

Roland Berger Trend Compendium 2030

Megatrend 6
Global knowledge society



About the Roland Berger Trend Compendium 2030

What is it?

- > The Roland Berger Trend Compendium 2030 is a global trend study compiled by Roland Berger Institute (RBI), the think tank of Roland Berger
- > It describes the most important megatrends that will shape the world between now and 2030
- > The megatrends have a broad impact on the environment of companies, strongly influencing challenges and opportunities of their business

Our approach

- > We first screened relevant trend, scenario and future studies worldwide
- > Then we verified, analyzed and consolidated the results, using them to define the megatrends
- > Next, we broke down the megatrends into subrends, looking at each from a global perspective and the viewpoints of industrialized and developing countries
- > Finally, we identified corporate actions that companies worldwide should consider taking today

Use it!

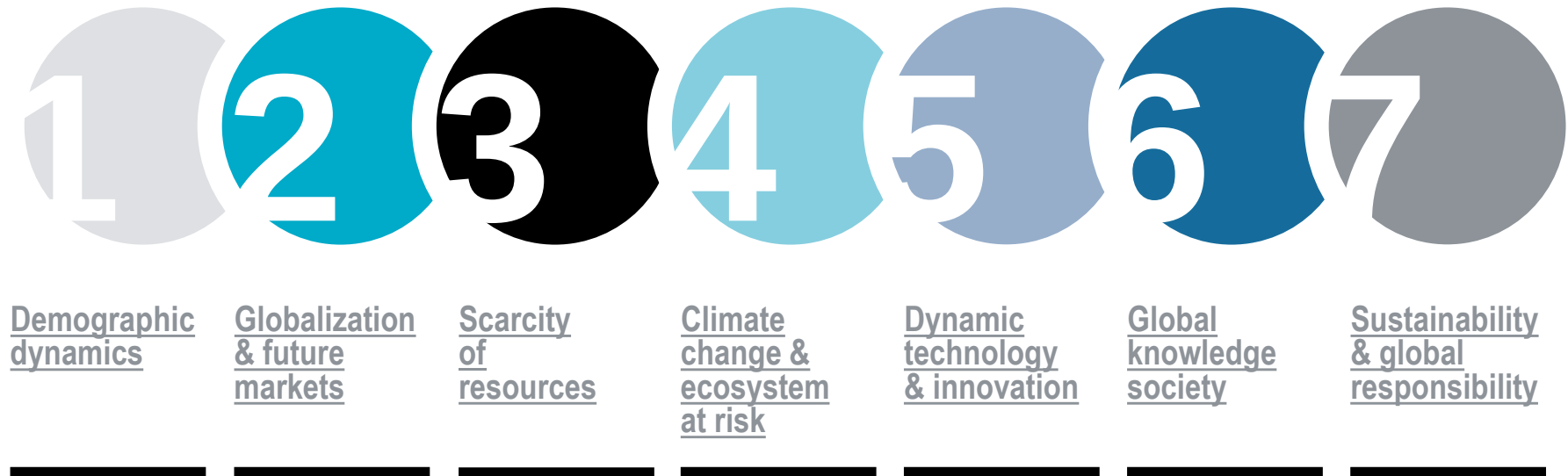
- > For your own presentations, for discussions with clients and business partners or as springboards for acquisition approaches
- > Following the description of the subrends and the recommended corporate actions, you will find the most important sources to help you keep track of the changes in the world, as well as dig deeper into the trends presented

The Roland Berger Trend Compendium 2030 focuses on stable long term developments

- > The Roland Berger Trend Compendium covers megatrends – long-term developments with major impact (usually global) on companies, economies and the natural world
 - > The forecasts are based on estimates reflecting the "normal" case, i.e. a stable development of the global economy with no unexpected events ("black swans"). Major political or financial crises, large-scale natural disasters or similar far-reaching events are not integral to our assumptions
 - > To incorporate today's volatile, uncertain, complex and ambiguous (VUCA) environment into strategic planning we recommend to combine the megatrends of the Roland Berger Trend Compendium with the Roland Berger scenario planning approach
-

Methodology

It covers seven megatrends that shape the future development of our world



Megatrends

The cross-linking of knowledge will increase, the war for talent will intensify and gender gaps will narrow

Subtrends of megatrend "Global knowledge society"



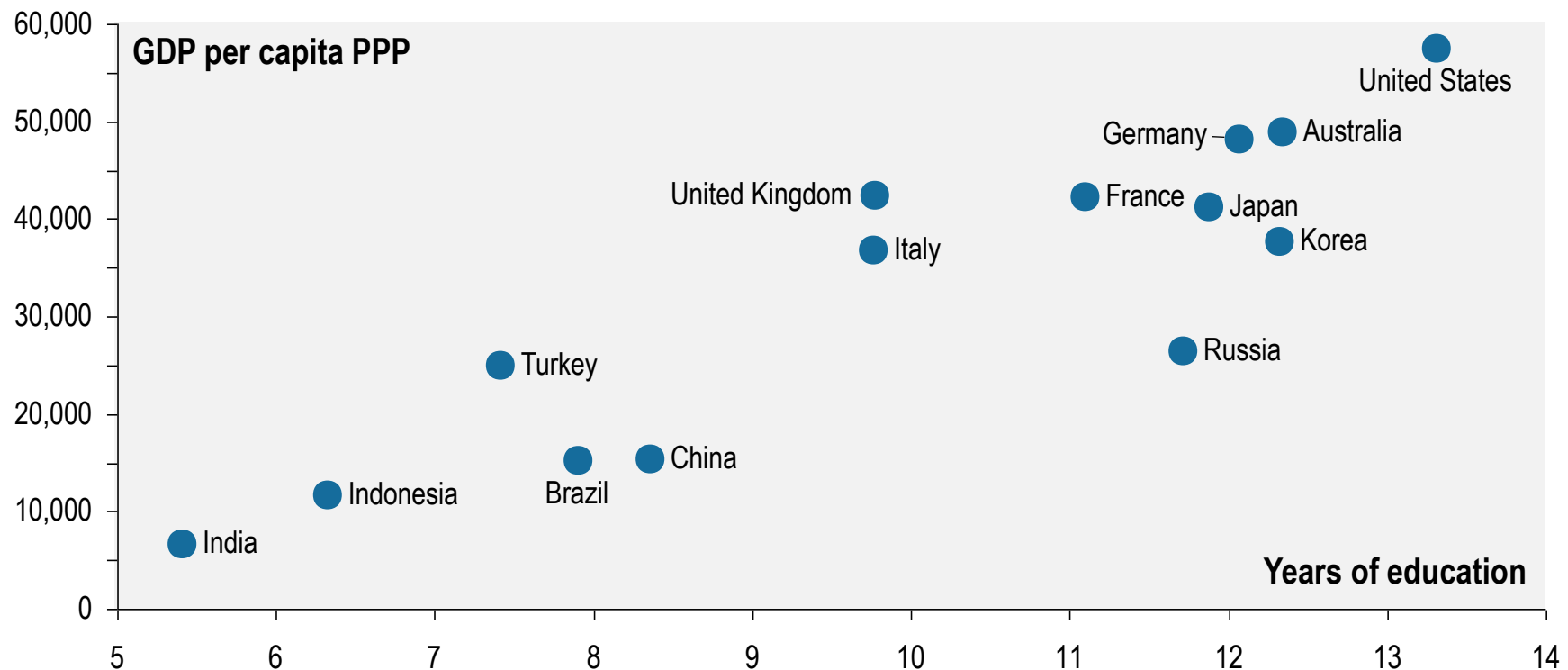
Know-how base – Increasing knowledge diffusion

War for talent – Rising skills shortage as a key challenge

Gender gap – Bridging the distance

The length of education – the prerequisite of a strong know-how base – clearly pays off in terms of financial prosperity ...

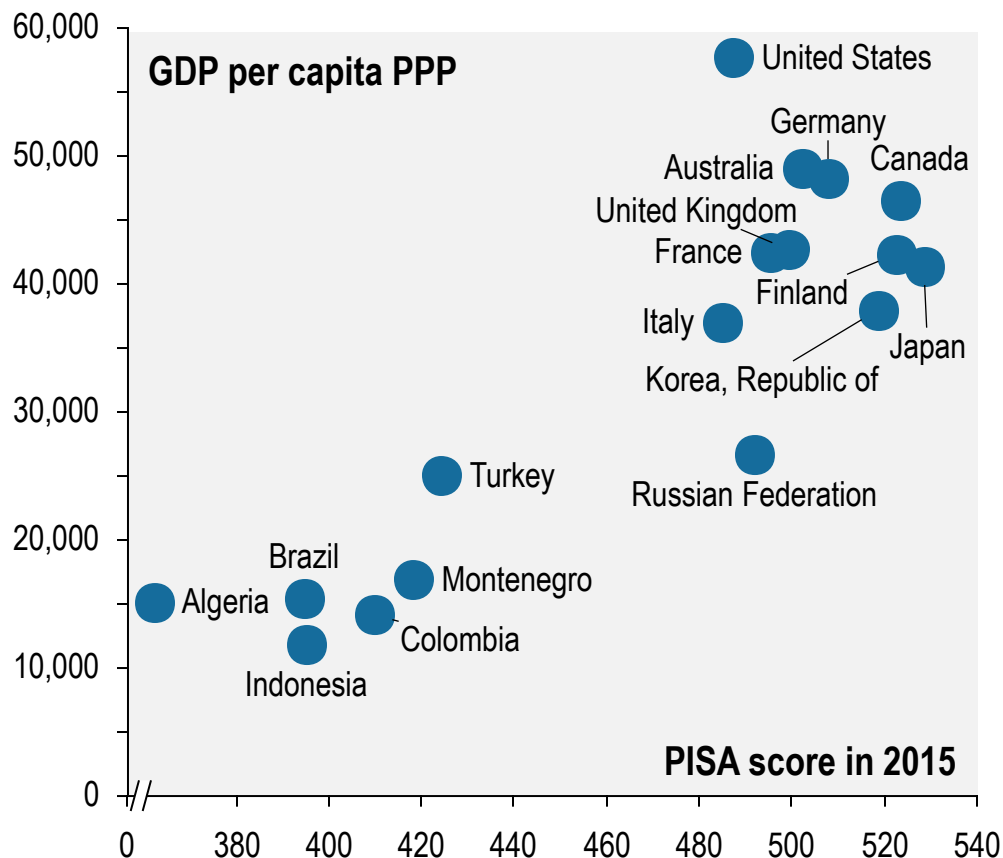
Average number of years of education completed in 2015 related to GDP per capita PPP in 2016 [years, USD]¹⁾



