

MCKINSEY GLOBAL INSTITUTE  
**CHINA'S ROLE IN THE NEXT  
PHASE OF GLOBALIZATION**

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DISCUSSION PAPER



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# MCKINSEY GLOBAL INSTITUTE

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MGI research combines the disciplines of economics and management, employing the analytical tools of economics with the insights of business leaders. Our "micro-to-macro" methodology examines microeconomic industry trends to better understand the broad macroeconomic forces affecting business strategy and public policy. MGI's in-depth reports have covered more than 20 countries and 30 industries. Current research focuses on six themes: productivity and growth, natural resources, labor markets, the evolution of global financial markets, the economic impact of technology and innovation, and urbanization.

Recent reports have assessed the economic benefits of tackling gender inequality, a new era of global competition, Chinese innovation, and digital globalization. MGI is led by four McKinsey & Company senior partners: Jacques Bughin, James Manyika, Jonathan Woetzel, and Frank Mattern, MGI's chairman. Michael Chui, Susan Lund, Anu Madgavkar, Sree Ramaswamy, and Jaana Remes serve as MGI partners. Project teams are led by the MGI partners and a group of senior fellows, and include consultants from McKinsey offices around the world. These teams draw on McKinsey's global network of partners and industry and management experts. Input is provided by the MGI Council, which coleads projects and provides guidance; members are Andres Cadena, Sandrine Devillard, Richard Dobbs, Katy George, Rajat Gupta, Eric Hazan, Eric Labaye, Acha Leke, Scott Nyquist, Gary Pinkus, Oliver Tonby, and Eckart Windhagen. In addition, leading economists, including Nobel laureates, act as research advisers. The partners of McKinsey fund MGI's research; it is not commissioned by any business, government, or other institution. For further information about MGI and to download reports, please visit [www.mckinsey.com/mgi](http://www.mckinsey.com/mgi).

## IN BRIEF

# CHINA'S ROLE IN THE NEXT PHASE OF GLOBALIZATION

Countries around the world have benefited from participating in the cross-border flows of goods, services, capital, people, and data that bind the global economy together. Global flows of data in particular have grown 45 times larger over the past decade and now exert an even greater impact on global GDP than trade in goods. But while globalization accelerates growth, it also amplifies disruption. Policy makers now face the challenge of finding a way to preserve the benefits of globalization while addressing its negative consequences. With some advanced economies turning inward, a successful reset of globalization may depend on whether China throws its considerable weight behind a new approach.

- Drawing more countries into global markets and value chains has produced economic growth around the world and lifted millions out of poverty in developing nations—and China has been the most dramatic success story by far. Its double-digit GDP growth in the mid-2000s was fueled by even faster growth in the flow of traded goods. Now accounting for more than a quarter of global manufacturing value add, China has climbed to rank seventh in the MGI Global Connectedness Index.
- But while developing economies such as China have boomed, reducing inequality between countries, inequality has risen *within* many countries. Across 25 advanced economies, some two-thirds of households experienced stagnating or declining income from 2005 to 2014—all while watching the wealthiest few in their countries realize tremendous gains. Growing inequality has led to a political backlash. There is a growing danger that a wave of populism and protectionism could reverse globalization and reduce its attendant economic benefits. Without global cooperation, the world also becomes more vulnerable to threats such as terrorism, pandemics, and climate change.
- While domestic policy is the primary vehicle for addressing issues of economic growth and inequality, resetting globalization is also in order. Global investors need a greater focus on human capital. Workers will need better education and training to adjust to labor market shifts, whether they are caused by foreign competition or automation technologies. Additional priorities include broadening participation in the digital economy; building infrastructure projects to boost global demand and productivity; and improving global governance of cross-border investment, trade, and digital flows.
- China has opportunities to lead in each of these areas. First, as China seeks to upgrade the skills of its vast workforce, it can forge new education models with relevance to other countries facing similar transitions. Furthermore, China can globalize its higher education systems, direct its considerable research capacity to shared global challenges, and become a source of top talent. Second, China can help to bring the rest of the world online and lead international efforts to establish frameworks on data standards, cybersecurity, and artificial intelligence. Third, China can continue putting its capital to work building the world's infrastructure, with the One Belt, One Road initiative representing just the start. Finally, China can reshape multilateral agreements and institutions to bridge the world's developing and advanced economies.

Economies that close their borders risk cutting themselves off from market opportunities, innovation, investment, and healthy competition. But it will be difficult to sustain globalization if large segments of the population in countries around the world are disillusioned. Policy makers will need to make tangible efforts to address their concerns by steering globalization onto a more inclusive path. China has expressed its desire to champion this effort, and now the world will be watching its follow-up actions intently.

# CHINA'S ROLE IN THE NEXT PHASE OF GLOBALIZATION

Globalization has been a powerful force for economic growth. Research from the McKinsey Global Institute (MGI) finds that the movement of goods, services, finance, data, and people across borders adds to GDP and fuels productivity growth. Furthermore, countries benefit from both inflows and outflows.

China has been one of the pivotal drivers of this trend. Its transformation into a powerhouse of trade has helped to lift a huge population into the middle class, creating massive market opportunities. While China's rise may be the most dramatic manifestation, drawing more countries into global markets and value chains has produced economic growth around the world and historic progress toward reducing poverty in developing nations.

But the era of globalization has also been a period of deepening inequality. Digitization and automation have unleashed job churn and disruption, but global trade has also contributed—and it has been a clearer political target. Today calls for protectionism and immigration restrictions are gaining traction in the West, but this path could have damaging consequences in a world still struggling to jumpstart growth. It would pose real risks for China, whose economic prospects are deeply intertwined with its integration into world markets.

Responding to this pushback does not require reversing course. Instead it calls for a new framework that can preserve the positive impact of globalization while delivering more inclusive growth and addressing the externalities. It is in China's best interest to play a leadership role in resetting globalization as the nation seeks to ensure its own future economic growth and domestic stability.

