development that we have outlined, calling for more sophistication of business planning and decision making, especially when it comes to managing a "portfolio" of markets.

The degree of diversity of emerging markets will grow with time

The advanced emerging markets face the prospect of an imminent slowdown. While it poses significant immediate risks, it also opens important new business opportunities in the spirit of late industrial and post-industrial development. More and more "superpower" infrastructure projects will be implemented in countries like China, Russia, Turkey or the Persian Gulf economies: sea bridges spanning tens of kilometers, high-speed rail, state-of-the-art cargo ports, and communications networks with a speed over 100 MB/second.
In the domain of digital technology, these markets will more and more often compete on the global frontier, both in software and hardware. Governments, corporations and consumers will be turning the growing awareness of the issues of sustainable development into concrete actions, especially targeting the legacy of ecological problems created by the past rates of growth. Finally, these countries are likely to become the possessors of vast pools of the most precious resource of the 21st century economy: talent. The resulting growth of an affluent class and innovation capabilities of companies will be the driving force for post-industrial business opportunities in goods and services.

The intermediate stage emerging economies have to take the baton of rapid growth and run with it. Their ability to do this will largely determine the overall global growth rates of the 2020s. They will be catching up on infrastructure, especially in power, roads and communications, gradually entering the realm of superpower projects. Integrated development of urban areas is likely to be another field of strong infrastructural advancement. Their technological landscapes will embrace a very wide range of approaches, from competing with the de-

Two trends of 'how' development will proceed:

- *the "emerging to emerging" model of cooperation will be a growing force*
- *the redefinition of the roles of private and public, represented largely by business corporations and governments, but also inclusive of personal and communal efforts*

veloped economies in space exploration to expanding the robust and effective "bottom of the pyramid" systems.

In sustainable development, their key focus probably will lie in social issues, aiming at the elimination of poverty, provision of effective mass healthcare and generally striving to build an inclusive society. The talent development potential of the intermediate markets is huge; however, in the 2020s they will probably concentrate first of all on building a skilled and motivated class of industrial workers and technical specialists. These will constitute the powerful middle class aspiring to the Western consumption style, with extensive opportunities for business.

The early stage markets will grow at rates even higher – often close to 10% a year. This will enable some of them to jump significantly in the overall rankings of global economies, increase competitiveness and build the base for further qualitative development. They will make important progress in solving the basic infrastructure deficiencies in roads, power, utilities and communications, though urban development will probably continue to struggle to keep in pace with the urbanization process. They will master the skillful usage of basic digital technologies, bringing them to more and more customers, solving everyday needs and leapfrogging the deficiencies of traditional infrastructure.

We expect the early stage countries to learn from the mistakes of rapid industrial development in the emerging markets in the 1990s and 2000s and work out approaches and regulation for more sustainable development. They will also learn to turn their demographic capital into talent capital, increasing standards of mass secondary education, as well as vocational and professional training. While these markets present more substantial opportunities in the B2B sphere, the B2C markets will be growing at a very high pace from the current low base.

And, finally, we expect enough of the current **"dormant" markets** to wake up and turn into important markets for international companies, requiring the attention of global business leaders.

However, with all the heterogeneity in the "what?" of the development, we see some important similarities in the "how?" of it. We see two major trends in this.

For one, the "emerging to emerging" model of cooperation will be a growing force, which may quite soon go from a predominantly bilateral mode into creation of stable and powerful multilateral institutions built on connections in politics, economics and culture[17]. There is a visible opportunity for a global organization of a new type that will pursue the development interests of the emerging markets through their own cooperative efforts. Within this context, projects like the Silk Road Belt are just the early examples of the new approach, We expect such projects to become the landmark feature of the international economy in the 2020s and 2030s.

The second trend, no less important, is the redefinition of the roles of private and public, represented largely by business corporations and governments, but also inclusive of personal and communal efforts. The domains where the trend is most visible are the infrastructural and sustainable development[18]. Yet in technology and talent we also see ma-

17 Imagine BRICS: Four Scenarios for the Future.BRICS Business Magazine, №4 (8), 2014

18 A Revolution in Sustainability. BRICS Business magazine, №4 (12), 2015

jor paradigmatic shifts. The private sector is successfully entering the traditional areas of government-led expertise like space exploration or public education. At the same time, the public is participating in an increasingly sophisticated way of setting up and developing businesses through initiatives like innovation parks, which involve innovative entrepreneurs and rely on talent development institutions of all sorts.