1) Number of years of education completed by people aged 25 years and older; PPP stands for purchasing power parity. They are taken into consideration to create comparability across countries. Here measured in current international dollar

... as well as the quality of education does – Countries with higher PISA score show a higher GDP per capita on average

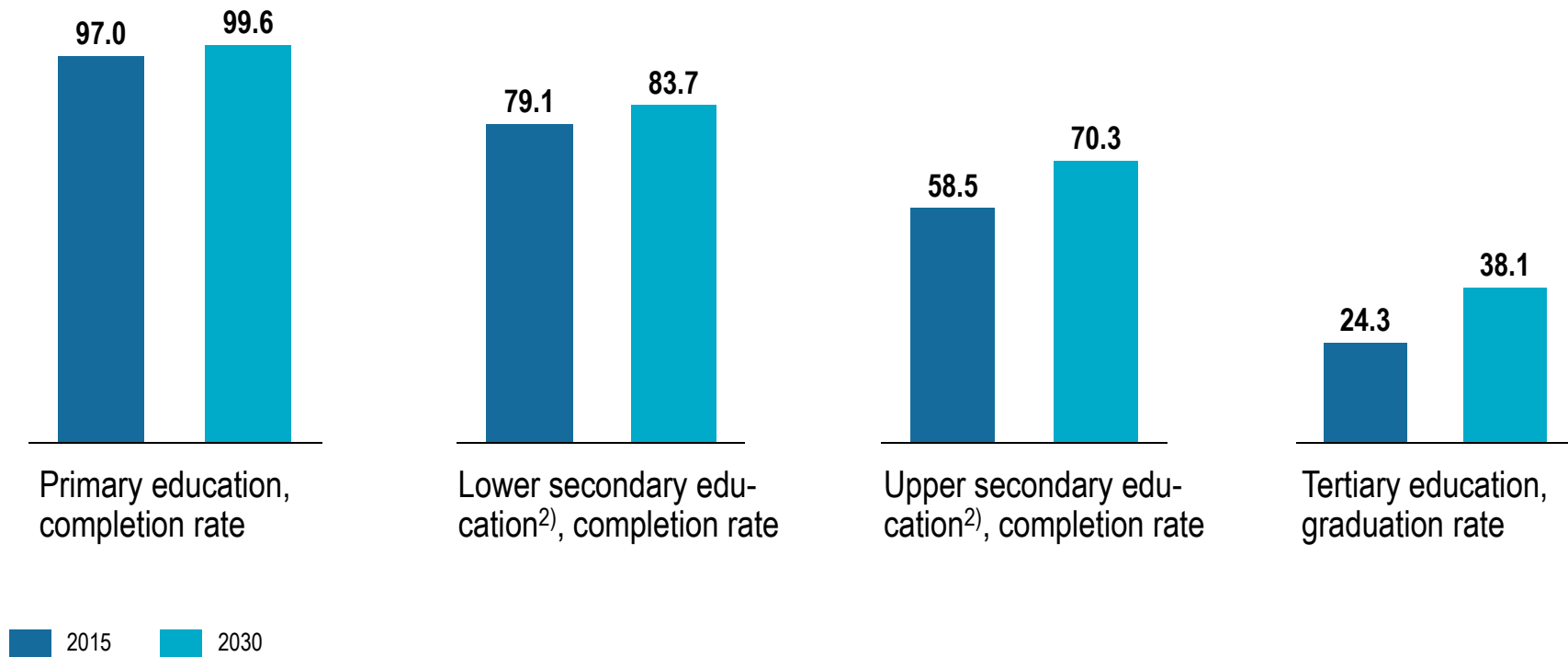
PISA results 2015 related to GDP per capita PPP 2016 [score, USD]



- > **A boost of the average PISA score** in all OECD countries by **25 points** over the next 20 years, implies an aggregate **gain of OECD GDP of USD 115 trillion** over the lifetime of the generation born in 2010 – more than twice of the total GDP of OECD countries in 2016
- > Among wealthier economies, those that prioritize **the quality of teachers** over **smaller classes**, e.g. Korea, tend to show **better performance**. Besides the total resources available, their **allocation** also matters
- > **School systems committing** themselves to ensuring that **all students succeed, perform better** in PISA than systems that tend to separate out poor performers or students with behavioral problems or special needs

Education completion rates will rise globally across all levels – In 2030 almost all children will be going to school

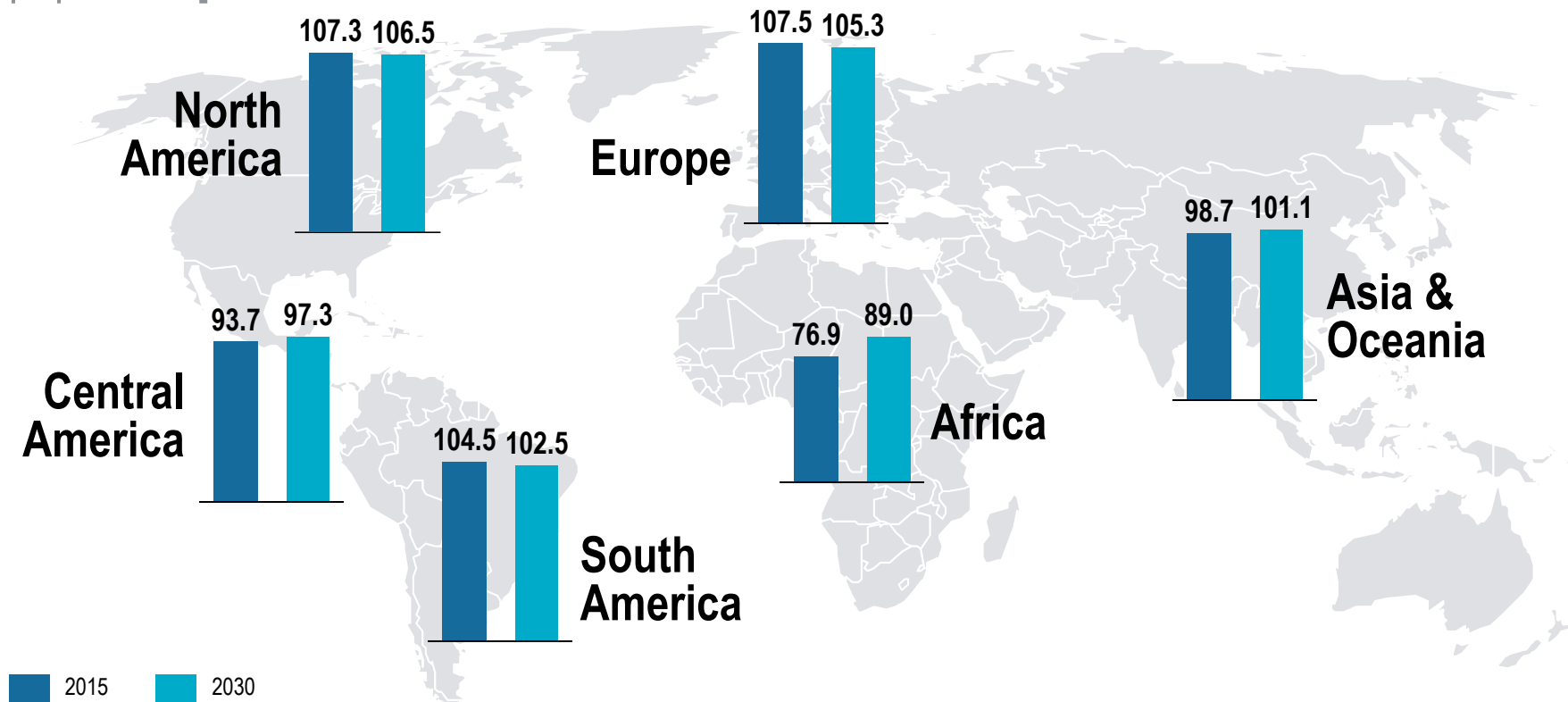
Global completion/graduation rates, gross, in primary, lower secondary, upper secondary and tertiary education as share of of-age children in 2015 and 2030 [%]¹⁾



1) Gross completion/graduation rate is the number of graduates regardless of age in a given level or program, expressed as a percentage of the population at the theoretical graduation age for that level or program 2) Lower secondary education generally continues the basic programs of the primary level, covering grades 7 to 9 (often compulsory) while upper secondary level covers grade 10 onward and corresponds to the final stage of secondary education in most countries

Primary education completion rates converge across the globe by 2030, laying the foundation for rising human development ...

Primary completion rate¹⁾, gross, regional breakdown 2015 and 2030 [% of age population]

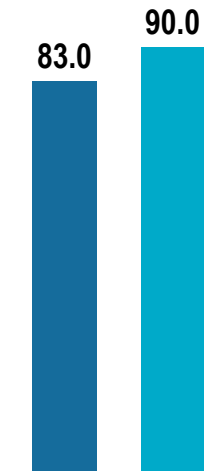


1) Primary completion rate, or gross intake ratio to the last grade of primary education, is the number of new entrants (enrollments minus repeaters) in the last grade of primary education, regardless of age, divided by the population at the entrance age for the last grade of primary education; The completion rate can exceed 100% because some students are younger or older than the defined age range for the education level in question

... and having a clear impact on literacy rates across the globe –
Asia and Africa will strongly catch up in the next decades

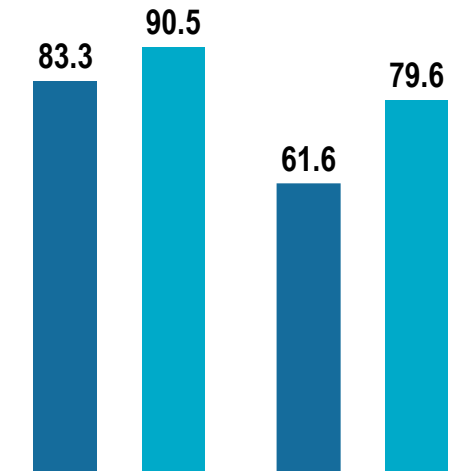
Average literacy rates 2015 and 2030 [% of population 15 and older]