## A MORE INTERCONNECTED AND DIGITAL GLOBAL ECONOMY HAS PRODUCED BOTH GROWTH AND DISRUPTION

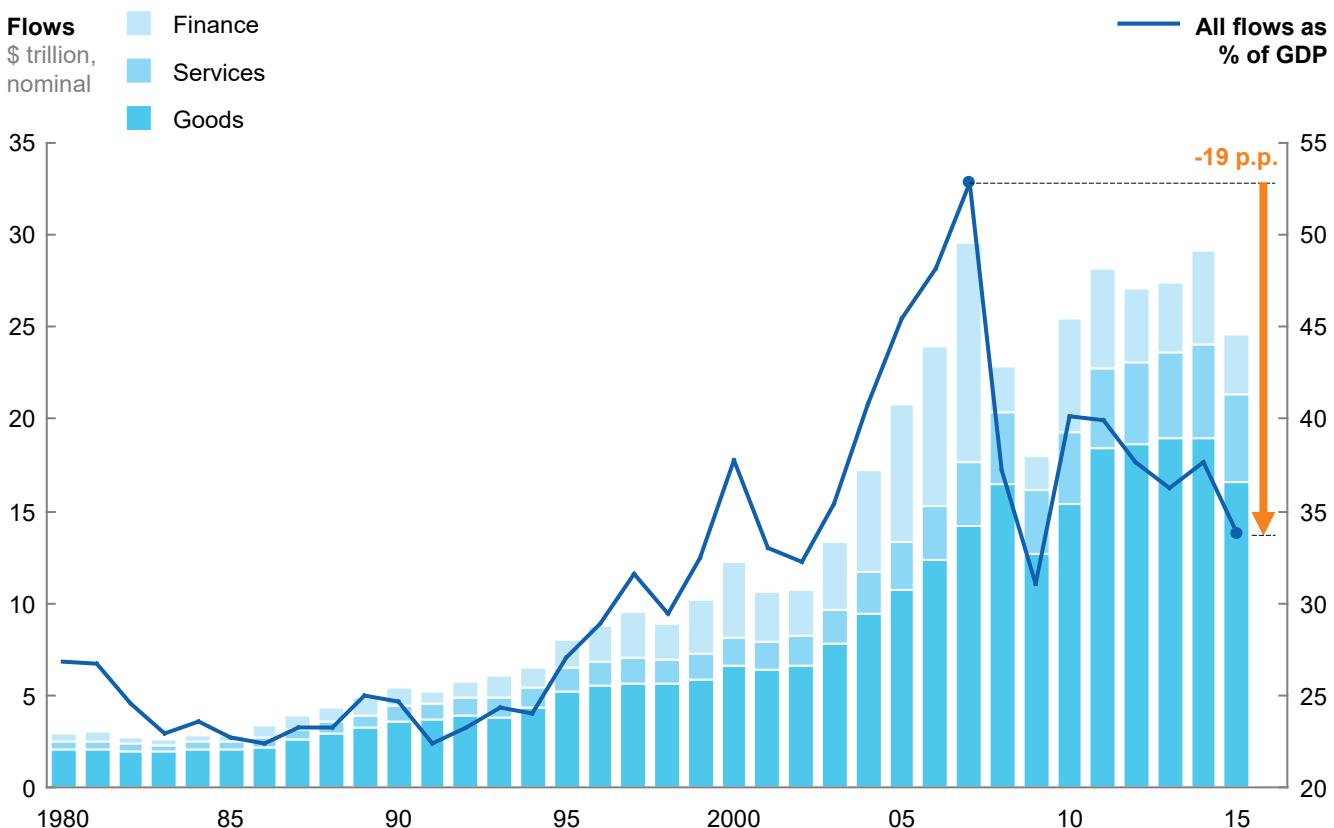
The world has never been more intricately tied together by global flows of commerce and communication than it is today. In 1990, \$5 trillion worth of goods, services, and finance moved across the world's borders, equal to 24 percent of world GDP at that time. By 2007, on the eve of the financial crisis and the Great Recession, that figure had soared to some \$30 trillion, equivalent to 53 percent of GDP. In 2015, it had declined to about 34 percent of GDP, reflecting some fundamental shifts—most notably a sharp drop in cross-border capital flows and a shortening of global supply chains as consumer demand sharply declined in developed markets (Exhibit 1). These are not the only changes that have occurred, however: For the first time in history, emerging economies are counterparts in more than half of global trade flows, and trade between these countries is the fastest-growing type of connection.

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## Exhibit 1

**After 20 years of rapid growth, traditional flows of goods, services, and finance have declined relative to GDP**

1980–2015



SOURCE: UNCTAD; IMF Balance of Payments; World Bank; McKinsey Global Institute analysis

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### Globalization goes digital

Between 1985 and 2007, the world's trade in goods grew roughly twice as fast as global GDP as multinational corporations built far-flung supply chains to serve developed markets by establishing new bases of production in emerging economies with lower-cost labor.

As those nations rapidly urbanized and industrialized, they themselves became important new markets for commodities and consumer goods, bolstering global demand. During this period, national financial markets also became more intertwined, connecting borrowers and savers from different countries.

Both global trade in goods and cross-border financial flows took sharp tumbles during the financial crisis and the Great Recession. Since then, global trade bounced back but is now flattening for a variety of reasons, including lower commodity prices, sluggishness in many major economies, and a trend toward producing goods closer to the point of consumption. Capital flows remain at a fraction of the heights reached during the bubble years.

But globalization has proven to be a powerful secular trend. Instead of stalling out in the face of the financial crisis, it has assumed a new—and more digital—form. Trade in goods and cross-border capital flows still form an important part of the global economy, but flows of data and information are now providing the real momentum behind globalization. A large share of global Internet traffic is driven by companies interacting with their foreign operations, suppliers, and customers. Now that digital files are transmitted around the world with the click of a mouse and it is possible to collaborate remotely through video conferencing and other tools, half of the world's traded services have been digitized.

Twelve percent of the global goods trade is conducted via international e-commerce; online marketplaces enable companies and consumers to buy products from anywhere in the world.