Finally, you do not need to be in road construction, energy, IT or the education business to tap into the opportunities stemming from the four outlined development domains. As the cases in our report demonstrate, these domains create strong chances for companies in virtually every industry. However, the shifts in how things are done require the review of many traditional approaches. More and more first-class competition will come from the emerging world, as many of its countries are quickly moving to the global frontier of innovation and operations.

This will create increasingly complex global supply chains and investment instruments. For a multinational corporation from the “developed” part of the world, this would mean the need for more knowledge and intuition about what’s going on globally, and probably much more empowerment for the business leaders immediately operating in the new global centers like Sao Paolo, Moscow, Beijing, Mumbai or Johannesburg. ■

More and more first-class competition will come from the emerging world, as many of its countries are quickly moving to the global frontier of innovation and operations

THERE IS ALWAYS AN EMERGING MARKET, REGARDLESS OF WHERE IT IS LOCATED OR HOW IT IS CALLED. THE NAMES MAY CHANGE, AND THE ROLES MAY CHANGE, BUT THE CONCEPT OF EMERGING MARKETS IS HERE TO STAY

Methodology

The methodology for multi-dimensional comparison of the emerging markets was originally developed by SKOLKOVO IEMS in 2010 as a Brave New World Index. Within the present report we were building up on the initial composition of the Index to reflect the complex developments in the emerging world in the first half of 2010s.

The updated version of the Index analyses separately the five dimensions:

- economic performance
- infrastructure development
- technology development
- sustainable development
- talent development

A common measure is introduced across all five dimensions, i. e. the level of performance against the average unweighted level for OECD. This allows to solve the normalization problem — bringing different natural metrics to the common bases — in one move.
The countries were ranked separately in the five dimensions with the rank of 1 representing the best performance in the sample. The total index for each country was calculated as the average of ranks in the five sub-indexes.

Twenty primary metrics we used in the Index, grouped according to dimensions:

- economic performance: GDP per capita (nominal USD), GDP growth CAGR % 2010 — 2014, Global Competitiveness Index, FDI net inflows % f GDP,
- infrastructure development — Logistics Performance Index, electricity availability, internet penetration, domestic credit as % of GDP, Regulatory Quality Index, Ease of Protecting Investors Index
- technology development — R&D spending as % of GDP, hi-technology output as % of GDP, computer exports as % of exports, creative goods exports as % of exports
- sustainable development — IEMS Sustainability Index
- talent development — expenditure on education as % of GDP, tertiary enrollment ratio, World Talent Ranking, knowledge-intensive employment, net migration rate

The latest available data from the World Bank database captured as of March 31, 2016 was used for the calculations, except for the IEMS Sustainability Index.
The authors acknowledge that capturing the complexity of the emerging world through a set of statistical metrics is a highly challenging methodological task. We will be happy to discuss the methodology in detail and receive suggestions from scholars around the world in order to strengthen our framework in the future research.
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The Moscow School of Management SKOLKOVO is one of the leading private business schools in Russia and the CIS, was founded in 2006 by members of the business community. The school's founding partners are 10 Russian and multinational rms and 11 individuals, each a leader of Russian business. The educational o erings of the Moscow School of Management SKOLKOVO include programs for businesses at any stage of development — from startups to major corporations entering international markets. The Moscow School of Management SKOLKOVO also serves as a hub of expertise drawing those who place bets on Russia and work in markets with fast-changing economies.

SKOLKOVO Institute for Emerging Market Studies (IEMS) is a member of a global IEMS network, which is sponsored by EY and includes research institutions in Moscow, Shanghai, Hong Kong and Hyderabad. SKOLKOVO IEMS addresses the fields of strategy and innovation, global markets and institutions, sustainable development, Asian studies and digital technology. The mission of the institute is to promote Russia's multi-dimensional and seamless integration into the world economy. The institute helps the international business community better understand Russia as a market and as a global player, and supports the efforts of Russian businesses to attract investors and enter international markets.

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