World



World

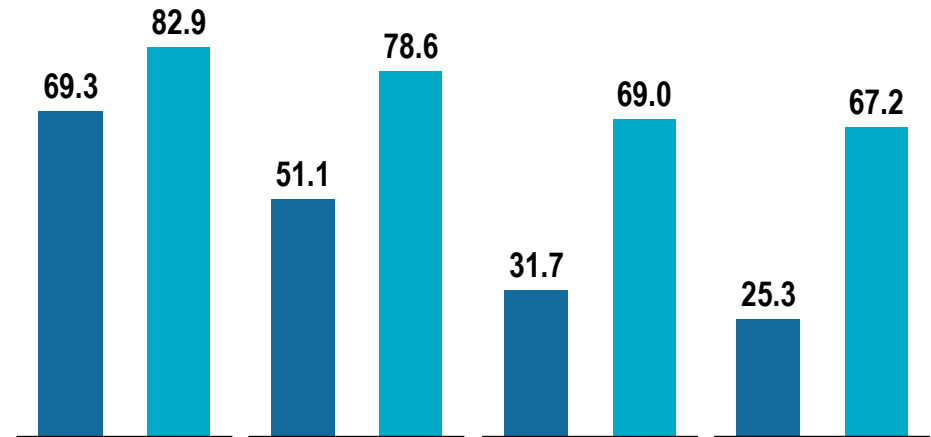
Selected continents



Asia

Africa

Selected countries



India

Nigeria

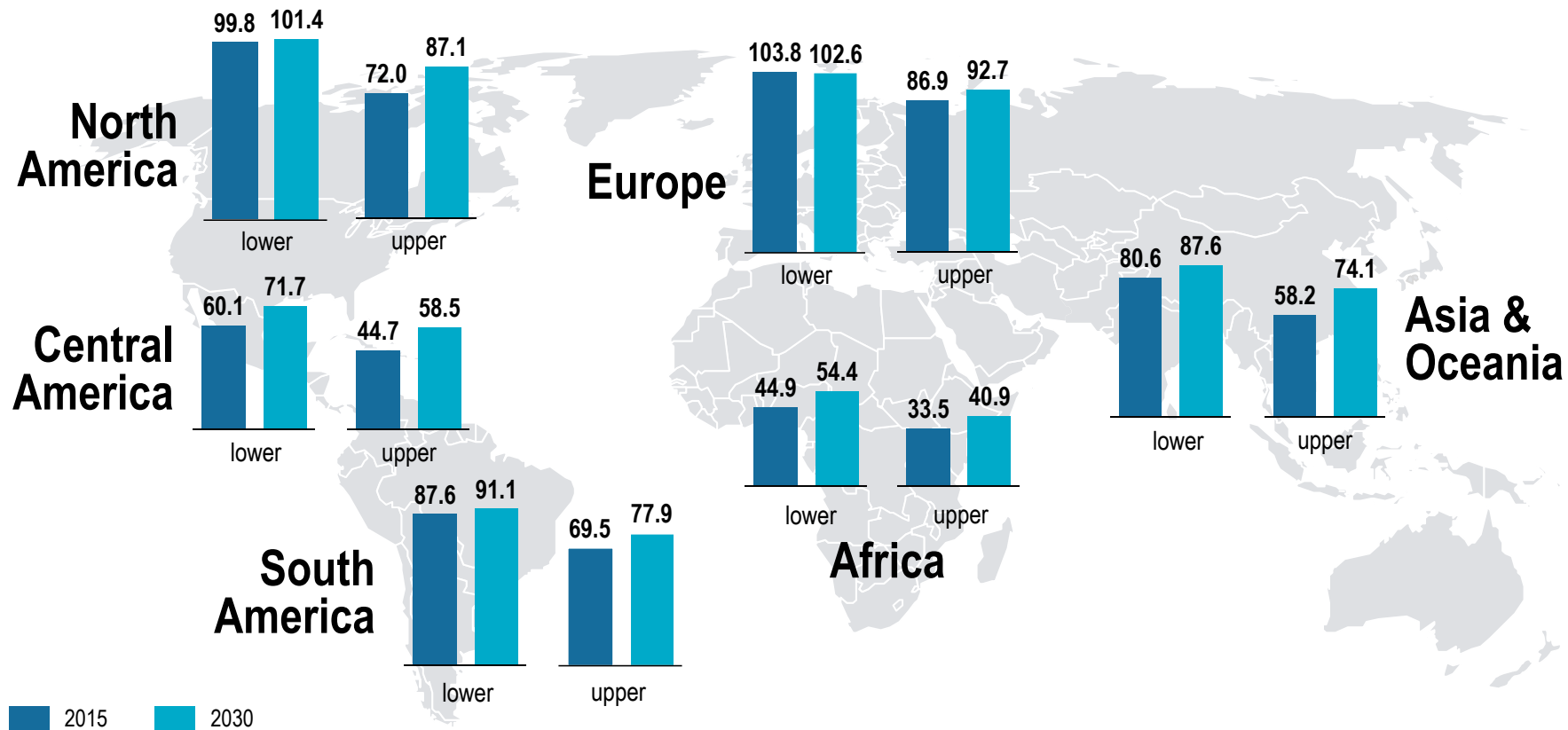
Afghanistan

Guinea



Secondary education outcomes, paving the way for participation in labor markets and higher education, remain unequal across regions

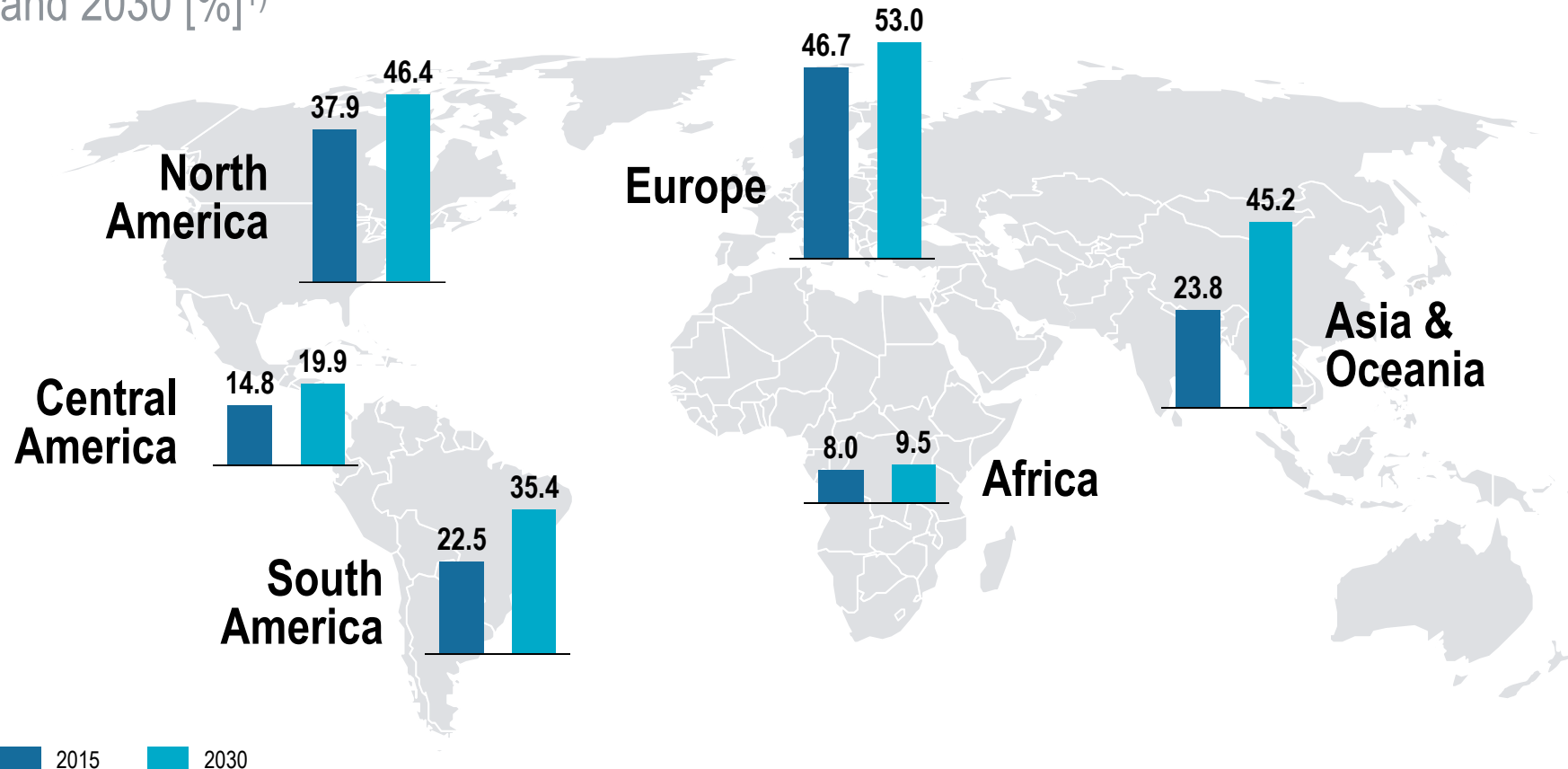
Secondary completion rates, gross, regional breakdown 2015 and 2030 [%]¹⁾



1) Gross completion rate is the number of graduates regardless of age in a given level or program, expressed as a percentage of the population at the theoretical graduation age for that level or program. Lower secondary education covers grades 7 to 9 (often compulsory); upper secondary education covers grade 10 onward. The completion rate can exceed 100% because some students are younger or older than the defined age range for the education level in question

These regional imbalance is amplified in tertiary education – Less than 10% of Africa's relevant age group will graduate by 2030

Tertiary education graduation, gross, as share of age group, regional breakdown 2015 and 2030 [%]¹⁾



1) Gross graduation ratio is the number of graduates regardless of age in a given level or program, expressed as a percentage of the population at the theoretical graduation age for that level or program

Global completion rates in education are rising, but major problems remain, particularly in higher education of developing regions

- > **Globally, enrollment and completion rates** for primary, lower- and upper secondary as well as tertiary education will **rise by 2030**. However, **developing regions** in particular need to **increase the years spent in education** as well as **quality standards** making better use of education as a resource for societal and economic development. Providing a broader and deeper educational offer to students opens new pathways for individuals to participate in the global economy
- > **Secondary school** is a **crucial channel** through which young people acquire knowledge and skills that **improve their opportunities for good jobs**. High quality secondary education that caters to a wide range of abilities, interests and backgrounds is vital not just to set young people on the path to the world of work or academic research, but also to give countries the educated base layer they need to compete in today's technologically driven world. Especially the transition from lower to upper secondary education is relevant, in turn ensuring a sustainable flow to higher education (tertiary education) – this is precisely where developing and emerging regions (Central America and Asia & Oceania but especially Africa) need to catch up
- > Regarding **tertiary education**, **Europe and North America are leading** in terms of graduation rates. **Developing countries are predicted to catch up towards 2030** (especially Asia & Oceania), but a significant gap to developed countries will remain. However, in absolute numbers most of the tertiary students come from developing countries with China and India in leading positions. The 25-34 year-olds in these two countries are predicted to account for 50% of tertiary degrees across OECD and G20 countries in 2030. Nevertheless a **key challenge**, namely the **improvement of quality standards** across the educational systems in several emerging countries, especially in Africa and Arab World, remains. This is valid not only for basic – but also for higher education. Although becoming more notable, only around 20% of today's top 500 universities¹⁾ are currently found in the developing world