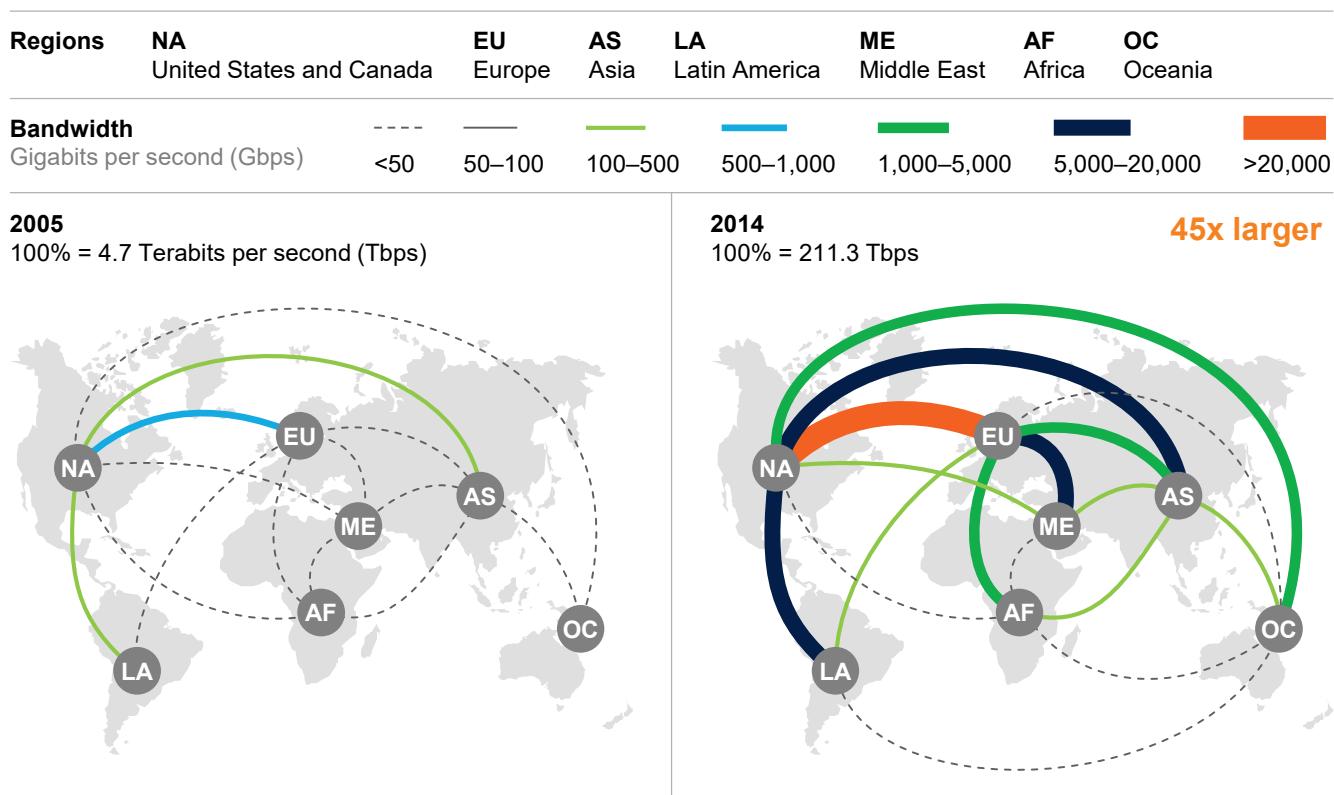
Digitization has introduced three new phenomena into the equation. First and foremost, large-scale Internet platforms link millions of businesses and customers around the world while driving down the cost of cross-border interactions and transactions. Second, purely digital goods and services are now traded virtually and instantly. And finally, “digital wrappers” (such as sensors and trackers that enable better logistics management) have been added to many traditional products, enhancing their value. In addition to transmitting valuable streams of information and ideas in their own right, cross-border data flows enable other flows of goods, services, finance, and people. Virtually every type of cross-border transaction now has a digital component.

MGI’s econometric research finds that data flows now exert a larger impact on economic growth than traditional goods flows. This is a remarkable development given that the world’s trade networks developed over centuries but cross-border data flows were negligible just 15 years ago. While flows of goods and finance have lost momentum, cross-border used bandwidth has grown 45 times larger since 2005 (Exhibit 2). It is projected to grow by another nine times in the next five years as digital flows of commerce, information, searches, video, communication, and intracompany traffic continue to surge.

## Exhibit 2

### Cross-border data flows are surging and connecting more countries

#### Used cross-border bandwidth



NOTE: Lines represent interregional bandwidth (e.g., between Europe and North America) but exclude intraregional cross-border bandwidth (e.g., connecting European nations with one another).

SOURCE: TeleGeography, Global Internet Geography; McKinsey Global Institute analysis

## As it fuels growth, globalization has amplified change and disruption

The age of globalization has coincided with a period of remarkable growth. The world's GDP has risen by 2.9 percent annually since 1980.<sup>1</sup> Global labor productivity rose at 1.8 percent annually over the past 50 years, a period during which life expectancy jumped from 55 to 72 years.<sup>2</sup> This speaks to the fact that global exchanges of people, research, and ideas have had far-reaching ripple effects. The dissemination of technologies, best practices, and medical advances has greatly enhanced the economic prospects and quality of life in developing nations. As these countries became more connected to global markets, some 1.1 billion people around the world exited extreme poverty from 1990 to 2013, with the greatest progress made in China, India, and Indonesia.<sup>3</sup> In advanced economies, globalization has been a boon to consumers, increasing their purchasing power and range of choices.

Globalization has fueled growth in advanced and developing economies alike, although the strength of each country's institutions and its approach to industrial policy influence the degree to which it is able to realize the benefits.<sup>4</sup> The economic benefits stem from globalization's capacity to amplify several fundamental trends that are playing out simultaneously in countries around the world:

- **Urbanization.** Emerging economies are rapidly industrializing to stake out a role in global value chains—and as they do, millions of people are moving from the countryside to find better opportunities in cities. Across the developing world, hundreds of millions of people are undertaking massive internal migrations at a speed never before seen in history. Cross-border people flows have further fueled urbanization, with large international communities taking root in major global cities. Immigrants make up 31 percent of the population in New York City, 37 percent in London, and 27 percent in Munich, for example.<sup>5</sup> The growth of both megacities and midsize cities is creating an urgent need for infrastructure, pooling more labor, and fueling the world's fastest-growing consumer markets. As modern infrastructure is completed, it will further reshape the world's value chains. MGI estimates that large cities generate about 75 percent of global GDP today and will generate 86 percent of worldwide GDP growth between 2015 and 2030. But even as urban areas in the developing world continue to grow, population declines are expected in many of the largest cities in advanced economies, which will have implications for growth trends and the role of new immigrants.<sup>6</sup>
- **Digitization.** With China at the center of global supply chains and supporting global demand, the cost of mobile phones has plummeted, enabling these devices to proliferate rapidly. The share of smartphone subscribers in emerging economies rose from 7 percent of the total population in 2012 to 25 percent by 2015 and is expected to reach 45 percent by 2020.<sup>7</sup> As of the end of 2015, some 3.2 billion people around the world—accounting for 43.4 percent of the global population—were online and

<sup>1</sup> According to World Bank data, world GDP was \$27.6 trillion in 1980 and \$74.9 trillion in 2015, both measured in constant 2010 US dollars (<http://data.worldbank.org/indicator/NY.GDP.MKTP.KD>).

<sup>2</sup> World Bank data for life expectancy at birth for 1964 and 2014: <http://data.worldbank.org/indicator/SP.DYN.LE00.IN>

<sup>3</sup> *Poverty and shared prosperity 2016*, The World Bank. See also Andreas Bergh and Therese Nilsson, "Is globalization reducing absolute poverty?" *World Development*, volume 62, 2014.

<sup>4</sup> See, for example, *Digital globalization: The new era of global flows*, McKinsey Global Institute, February 2016; Matthias Busse and Jens Koeniger, *Trade and economic growth: A re-examination of the empirical evidence*, Hamburg Institute of International Economics, research paper 123, 2012; Lill Anderson and Ronald Babula, "The link between openness and long-run economic growth," *Journal of International Commerce and Economics*, July 2008; and Dani Rodrik, *Growth after the crisis*, paper prepared for the Commission on Growth and Development, May 2009.

<sup>5</sup> *People on the move: Global migration's impact and opportunity*, McKinsey Global Institute, December 2016.

<sup>6</sup> *Urban world: Meeting the demographic challenge in cities*, McKinsey Global Institute, October 2016.

<sup>7</sup> *Digital finance for all: Powering inclusive growth in emerging economies*, McKinsey Global Institute, September 2016.

empowered to access information and opportunities.<sup>8</sup> Some 900 million people have international connections on social media, and 360 million take part in cross-border e-commerce. The world's biggest digital platforms tap into these numbers, creating markets and user communities with global scale.

- **Demographics.** Between 1980 and 2010, some 1.2 billion people came of working age and joined the world's labor force. As emerging markets have become more connected to global supply chains, these countries have become a significant source of labor for multinationals—not only for offshoring activities in traded industries, but also to establish local bases of production for goods to be sold in these fast-growing markets.<sup>9</sup> Rising global competition led firms in advanced economies to specialize in capital- and knowledge-intensive activities, rather than labor-intensive ones, even as increasing geographic mobility of supply chains may have decreased labor's bargaining power in these countries. At the same time, labor has become more mobile—and global flows of people can be an important source of labor force growth to maintain economic momentum in aging societies. Immigrants generated 40 to 80 percent of labor force growth between 2000 and 2014 in the top destination economies, many of which rely on cross-border migrants to fill occupational shortages. Foreign-born workers represent 28 percent of the labor force in Oceania, 18 percent in North America, and 14 percent in Western Europe.<sup>10</sup>

However, while globalization has produced net economic benefits, it has also amplified negative externalities that are altering societies around the world for worse:

- **Climate change.** The rapid growth of cities is straining urban infrastructure and creating a multitude of environmental pressures. While it is difficult to draw a straight causal line from globalization to climate change, the industrialization and consumption growth intertwined with this trend have contributed to deforestation, pollution, and increased emissions. This looming threat is now a reality that needs to be met with collective global action.
- **Volatility.** Our more interconnected world is a more volatile world. As the global financial crisis showed, shocks in one part of the world can be quickly transmitted throughout the system. Lengthy and complex global supply chains are more exposed to disruption, and digital networks are vulnerable to global cyberattacks. The ability to connect with the world digitally on a 24/7 basis is altering social and personal interactions. The movement of people across borders as part of a more global labor market is being met with resistance by those who fear competition for jobs or simply dislike multiculturalism.
- **Inequality.** Finally, globalization has exacerbated inequality, as we will discuss below. A growing income gap in many countries has created its own sociopolitical tensions.

All of these factors, but particularly growing inequality, have left many people disillusioned with globalization.

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<sup>8</sup> *The state of broadband 2015: Broadband as a foundation for sustainable development*, International Telecommunication Union and UNESCO Broadband Commission for Digital Development, September 2015.

<sup>9</sup> *Playing to win: The new global competition for corporate profits*, McKinsey Global Institute, September 2015.

<sup>10</sup> *People on the move: Global migration's impact and opportunity*, McKinsey Global Institute, December 2016.

## CHINA HAS BEEN A MAJOR ENGINE OF GLOBALIZATION—AND ONE OF ITS PRIME BENEFICIARIES

Globalization has provided the backdrop against which countries around the world have posted growth. The rapid industrialization and urbanization it unleashed in many developing economies established a pathway for millions of people to exit poverty.

China's rise has been by far the most dramatic success story associated with globalization. The nation's current status as one of the world's most connected countries is remarkable given that it was a closed economy just four decades ago. Its period of double-digit GDP growth in the mid-2000s was fueled by even faster growth in the flow of goods in and out of China. Its exports surged from just \$257 billion in 2000 to \$2.4 trillion in 2016, making it the world's top exporter, accounting for 12 percent of the global total. China has also become the world's second-largest importer, having taken in about \$2.0 trillion worth of goods (10 percent of the global total) in 2016.

China's vast manufacturing sector is deeply integrated into global value chains. According to government statistics, the number of foreign-funded enterprises in China more than doubled from 230,000 in 2000 to 481,000 in 2015—and these businesses account for roughly half of total exports, 30 percent of output, and 10 percent of employment.<sup>11</sup> FDI has more than tripled since 2000, creating productivity spillovers for domestic firms. In 2016, China's outbound foreign direct investment surpassed inbound FDI, making the country a net exporter of capital. Its outbound investment now exceeds that of Japan and is second only to the United States.