1) Top 500 universities referring to QS University Rankings 2016-2017

From literacy to universal primary education, reaching new targets in education requires heavy investment across the developing world

- > **Most OECD countries** (and developed nations in general) have already reached **literacy rates nearing 100%**. These are followed by BRICS countries (except India) together with other Asian countries, as well as Iran, which are all predicted to achieve the 100% mark by 2030. On the other hand, **Afghanistan** as well as **some African countries** like Guinea, Benin, Mali and Ethiopia still have **literacy rates below 40%**. For most of these, it will take many years to achieve a significant increase in literacy rates
- > **Developing regions** will educate more than one billion new primary students till 2030, accounting for around **95% of all new primary students by 2030**. Regarding this development in connection with necessary quality improvements, developing regions are facing financial stress. The annual total cost reaching universal primary education¹⁾ in low and lower middle income countries will increase more than twice leading to USD 340 bn average costs p.a. from 2015 to 2030. In terms of GDP, **the costs will increase** from 3.5% to 6.3% of GDP between 2012 and 2030, with highest necessary increases in low income countries
- > In higher education and corporate learning, the rising **dissemination of affordable e-learning modules**, expedited by the boost of internet penetration, will continue to **aid access to education**. Coursera, the biggest provider of Massive Open Online Courses (MOOCs) to date has around 24 million users and 150 partner universities around the globe. Furthermore, some 77% of US companies already offered access to e-learning programs in 2015. **The trend of learning "anywhere anytime" will become a global reality** and ultimately help to bring education to all, particularly in developing countries with a lack of access to educational infrastructure. However, e-learning modules are more suitable for higher education pathways, and do not address issues in primary education. They are no substitute for much needed investments in primary education infrastructure

1) Universal primary education: defined by UNESCO as 100% pre-primary, primary and lower secondary education enrollment as well as continuing quality improvements in education

The importance of global knowledge and different demographic factors in developed and emerging countries cause a war for talent

Underlying factors contributing to the war for talent

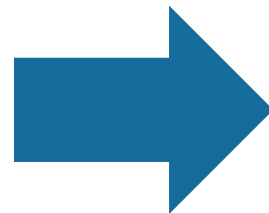
Developed countries

- > Large group of **older employees will retire** ("baby boomers")
- > Despite a currently rising amount of **young people** coming from universities and vocational backgrounds to enter the labor market, their number **cannot offset the losses** caused by the rate of retirements
- > Digital transformation requires increasingly **better educated people**
- > Massive **talent gap**

Developing countries

- > **Increasing number of students** from high schools and university graduates
- > Strongly increasing **demand for well educated employees** due to economic growth and transition from agriculture to industry to services
- > **Moderate to significant talent gap**

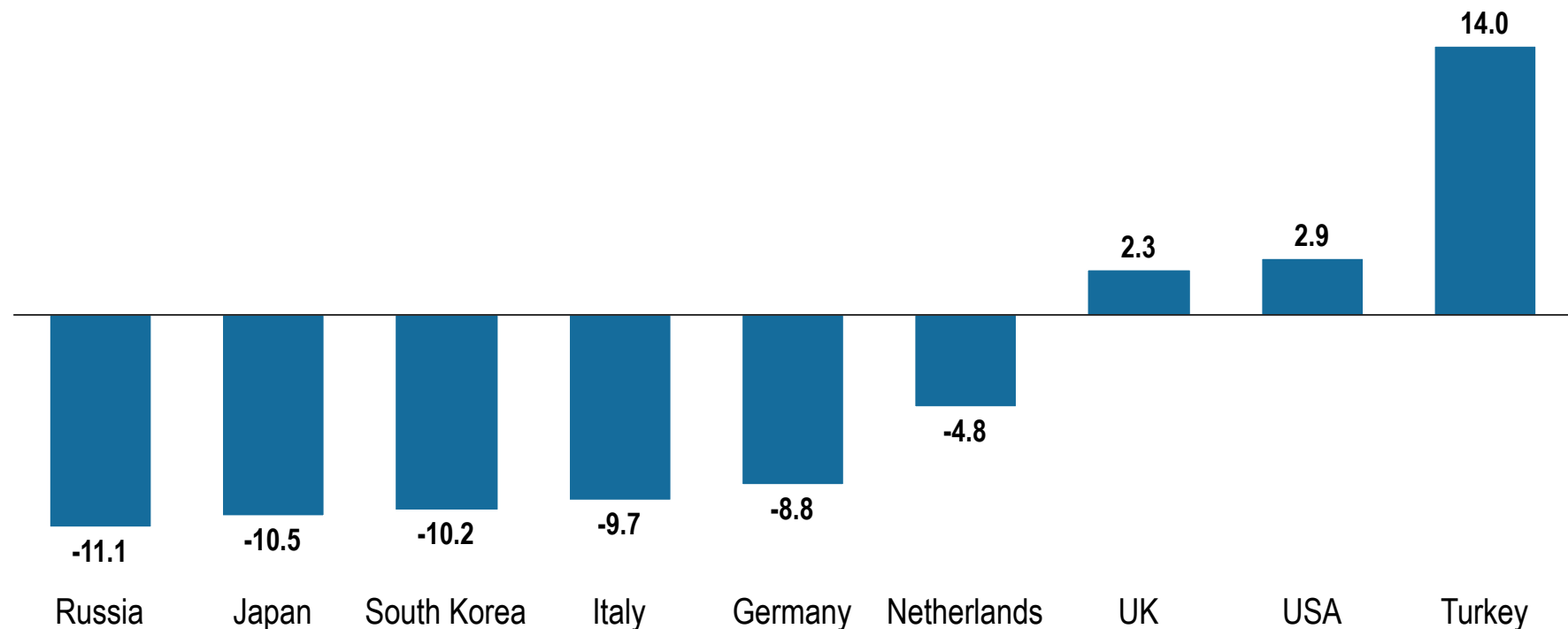
+ Higher mobility of students and employees



War for talent

Developed countries with a declining population will feel talent shortages most acutely ...

Projected change in working age population from 2015 till 2030 [%] ¹⁾



Notes: Data from the UN World Population Prospects: The 2017 Revision; estimations are based on the medium-variant projection which assumes a fertility decline in countries where large families are still prevalent as well as a slight fertility increase in several countries with fewer than two children per woman on average ¹⁾ Working age population is defined as those aged 15 to 64

... while even countries with growing populations such as Turkey, USA and UK already face difficulties in filling job vacancies

Talent shortages in leading economies and top 10 jobs with shortages 2016

Percentage of companies in having difficulties filling jobs 2016

Japan	86%
Turkey	66%
Germany	49%
India	48%
USA	46%
Brazil	43%
France	23%
Switzerland	20%
UK	18%
China	10%

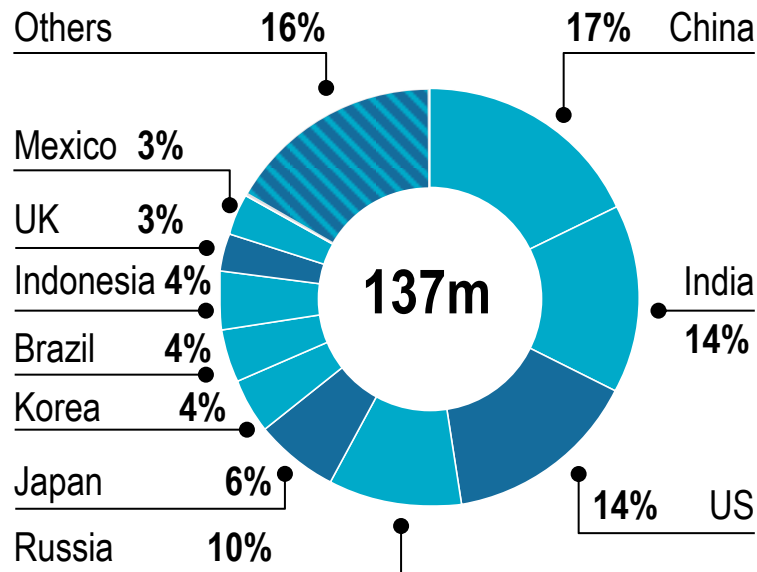
Top 10 jobs employers are having difficulty in filling 2016



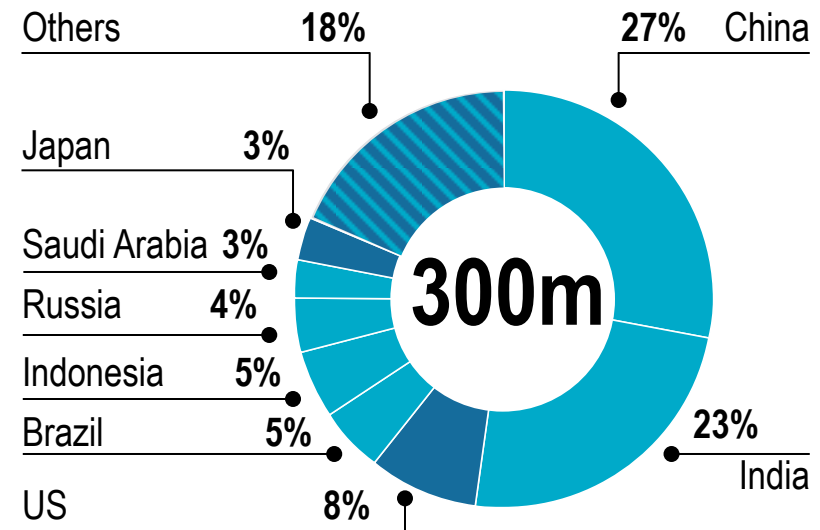
Globally speaking, the increasing number of higher-level qualified talent provides a chance to ease the intensity of the war for talent