Today China ranks seventh in MGI's Global Connectedness Index, which ranks countries on inflows and outflows of goods, services, finance, people, and data (Exhibit 3). China stands out for its high level of connectedness relative to its income. This research also looks at where individual cities and provinces would fall in the global rankings alongside national economies. It finds that the booming coastal province of Guangdong would rank sixth globally in terms of goods flows, above the United States, while Shanghai and Beijing would top Japan and Italy in goods flows.<sup>12</sup>

As China has transformed into a powerhouse of global trade, its GDP has risen more than 25-fold since 1980. More than 600 million people have exited poverty, and there are now 116 million middle-class and affluent households (with annual disposable income of at least \$21,000 per year) compared with just 2 million such households in 2000. Private consumption grew by more than \$1 trillion from 2010 to 2015, accounting for one-quarter of global consumption growth.<sup>13</sup> China has moved beyond being a source of low-cost manufacturing labor for multinationals; it is now one of the world's most lucrative consumer markets for both local and global companies.

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<sup>11</sup> Latest figures from the Ministry of Commerce and National Bureau of Statistics.

<sup>12</sup> The index takes into account the size of each flow for a country relative to its own GDP or population (flow intensity) as well as its share of each total global flow. See *Digital globalization: The new era of global flows*, McKinsey Global Institute, February 2016.

<sup>13</sup> *China's choice: Capturing the \$5 trillion productivity opportunity*, McKinsey Global Institute, June 2016.

### Exhibit 3

#### MGI Connectedness Index

##### Country connectedness index and overall flows data, 2014

Rank of participation by flow as measured by flow intensity and share of world total

**Connectedness index rank** ■ 1–10 ■ 11–25 ■ 26–50 ■ >50      **Flow intensity** ■ 100+ ■ 70–99 ■ <70

Rank	Country	Score	Connectedness Index rank					Flow value <sup>1</sup> \$ billion	Flow intensity <sup>2</sup> % of GDP
			Goods	Services	Finance	People	Data		
1	Singapore	64.2	1	2	2	12	6	1,392	452
2	Netherlands	54.3	3	3	6	21	1	1,834	211
3	United States	52.7	7	7	3	1	7	6,832	39
4	Germany	51.9	2	4	8	3	2	3,798	99
5	Ireland	45.9	32	1	1	28	9	559	227
6	United Kingdom	40.8	13	5	5	6	3	2,336	79
7	China	34.2	4	16	4	82	38	6,480	63
8	France	30.1	11	8	9	7	4	2,262	80
9	Belgium	28.0	5	6	33	33	8	1,313	246
10	Saudi Arabia	22.6	20	28	27	2	53	790	106
11	United Arab Emirates	22.2	6	23	17	4	46	789	196
12	Switzerland	18.0	12	11	10	17	13	848	115
13	Canada	17.3	16	22	11	11	18	1,403	79
14	Russia	16.1	21	25	18	5	25	1,059	57
15	Spain	14.4	25	13	19	14	16	1,105	79
16	Korea	14.0	8	12	28	50	44	1,510	107
17	Italy	13.4	17	18	24	16	19	1,587	74
18	Sweden	13.0	29	14	22	31	5	572	100
19	Austria	11.7	26	17	31	20	12	470	108
20	Malaysia	11.6	9	19	25	26	43	610	187
21	Mexico	10.7	14	63	34	18	41	1,022	80
22	Thailand	10.7	10	15	36	44	64	605	162
23	Kuwait	10.6	37	46	13	13	75	306	153
24	Japan	10.5	15	20	12	81	20	2,498	54
25	Kazakhstan	10.0	48	73	41	8	57	176	83
26	Ukraine	9.8	38	39	87	10	34	133	101
27	Australia	9.7	30	34	21	15	33	825	57
28	Denmark	8.9	35	9	32	41	11	369	108
29	Jordan	8.8	73	50	75	9	83	50	138
30	India	8.5	24	10	35	58	70	1,316	64
32	Czech Republic	7.5	18	33	57	59	15	397	193
34	Poland	7.0	23	31	47	34	22	585	107
35	Hungary	6.8	22	30	26	62	17	287	209
36	Norway	6.0	36	24	20	46	24	458	92
37	Vietnam	5.7	19	54	45	103	61	350	188
39	Finland	5.5	46	27	23	70	10	390	144
40	Portugal	5.5	47	36	30	23	31	255	111
41	Turkey	5.1	28	40	53	38	29	521	65
43	Israel	4.9	51	32	49	24	56	248	82
44	Brazil	4.5	41	38	14	125	30	869	37
45	Chile	4.1	45	58	16	102	27	239	92
47	Greece	4.1	60	29	54	35	42	160	67
48	New Zealand	3.9	67	48	61	25	51	130	63
51	Indonesia	3.4	31	49	38	106	76	504	57
53	South Africa	3.3	34	57	52	64	80	277	79
54	Philippines	3.2	54	41	44	52	67	230	81
64	Morocco	2.6	58	43	74	56	65	104	97
73	Egypt	2.2	68	42	69	73	71	158	55
83	Nigeria	1.9	55	76	48	128	98	268	47
86	Peru	1.8	62	88	51	104	49	122	60
118	Kenya	1.3	100	84	127	119	91	35	58

1 Flows value represents total goods, services, and financial inflows and outflows.

2 Flow intensity represents the total value of goods, services, and financial flows as a share of the country's GDP.

SOURCE: McKinsey Global Institute analysis

Chinese firms now account for a greater proportion of the corporate universe, intensifying global competition in many industries. While this dynamic supports greater allocative efficiency, it has also produced churn and margin pressure as Chinese and other emerging market companies capture greater market share at the expense of industry incumbents.<sup>14</sup> The makeup of the Fortune Global 500 illustrates this shift in corporate geography. The number of Chinese firms on the list rose from 43 in 2010 to 103 in 2016, making China's representation second only to that of the United States. Among the world's billion-dollar firms, approximately 900 are from the Greater China region.

Having grown to significant size at home, Chinese companies are now using M&A to expand their global presence.<sup>15</sup> This strategy began in the resource sector; energy- and materials-related deals accounted for 62 percent of outbound M&A between 2006 and 2010. This share fell to 46 percent between 2011 and 2015, as deals increasingly branched into areas such as technology, real estate, and entertainment. Chinese M&A has also broadened its geographic reach. From 2011 to 2015, a quarter of all outbound deals were for targets in North America, and estimates indicate that Chinese investment in the United States tripled between 2015 and 2016.<sup>16</sup> Consider just a few of the headline deals in recent years: ChemChina's \$43 billion deal with Syngenta, a Swiss-based seed company; Midea's acquisition of Kuka, a German robot maker; Shuanghui International's purchase of US-based Smithfield Foods, the world's largest pork producer and processor.

China's increasing outbound investment has had an outsized impact in developing regions such as Africa, where some Chinese firms have expanded with offers to build turnkey infrastructure projects, including hydroelectric plants and railways. In 2013 alone, Chinese firms accounted for nearly half of the more than \$30 billion in foreign investment that went into African infrastructure. Chinese investment in labor-intensive industries abroad can create opportunities for other developing countries to climb the ladder of economic development.<sup>17</sup>

After its long period of rapid investment-led growth, China now faces the challenge of establishing a more sustainable trajectory. But under any scenario, China and its influence on the world will continue to grow. Even as the nation shifts to an economic model that puts more emphasis on domestic consumption, its global ties will continue to be of great strategic importance. While the nation already ranks high in flows of goods and finance, it has more limited exposure to global flows of data and long-term migration. Given that the global goods trade has generally been flattening and globalization is becoming a more digital phenomenon, China will need to consider how to benefit from flows of data, services, and people.

China has successfully used trade as a springboard for economic development, propelling millions into the middle class. Deepening its participation in global flows of services, people, and data may help China continue to drive growth in the years ahead. The nation is deeply embedded into the global economy, and its prospects for continued economic growth and social stability are closely tied to the success of globalization. Indeed, China cannot de-globalize. It is in the nation's own interests to take the lead in addressing some of the externalities and investing in global public goods to counteract other nations turning inward.

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<sup>14</sup> Caroline Freund and Dario Sidhu, *Global competition and the rise of China*, Peterson Institute for International Economics, working paper 17-3, February 2017.

<sup>15</sup> *A pocket guide to Chinese cross-border M&A*, McKinsey & Company Strategy & Corporate Finance Practice, April 2017.

<sup>16</sup> *China's choice: Capturing the \$5 trillion productivity opportunity*, McKinsey Global Institute, June 2016.

<sup>17</sup> Justin Yifu Lin and Yan Wang, *China-Africa co-operation in structural transformation: Ideas, opportunities, and finances*, United Nations University WIDER working paper 2014/046, February 2014.

## A GROWING BACKLASH IN DEVELOPED COUNTRIES HAS BROUGHT GLOBALIZATION TO A CRITICAL TURNING POINT

While the global economy experienced positive growth overall during the past decade, not every country progressed at the same rate. Advanced economies continued to grow at a slower pace, while developing nations around the world made rapid gains. The result was a narrowing of inequality *between* nations. But income inequality has widened *within* many countries.<sup>18</sup> These variations have shaped popular perceptions of globalization's negative consequences, particularly among citizens of advanced economies.

Across 25 advanced economies, 65 to 70 percent of households were in segments that experienced stagnating or declining income from 2005 to 2014.<sup>19</sup> The lower middle classes in these countries made the weakest relative gains during the period of rapid globalization that occurred between 1988 and 2008. Although they still enjoy greater levels of well-being than their counterparts in the developing world, they have felt their standing slip while watching the wealthiest few in their own countries realize tremendous gains. Within the United States, a significant share of globalization's benefits went to the nation's top earners, who account for half of the world's "1 percent."<sup>20</sup>

Globalization is not the sole cause of growing inequality in developed economies. The transition to a digital economy that disproportionately rewards highly skilled workers and devalues routine tasks has been a driving factor, and to date, advanced economies have been unable to design mechanisms for retraining and skills development to help their overall workforces adapt to this shift. But import competition also played a role.<sup>21</sup> Exposing local industries to international competition spurs efficiency and innovation, but it has taken a toll on workers and incumbent businesses. The integration of developing economies into global value chains accelerated after 2000, as multinationals increasingly engaged in labor arbitrage in an effort to lower production costs.<sup>22</sup> One study found that trade with China since 2000 erased thousands of manufacturing jobs in the United States; these losses tended to be localized in hard-hit communities, and the effects have persisted for more than a decade.<sup>23</sup>

In advanced economies where underlying growth has been lackluster, there is a growing tendency to gloss over the effects of technological change and blame globalization—in all its forms—for the fact that large segments have fallen behind. Xenophobia and racism appear to be on the upswing. A recent MGI survey found that a large proportion of the middle- and low-income groups in Europe experiencing flat or falling real incomes expressed pessimism about the future and were more likely to hold negative views about immigrants.<sup>24</sup> Many observers have linked this resentment of global trade and immigration to worsening political

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<sup>18</sup> François Bourguignon, *The globalization of inequality*, Princeton University Press, 2015.

<sup>19</sup> *Poorer than their parents? Flat or falling incomes in advanced economies*, McKinsey Global Institute, July 2016. It should be noted, however, that inequality has also increased in many developing economies such as India. See, for example, Nisha Agrawal, "Inequality in India: What's the real story?" World Economic Forum blog, October 4, 2016, [www.weforum.org/agenda/2016/10/inequality-in-india-oxfam-explainer/](http://www.weforum.org/agenda/2016/10/inequality-in-india-oxfam-explainer/).

<sup>20</sup> Branko Milanovic, *Global inequality: A new approach for the age of globalization*, Harvard University Press, April 2016.

<sup>21</sup> See, for example, Michael Spence, "The impact of globalization on income and employment: The downside of integrating markets," *Foreign Affairs*, July-August 2011.