Share of 25-34 year-olds with a tertiary degree across OECD and G20 countries

2013



2030



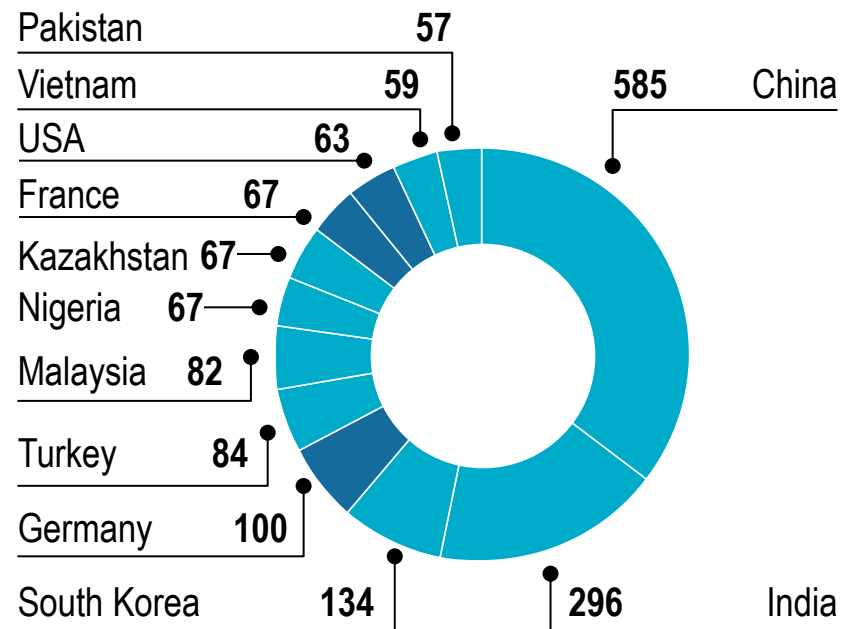
Developed countries Developing countries

In addition, developed countries can tap into the high outbound mobility of students originating from developing markets

Top 12 countries regarding student's outbound and inbound mobility 2020

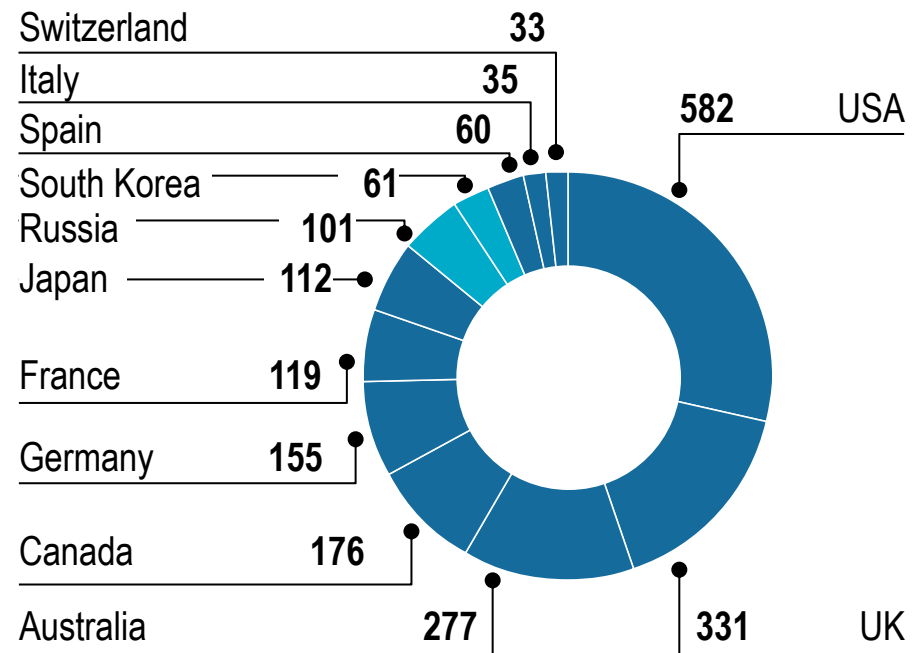
Outbound mobility

[number of students in '000]



Inbound mobility

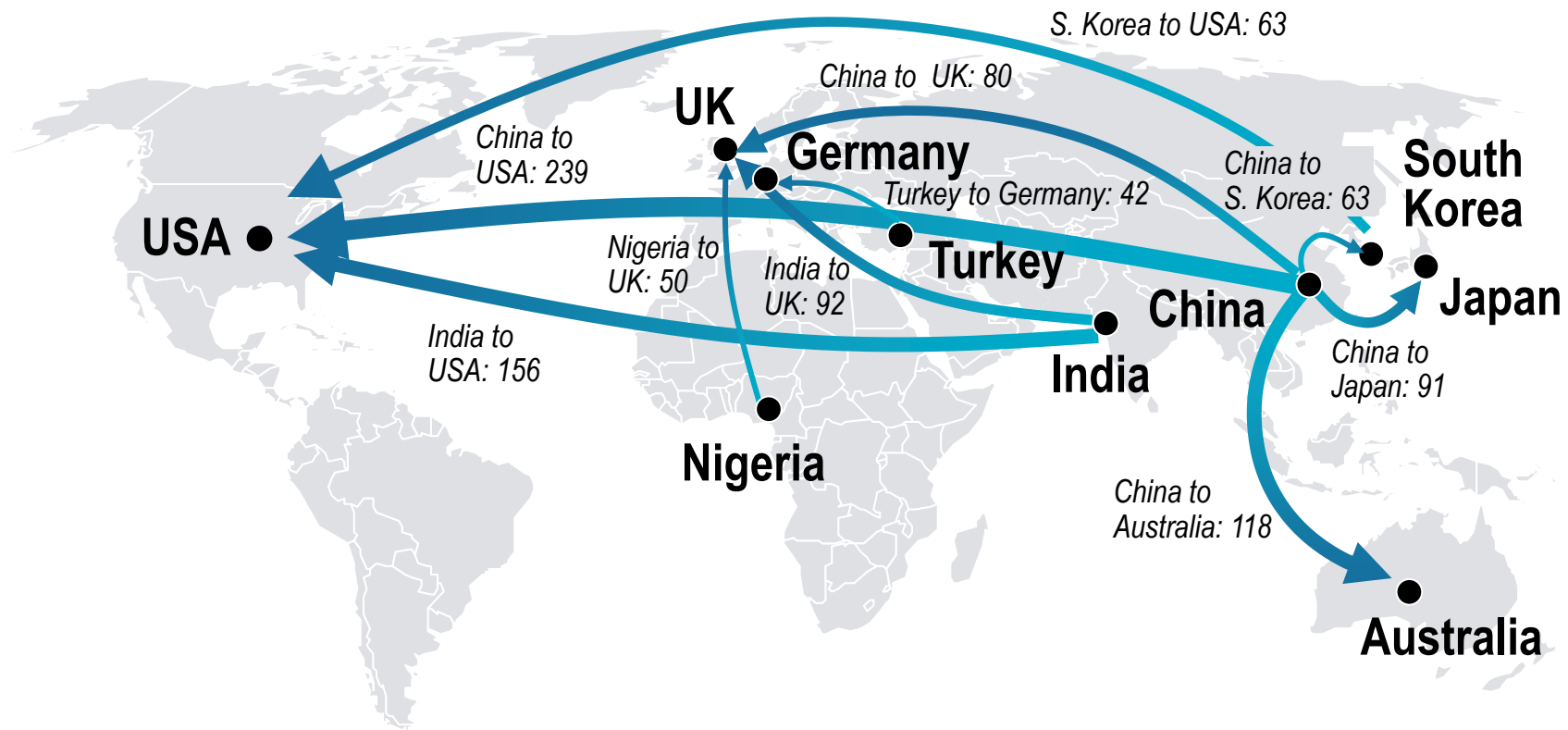
[number of students in '000]



Developed countries Developing countries

Most international students originate from Asia, especially China and India. USA and UK are key higher education destinations

Top ten bilateral higher education mobility flows in 2024 ['000]¹⁾



1) Postgraduate education involves learning and studying for academic or professional qualifications for which a first or bachelor's degree generally is required (e.g. Masters, Diploma, Doctorates). International students are defined as students moving to another country for the express purpose of study

Developed countries benefit when attracting international students and retaining them ...

International students: Benefits for developed countries and attracting & binding factors

Benefits

- > A country **benefits economically** if it manages to **retain international students** as prospective employees
- > As an **example** – a study²⁾ concerning the **Netherlands** shows, retaining 20% of international students after their graduation within the labor market would yield annual **economic benefits worth EUR 740 million**
- > The **number of foreign tertiary students** worldwide is **constantly rising** (+50% between 2005 and 2012)
- > However the **stay rate of international students varies widely between countries**: according to an OECD study (2013), Austria, for example, had a stay rate of only 17% in 2008/09 (latest data available) while France and Canada reached more than 30%

Attracting & binding factors

- > To compete successfully in the international talent pool, a country must offer **attractive higher education** to foreign students to become a **"first choice" destination**
- > The ultimate aim must be to **retain graduates as employees** after the end of their studies
- > Factors to **bind international students**:
 - Better **work opportunities** in their host country
 - Ease of **integration**
 - Overall **quality of life**
 - **Linkages and friendships**
 - **Future career advantages** in their home country or a third country

1) The stay rate is estimated as the ratio of the number of persons who have changed status (whether for work, family or other reasons) to the number of students who have not renewed their permits 2) Netherlands' Ministry for Education, Culture and Science

... but also for developing countries sending students and talents to the developed world offers more benefits than downsides

Benefits and potential downsides of human capital flight¹⁾ for developing countries

Benefits

- > Research shows **significant economic benefits** of human capital flight on **both sides** such as knowledge and monetary flows between countries
- > International **remittances** to dependents support the home country's economy and constitute a way of financial risk mitigation
- > **Earning** potential abroad may be several **multiples** of **country of origin income levels**
- > Migration may lead to **a more productive pairing of people's skills**, and **avoid joblessness** at home
- > Return of foreign-educated talent **to the developing world** contributes to **raising educational aspiration, innovation and democratic processes**

Potential downsides

- > The **global war for talent** implies that retaining well educated international graduates originating from developing countries leads to a **loss (brain drain) in the country of origin**
- > Brain drain has long been a common **concern** for migrant-sending countries, in **particular for small countries where high-skilled emigration rates are highest**
- > The **negative aspects** of human capital flight remain largely **unsupported in academics**

1) Human capital refers to the movement of highly skilled or well-educated individuals to more favorable geographic, economic, or professional environments. On this slide we consider geographical human capital flight between countries

Main future challenge is to balance unequally distributed labor supply and demand across developed and developing countries

- > **The war for talent will intensify:** In several countries with aspiring economies, the demand for skilled employees will rise steadily. Many developed countries will face a decline of skilled employees due to demographic changes
- > According to a **global study** published by Manpower Group in 2016, **40% of employers** surveyed highlight **difficulties in hiring suitable candidates**. In 2015, 54% of employers worldwide estimated that talent shortages already impact their client-facing capabilities as well as cost. A 'bad hire' (employee not well-suited for the job) costs businesses upwards of USD 17,000 on average. Companies in Japan and Turkey in particular have problems to staff available jobs. Vacancies being most difficult to fill are skilled labor jobs such as sales representatives, engineers and skilled trade workers
- > Many **developed countries**, as well as some countries in transition (Russian Federation, South Korea), face a **decrease in labor force**. With fewer young people obtaining university degrees or from vocational backgrounds, the labor markets in developed countries will need to deal with **talent shortages**. This is especially apparent for economies with advanced industries having a strong need for inter alia scientists, engineers and IT specialists. Countries like **Germany and Japan are already experiencing talent shortages**, a condition which will further intensify under current demographic trajectories
- > By contrast, the **developing world** has the **biggest quantitative talent pool in absolute numbers**. However, closing the gap between higher **educational qualifications** of developing and developed countries **requires further efforts in developing regions**. Also, differences between varying educational systems can make it difficult to integrate foreign graduates in other economies. The **overall number of students** around the globe enrolled in higher education is forecast to more than **quadruple within 30 years** from 99 million in 2000 to 414 million in 2030. **Most of this growth** will take place in the **developing world**, with more than half of the students being located in China and India alone

Millennials might play a major role in providing solutions to these unequally distributed labor supply and demand shortages

- > The **talent mismatch between developed and developing countries** will be an important challenge to deal with. The war for talent manifests itself predominantly in the **need of developing countries to better educate and retain talent**, while **developed regions have to attract talent from outside their borders**. This problem will be a permanent state in future, both in developed and developing regions with differing demographic trajectories. Also, developing countries are poised to transform their education systems to maintain a sufficient flow of talent to their aspiring economies
- > A mitigating effect on difficulties to fill jobs may lie in the next generation of highly educated professionals. The **talent of tomorrow is expected to work even more internationally** than today's employees. **By 2025, Millennials** (often also referred to as Generation Y) **will make up 75% of the global workforce**. These are well educated job candidates with a global perspective, interest in technology and desire for autonomy further fueling global labor mobility. The **number of students seeking to study abroad could rise to 8 million** – nearly triple the number today and up from 800,000 in the mid-70s. Moreover, students are a sizable financial asset to national economies. According to the US Department of Commerce, international students contributed more than USD 30 billion to the US economy (e.g. through tuition and living expenses) in 2015
- > The **most sizable flows of higher education students in 2024** are predicted to be seen from China to US (239k), India to US (156k), China to Australia (118k), India to UK (92k), China to Japan (91k), and China to UK (80k). Flows from Nigeria to UK (50k) and Turkey to Germany (42k) are also among the top ten major bilateral student flows. While **English speaking countries** (USA, UK, Australia, Canada) particularly **benefit** with high net gains in students from abroad, **Asian countries** (India, China, South Korea) **see their students moving to the western world**. A UK study shows that on-and off-campus spending by international students and their visitors generated a knock-on impact of GBP 25.8 billion in gross output and supported 206,600 jobs all over the UK

The war for talent calls for clearer efforts to narrow the gender gap – We analyze three of the main factors impacting this gap



Years of education

Years spent in education are a crucial prerequisite for subsequent labor force participation



Labor force participation

Labor force participation is an indicator of women's integration in national labor markets

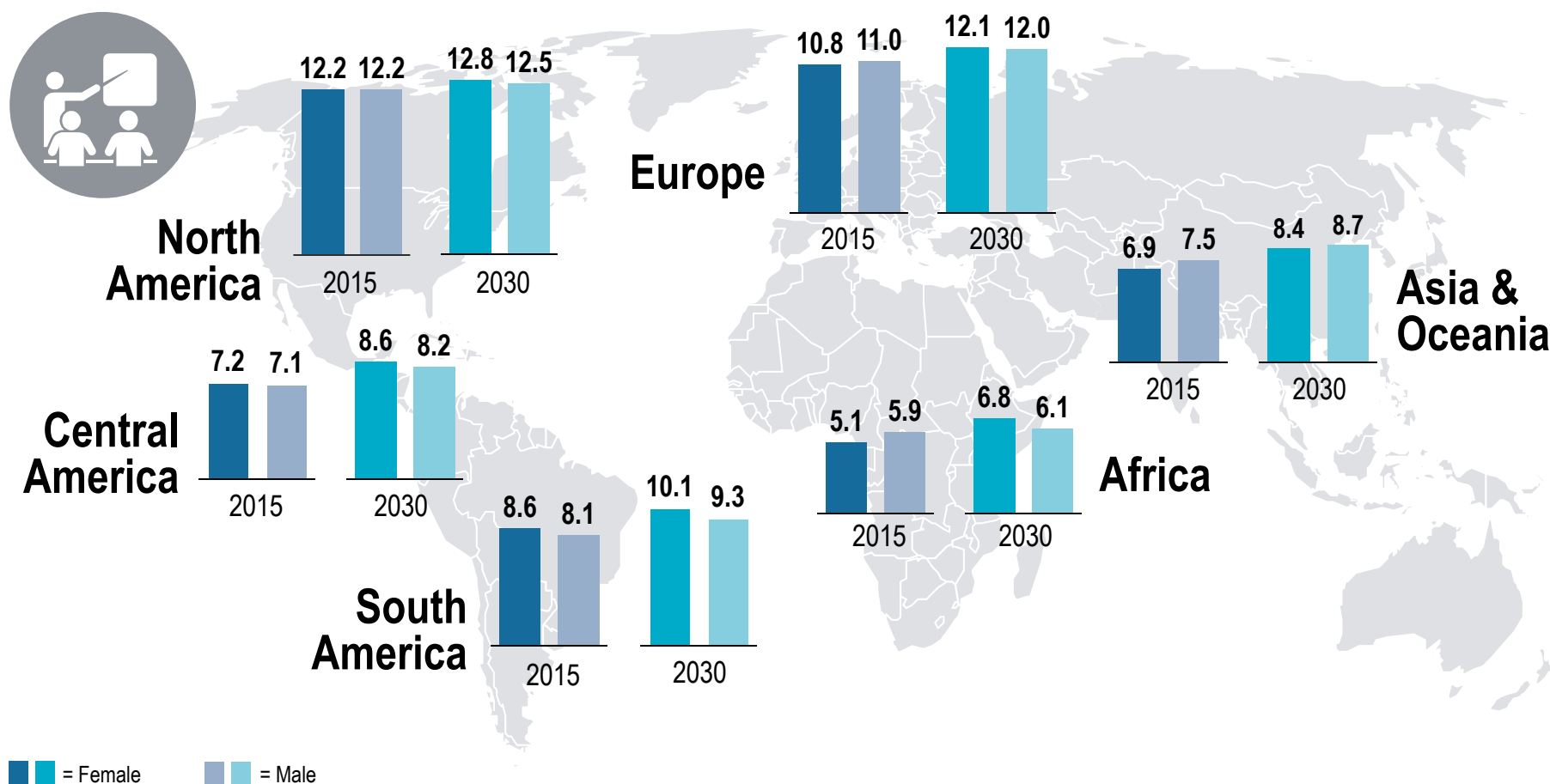


Disposable income

Level of disposable income relates not only to inequality in terms of earnings but also to status of jobs

America and Europe enjoy gender parity in terms of years spent in education – The gap is narrowing in Africa and Asia towards 2030 ...

Completed years of education by gender for adults 25 years + in 2015 and 2030 [years]

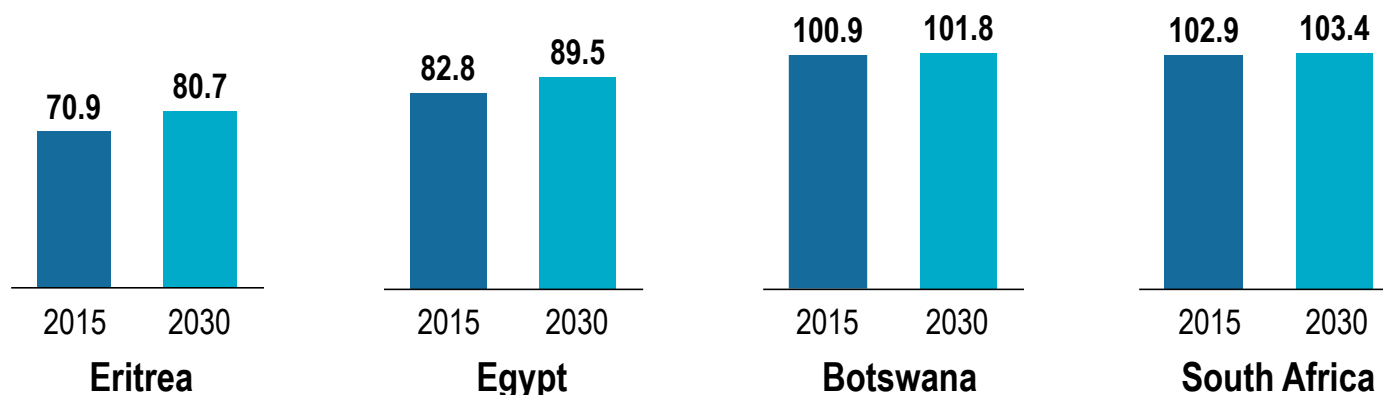


... but currently the gap varies widely across Asian and African countries with some on the path to educational parity by 2030