<sup>22</sup> Trade involving developing nations increased from about 30 to 50 percent of all global trade between 2000 and 2014, with China's involvement increasing from about 5 to 20 percent in the same period. *Digital globalization: The new era of global flows*, McKinsey Global Institute, March 2016.

<sup>23</sup> David H. Autor, David Dorn, and Gordon H. Hanson, *The China shock: Learning from labor market adjustment to large changes in trade*, NBER working paper number 21906, January 2016.

<sup>24</sup> *Poorer than their parents? Flat or falling incomes in advanced economies*, McKinsey Global Institute, July 2016. See also Robert P. Jones et al., *How immigration and concerns about cultural changes are shaping the 2016 election: Findings from the 2016 PRRI/Brookings Immigration Survey*, Public Religion Research Institute and Brookings Institution, June 2016; in this survey, more than half of US respondents said that illegal immigrants hurt the economy by driving down wages.

polarization.<sup>25</sup> Populist movements in advanced economies have coalesced against global trade on both sides of the political spectrum. The left argues that globalization operates under rules that favor the wealthy, while many on the right blame trade deals and immigration for job losses and depressed wages.

While China has been a clear beneficiary of globalization, it is not guaranteed to remain immune from these pressures in the future. It has developed an extensive manufacturing ecosystem with hundreds of thousands of manufacturers and suppliers, setting it apart from other low-wage countries. While this has unfolded, its share of global manufacturing value added has increased from less than 7 percent in 2000 to nearly 26 percent in 2014.<sup>26</sup> This transformation is continuing to redraw the world's manufacturing landscape—and as China moves up the global value chain into more innovative industries, wages are rising and it may face labor adjustments of its own, similar to the issues facing workers in advanced economies. In addition, industrialization in China and other developing nations is causing societal and environmental stresses. These include the rapid unplanned growth of cities without sufficient infrastructure and housing as well as the absence of well-developed and enforced environmental regulation to protect clean air, water, and open space.<sup>27</sup>

Countries around the world are rethinking the terms of their engagement in global trade, cross-border finance, and international digital flows as well as their willingness to welcome cross-border migrants. A wave of populism and protectionism could reverse globalization. This scenario would pose serious economic and social risks for China. The threats posed by climate change, rising volatility, and social stresses are growing—not only for China itself but also for its neighbors. All of these are collective challenges that would be difficult for any country to face alone without international support.

While protectionist measures to save jobs may score political points in the short run, they can set off unintended consequences and retaliatory moves.<sup>28</sup> Discontent with globalization may be running high in the United States, but one study estimates that international trade may have been responsible for about one-quarter of total US productivity growth over the 1990s and 2000s, and it also provides middle-class consumers with more than a quarter of their purchasing power.<sup>29</sup> Trade wars could have harmful and unpredictable effects, shutting off a critically needed source of global growth without actually addressing many of the distributional issues at the root of popular discontent. Migrants contributed roughly \$6.7 trillion to global GDP in 2015, with North America and Western Europe capturing the vast majority of those benefits.<sup>30</sup> Economies that close their borders risk cutting themselves off from the labor force growth, innovation, and dynamism that immigrants bring.

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<sup>25</sup> See, for example, Ronald F. Inglehart and Pippa Norris, *Trump, Brexit, and the rise of populism: Economic have-nots and cultural backlash*, Harvard Kennedy School, faculty research working paper series, RWP16-026, August 2016; Justin Sink, Eleni Chrepa, and Margaret Talev, "Obama says Brexit and Trump powered by globalization fears," Bloomberg, November 15, 2016; and Wolfgang Keller and Hale Utar, "Globalisation and polarization in the wake of Brexit," VoxEU, July 5, 2016.

<sup>26</sup> *China's choice: Capturing the \$5 trillion productivity opportunity*, McKinsey Global Institute, June 2016.

<sup>27</sup> See, for example, *Outdoor air pollution and health in the developing countries of Asia: A comprehensive review*, Health Effects Institute, special report 18, November 2010; and Bo Zhang and Cong Cao, "Four gaps in China's new environmental law," *Nature*, volume 517, January 2015.

<sup>28</sup> Gary Clyde Hufbauer and Sean Lowry, *US tire tariffs: Saving few jobs at high cost*, Peterson Institute for International Economics, policy brief number PB12-9, April 2012. Recent estimates from economists at Morgan Stanley and Barclays warn that imposing tariffs would have a negative impact on US GDP, and the January CNBC Fed Survey showed a majority of economists and industry experts believe trade protectionism is the top threat to the US economy, with 83 percent viewing potential protectionist policies negatively (see [www.cnbc.com/2017/01/30/trumps-protectionism-biggest-threat-to-us-economys-growth-cnbc-fed-survey-respondents-say.html](http://www.cnbc.com/2017/01/30/trumps-protectionism-biggest-threat-to-us-economys-growth-cnbc-fed-survey-respondents-say.html)).

<sup>29</sup> *The economic benefits of US trade*, Executive Office of the President, May 2015.

<sup>30</sup> *People on the move: Global migration's impact and opportunity*, McKinsey Global Institute, December 2016.

## **THE WORLD NEEDS A NEW FRAMEWORK FOR GLOBALIZATION THAT PRESERVES ITS BENEFITS WHILE DELIVERING MORE INCLUSIVE GROWTH**

It will be increasingly difficult to sustain globalization if large segments of the population in countries around the world view it as a project by and for the elite. Policy makers will need to acknowledge more fully that globalization has not benefited everyone and make tangible efforts to steer it toward a more inclusive path. While domestic policy is the primary vehicle for addressing inequality of both income and opportunity, there is also work to be done at the international level. The world will need to invest more heavily in delivering global public goods such as education and training, digitization, and infrastructure as well as addressing threats such as climate change. The alternative for any country, including China, is to face these challenges alone without the benefits of scale that global collaboration brings.

### **Four strategies can support more inclusive growth and reset globalization**

The accelerating pace of new technology advances has the potential to widen existing social and economic divides and cause nations to turn inward. Disruption is inevitable; policy makers and business leaders will need to stay ahead of it.<sup>31</sup>

#### **Educate and equip workforces for labor market adjustments**

Countries will need to do more to support the workers and communities that have been hit hard by foreign competition in certain industries. More broadly, however, investing in human capital needs to be at the top of the global agenda.