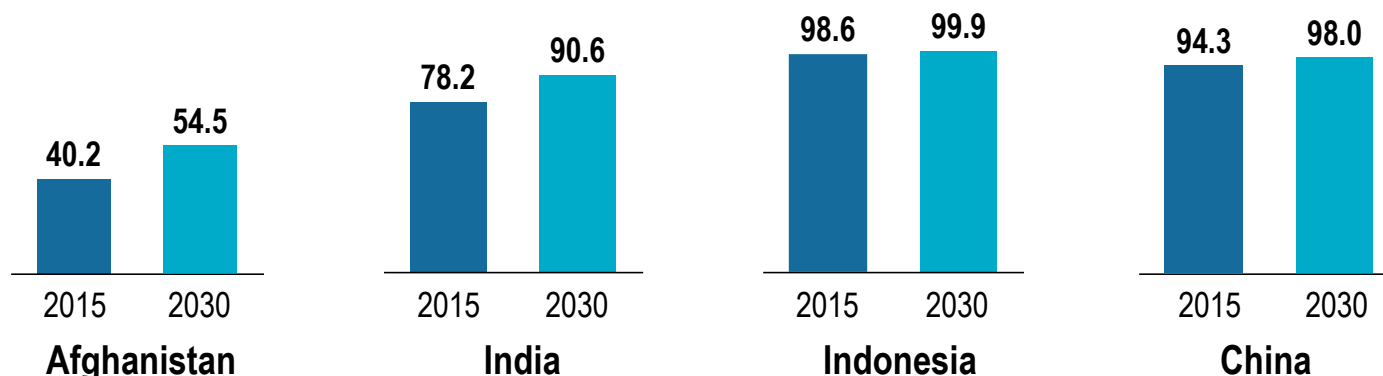
Female years of education as share of male years of education 2015 and 2030 [%]¹⁾



Selected African countries



Selected Asian countries



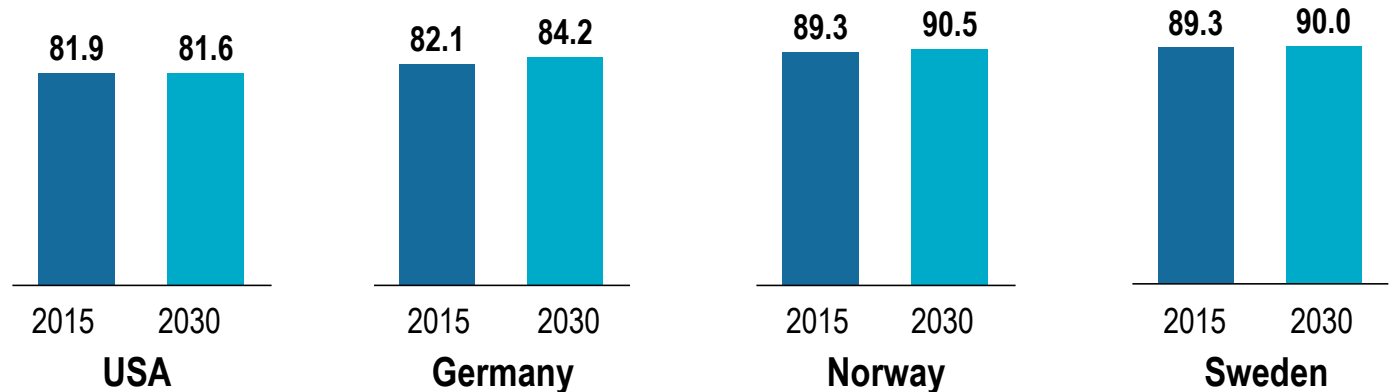
1) Adults defined as 25 years or older

Regarding labor force participation, Scandinavian countries are the benchmark – But forecasts show stagnation of current indicators

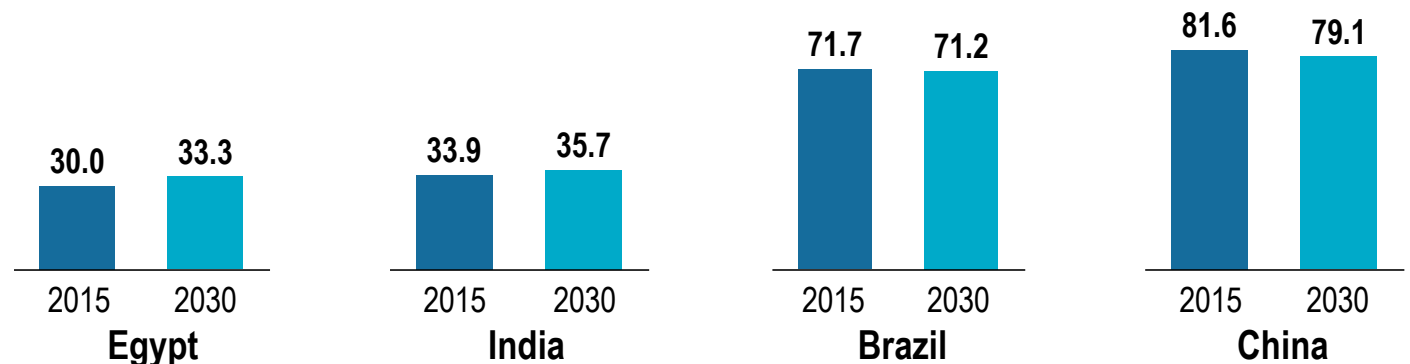
Female labor force participation rate as share of male rate 2015 and 2030 [%]¹⁾



Selected developed countries



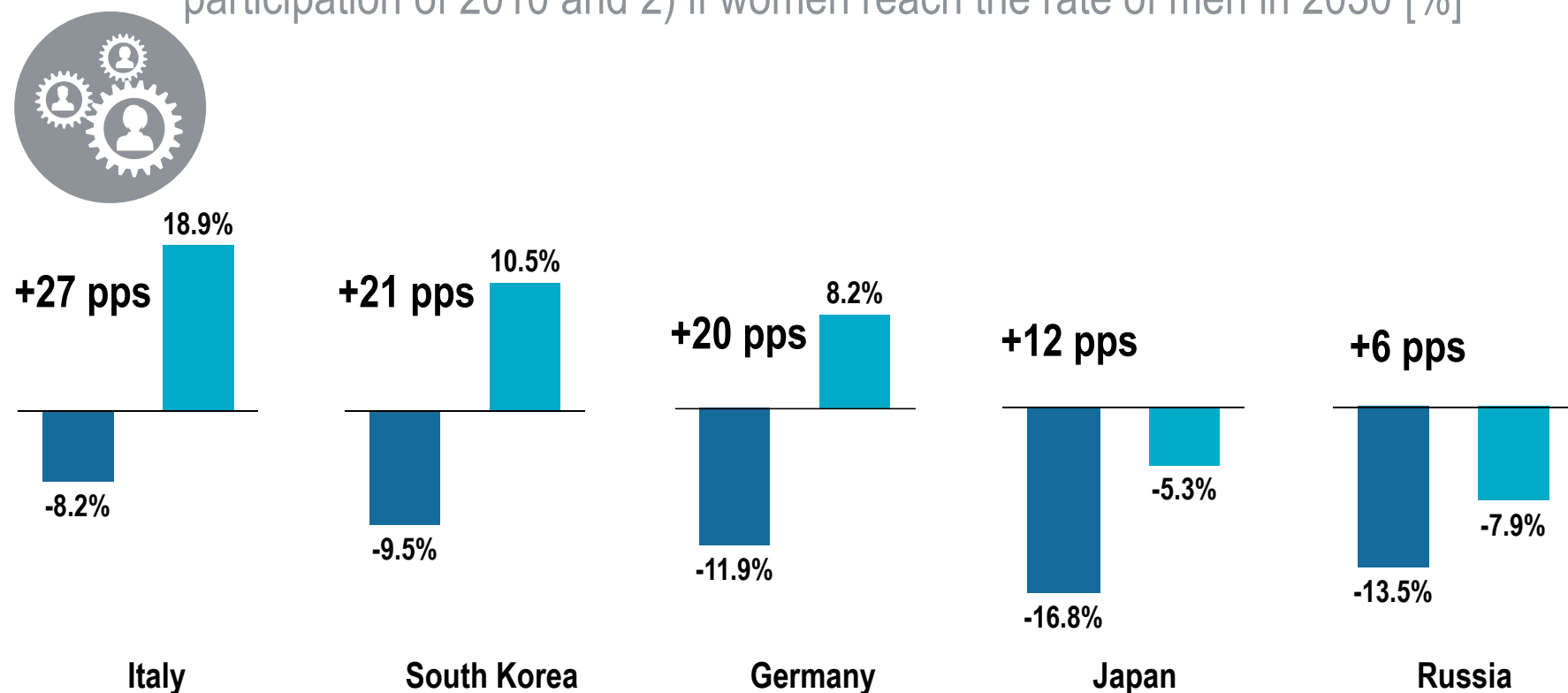
Selected developing countries



1) The labor force participation rate is calculated by expressing the number of persons in the labor force as a percentage of the working-age population. In India women's labor force participation may be undercounted due to the high proportion of women being in informal employment

Equality in labor market participation can offset current societal challenges such as demographic changes

Projected change in labor force from 2011 to 2030 under 1) constant female labor participation of 2010 and 2) if women reach the rate of men in 2030 [%]



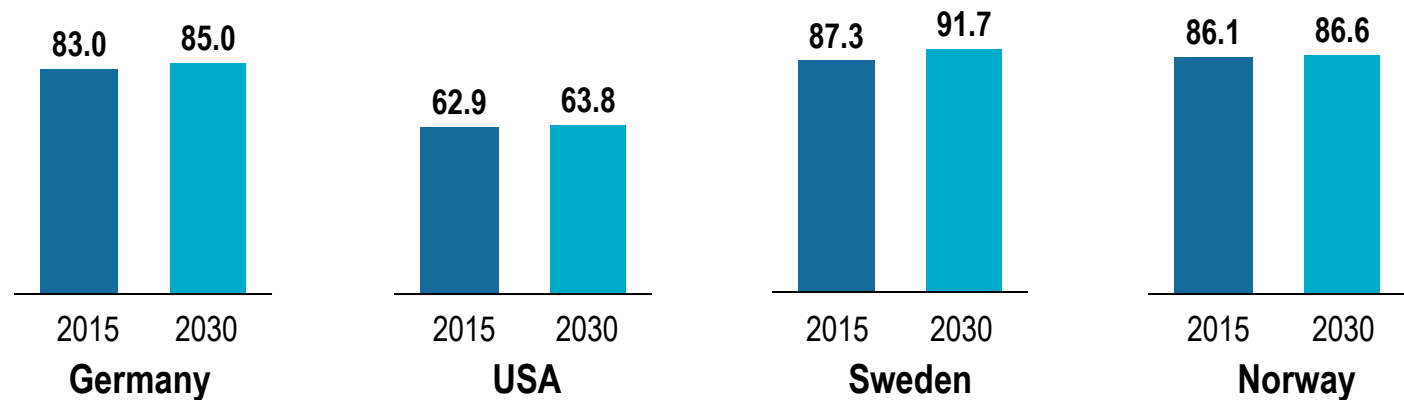
■ Projected change of labor force in no change scenario: constant female labor force participation of 2010 until 2030 (scenario 1)
 ■ Projected change of labor force in total convergence scenario: women reach the rate of men of 2010 in 2030 and the rate of men remains constant at the level of 2010 (scenario 2)

Women earn significantly less than men – And the future will only bring limited improvement

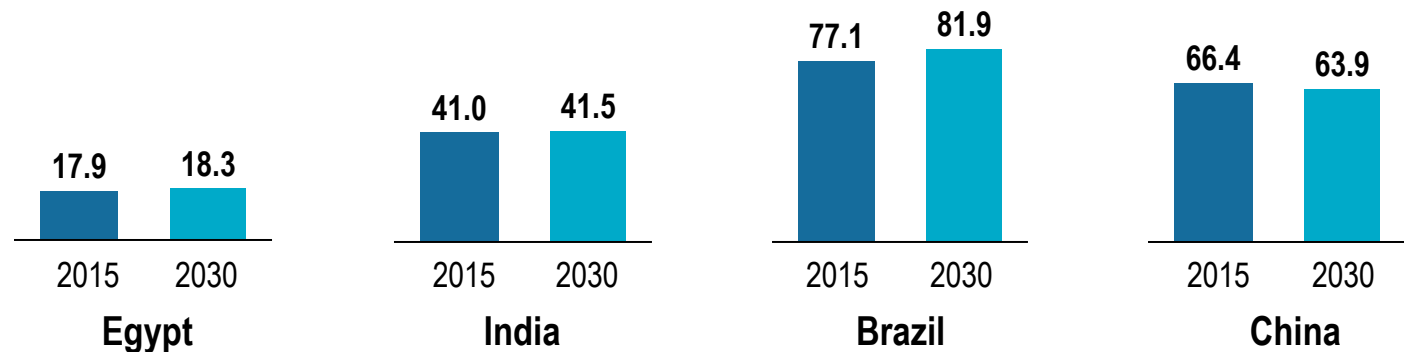
Female disposable income as ratio of male disposable income 2015 and 2030 [%]



Selected developed countries



Selected developing countries



Reasons for unequal labor force participation and payments are manifold, but causality between them is a given

Selected manifestations impacting female labor force participation and income

Labor force participation

- 
- > Countries **do not sufficiently support child and elderly care**, which most often rests with female family members
 - > Many women face **problems to re-enter the labor market** after a period of child care
 - > In many countries, a **lack of basic frameworks and rights**, or the culture inhibits women's potential to join the formal labor market
 - > In some countries, **tax** and other **financial regulations incentivize women to stay at home**

Female disposable income as share of male

- > Women contribute to economic welfare through **large amounts of unpaid work**
- > **Higher paid professions** (e.g. engineers) are still **male dominated**
- > The uptake of **parental leave** in combination with **part-time working** (still a predominately female domain) **impacts income**. While narrow for younger women, the **wage gap** increases steeply during child-bearing and -rearing years

Even in 2030, women's income is expected to be more than a third lower than the average annual disposable income earned by men

- > Despite almost having equal chances at education – and with women in many countries even accounting for more university degrees than men – **women still have trouble to transfer this empowerment in education to economic and political participation**. This is exemplified by the **WEF Global Gender Index** for 2016 (1 = equality, 0 = inequality). While the education index scores 0.95, the economic participation & opportunity and political empowerment indices only score 0.59 and 0.23 respectively. According to Euromonitor, the global **average annual disposable income at constant prices for women in 2030** will be USD 8,588 – a **35.1% increase compared to 2015**. However, the **gender gap in disposable income is expected to even increase slightly** with women earning 33.6% less than men in 2030 when compared to 31.6% in 2015
- > Since the **global rate of enrolment in tertiary education** of young women currently surpasses that of young men, each year, an extra 4 million young women graduates are beginning to reverse the tertiary education gap of the previous generation. This signifies a **huge potential calling for better usage** – if OECD member states could eliminate the gap between male and female labor force participation levels by 2030, their GDP could on average gain an additional increase of up to 12% from 2011. Another surprising indicator is that the **share of women in senior management positions in several developing countries**, such as Russia, Philippines, Lithuania, Thailand, Indonesia or China is **higher than in some OECD member states**, such as Japan, Germany or The Netherlands
- > **Africa and the Middle East** had the **largest male-female wage gap in 2015**, with women earning nearly two thirds less than men, while the current income of women in OECD countries is about 30% less than their male counterparts. The **largest earnings gap in 2030 will remain in these two regions**, Africa and the Middle East, mainly due to less qualified jobs for women, stemming from an underlying **gender inequality in society**

Optimize management of knowledge and foster online education in order to fully utilize and advance employees' potential

- > As global knowledge generation and connectivity increase, companies need to **establish an interdisciplinary system** which combines knowledge from different areas in an efficient, up-to-date network. **Openness to the knowledge of others, knowledge sharing** and **common knowledge creation** will become key targets for enterprises. Understanding opportunities and weaknesses of foreign education systems is important to tap into an international workforce and its benefits for companies
- > A **corporate e-learning system** optimizes professional qualification. In addition, e-learning can easily be integrated into the day-to-day of most working environments, **making further training accessible** to more employees. Shaping their knowledge in line with corporate requirements **is crucial in a time of talent shortages** and an increasingly globalized workforce. Furthermore, online learning supports employee retention by **offering new ways of career development** with the added advantage of staying up to date e.g. with regards to current trends in evolving technologies
- > **Social networks, semantic web technologies** and **open innovations** will play an important role in sharing and generating knowledge in the work place. Web 2.0 (change from static web pages to dynamic or user-generated content) will advance to a **decentralized and semantic Web 3.0 system** with an ever expanding library of social media applications and the ability to significantly improve the functionality and usability of search engines



Evolve HR management to embrace a global hiring strategy – Overcoming future talent shortages requires a new HR mindset

- > **Highly educated talent** is becoming an increasingly **scarce resource** especially in developed countries. As a consequence, companies need to **adjust their human resource management**. **Hiring strategies** must go beyond the home market; instead; the ability to **attract talent from all over the world** is key. As the war for talent intensifies, companies need to raise their profiles among potential employees. To do so, companies should intensify their efforts of **national and international cooperation with universities** and other **educational organizations** which attract young professionals. In addition, strategies for **future-based workforce planning** are needed to avoid skill shortages
- > Utilizing **social networks** as additional hiring channels is a high-quality, low-cost way to **recruit high potential candidates**. The analysis of potential candidates via specialized social networks helps, over time, to get an idea of today's talent pool
- > Any hiring strategy should be enhanced with an **optimized employee retention strategy**. Estimates suggest that e.g. losing a middle manager costs an organization up to 100% of his annual salary. In addition to compensation and benefits, several other factors are critical to employee retention. These include **transparent career development opportunities**, a well supported **work-life balance**, the **quality of supervision**, regular **performance feedback** and **clear communication of goals, roles and responsibilities**. The right fit between personality, skills and job demand and the chance to engage in new projects are also key factors for a strong retention rate



An attractive recruiting, retention and career model for women fosters economic growth and helps to overcome talent shortages

- > At least three developments highlight **companies' need and opportunity to attract qualified female employees**. First, many developed countries will face a shrinking population over the next two decades; second, the percentage of highly educated women is rising; third, the knowledge society is growing
- > Family commitments, especially children but also increasingly elder care, are the main reasons why many educated women do not work outside the home. It is therefore essential for companies to **create working models that are suitable and attractive to women**. The main aspects to be considered are flexibility, career opportunities and care support systems
- > **Flexible working conditions** are needed with regard to location (home office), working hours and co-workers' attitudes
- > In terms of offering support to working mothers, companies can either set up **day-care centers** or offer **easier access to childcare with external providers**. **Sweden** is currently setting a **benchmark**, with the highest percentage of working mothers
- > **Career opportunities** should **not be linked to working hours**, but have to be defined by **specific qualitative and/or quantitative goals**. This process needs to be made **transparent** to enable women to consider the necessary steps when planning their careers



Most important sources and material for further reading (1/2)

Most important data sources



- > University of Denver. Pardee Center for International Futures
http://www.ifs.du.edu/ifs/frm_mapViewer.aspx
- > International Labour Organization (ILO). Key Indicators of the Labour Market (KILM)
http://www.ilo.org/ilostat/faces/wcnav_defaultSelection?_afLoop=44968684513886&_afWindowMode=0&_afWindowId=null#!%40%40%3F_afWindowId%3Dnull%26_afLoop%3D44968684513886%26_afWindowMode%3D0%26_adf.ctrl-state%3D6vb36ubj3_48
- > OECD. Closing the Gender Gap: Act Now
<http://www.oecd.org/gender/closingthegap.htm>
- > UN DESA, United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2017 Revision
<http://esa.un.org/unpd/wpp/index.htm>
- > IMF. Gender Equality Indices
<http://www.imf.org/external/datamapper/datasets/GD/2>

Most important sources and material for further reading (2/2)



Further reading

- > Manpower. Talent Shortage Survey 2016
<http://www.manpowergroup.com/talent-shortage-2016>
- > British Council. The Shape of Things to Come
http://www.britishcouncil.org/sites/britishcouncil.uk2/files/the_shape_of_things_to_come_-_higher_education_global_trends_and_emerging_opportunities_to_2020.pdf
- > Euromonitor. Income Inequality
<http://blog.euromonitor.com/tag/income-inequality>
- > OECD. The Pursuit of Gender Equality - An Uphill Battle
<http://www.oecd.org/gender/the-pursuit-of-gender-equality-9789264281318-en.htm>
- > UNESCO. Education 2030: Incheon Declaration and Framework for Action
<http://unesdoc.unesco.org/images/0024/002456/245656e.pdf>
- > IMF. IMF Annual Report 2017: Promoting Inclusive Growth
<http://www.imf.org/external/pubs/ft/ar/2017/eng/pdfs/IMF-AR17-English.pdf>
- > Global Education Futures. Global Education Futures: Agenda
https://edu2035.org/pdf/GEF.Agenda_eng_full.pdf

Please contact us if you have any questions or comments –
Six more megatrend insights await on our website



Dr. Christian Kryss

christian.kryss@rolandberger.com
Tel.: +49 211-4389-2917



Klaus Fuest

klaus.fuest@rolandberger.com
Tel.: +49 211-4389-2231



Trend Compendium

<https://www.rolandberger.com/en/Dossiers/Trend-Compendium.html>

The bigger picture for a better strategy

Roland
Berger

THINK:ACT