The job churn of recent decades may be only a preview of what is still to come as more intelligent machines become capable of performing work that humans are now paid to do. MGI recently analyzed more than 2,000 work activities across 800 occupations in the global economy. Currently demonstrated technologies already appear to be technically capable of automating 50 percent of today's work activities. These activities touch almost 1.2 billion jobs globally (and almost 400 million in China alone). Many jobs will not be eliminated, but the day-to-day nature of a majority of occupations will change.<sup>32</sup>

This may take decades, and the pace will vary across countries and professions. This time lag will buy enough time to take action—but not enough time for complacency. Automation could deliver a productivity boost that is urgently needed to maintain growth in aging societies around the world, but a shift of this magnitude will need to be carefully managed. Many mid-career workers will need retraining, and it will be essential to work with private-sector employers to ensure that the skills being taught are marketable and relevant.

In the longer run, educational systems will also have to ensure that the next generation is better equipped to work alongside technology and that students acquire the mindset for lifelong learning. Schools will need a greater emphasis on science, technology, engineering, and math; even basic education and vocational programs will need to impart some level of data literacy. Today youth unemployment is an acute problem around the world; some 300 million young people worldwide are not involved in education, employment, or training.<sup>33</sup> This speaks to a serious disconnect between education systems and labor markets—an issue that will have to be addressed in order to avoid perpetuating inequality into the future.

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<sup>31</sup> For further discussion, see “The global forces inspiring a new narrative of progress,” *McKinsey Quarterly*, April 2017.

<sup>32</sup> This assumes that the human labor replaced by automation would rejoin the workforce and be as productive as it was in 2014. *A future that works: Automation, employment, and productivity*, McKinsey Global Institute, January 2017.

<sup>33</sup> Based on World Bank and OECD estimates.

## **Expand the digital economy and broaden participation in it**

In today's world, Internet access has become a necessity rather than a luxury. But as of the end of 2015, more than half of the world's population remained offline.<sup>34</sup> While even high-income countries have not connected their entire populations, the problem is acute in developing nations.

Bringing more of the world online can enhance economic growth. MGI's research finds that all types of global flows enhance productivity, but digital flows also have a unique capacity to increase labor and capital inputs. In other words, data flows and digitization have raised net employment within countries rather than reducing it. Furthermore, developing nations have the most to gain from increasing their exposure to digital flows. MGI found that the benefits to GDP growth for countries at the periphery of the global network are actually higher than for countries at the center of the network. For economies that have been relatively disconnected, the arrival of new digital platforms can be transformational. Anywhere from 15 to 30 percent of the GDP impact of data flows comes from consumers, while the remainder comes from B2B linkages within value chains.<sup>35</sup>

Bringing more small business into the digital economy is a critical aspect of making globalization more inclusive. E-commerce marketplaces such as Alibaba, Amazon, and eBay are providing millions of small and medium-size enterprises (SMEs) around the world with direct exposure to global customers as well as logistical support, payment infrastructure, and step-by-step guides. Similarly, social media platforms can provide global marketing for small firms, and digital finance platforms are expanding their access to capital. These are exciting developments, but they will reach their full potential only if the right multilateral agreements are in place. Creating digital trade agreements, as well as building the awareness, skills, and infrastructure needed to turn more small businesses into exporters, could spread the benefits of globalization beyond large corporations.

The digital economy is still in the early stages of development, and the world needs to ensure that the right foundations are in place for its continued growth. Sound, comprehensive, and open data ecosystems will determine whether technologies such as advanced analytics, the Internet of Things, and artificial intelligence fulfill their full promise to boost productivity. Global flows of data carry real economic value, so it will be critical to ensure that the world does not bring a protectionist mindset into cyberspace.

## **Continue to build infrastructure that supports global flows and stimulates global demand**

Today the world invests some \$2.5 trillion a year in transportation, power, water, and telecom systems.<sup>36</sup> Yet MGI estimates that from 2016 through 2030, the world needs to invest an average of \$3.3 trillion a year, or about 3.8 percent of GDP, just to support expected rates of growth. Emerging economies account for some 60 percent of that need.<sup>37</sup> Continuing to underinvest in the face of the world's ever-expanding needs will result in lower economic growth and deprive citizens of essential services.

Roads, ports, airports, rail, and telecom networks are the conduits of trade and mobility, and investment that modernizes and maintains these systems can propel economic growth. Infrastructure is also fundamental to achieving the UN Sustainable Development Goals of providing universal access to clean water, sanitation, and affordable, reliable, and

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<sup>34</sup> *The state of broadband 2015: Broadband as a foundation for sustainable development*, International Telecommunication Union and UNESCO Broadband Commission for Digital Development, September 2015.

<sup>35</sup> *Digital globalization: The new era of global flows*, McKinsey Global Institute, February 2016.

<sup>36</sup> Using a broader definition of infrastructure that includes real estate, social infrastructure, and backbone systems for the oil, gas, mining, and processing industries, the world spent \$9.6 trillion, or 14 percent of global GDP, in 2013.

<sup>37</sup> *Bridging global infrastructure gaps*, McKinsey Global Institute, May 2016.

sustainable energy—and the size of the funding gap triples if we consider what is needed to meet them. MGI estimates that infrastructure typically has a socioeconomic rate of return of around 20 percent. In other words, one dollar of infrastructure investment can raise GDP by 20 cents in the long run. These economic effects stem mostly from making economies more productive through means such as reduced travel time and costs, access to reliable electricity, or broadband connectivity for individuals and businesses.<sup>38</sup> In addition to the long-term productivity benefits, infrastructure construction immediately creates jobs. Estimates suggest that increasing infrastructure investment by one percentage point of GDP could generate an additional 3.4 million direct and indirect jobs in India, 1.5 million in the United States, 1.3 million in Brazil, and 700,000 in Indonesia.<sup>39</sup>

Chronic underinvestment in infrastructure is hollowing out the productive capacity of economies around the world. This has aggravated weak demand, making it difficult for advanced economies to jumpstart growth.<sup>40</sup> While national and regional governments will have to make decisions about increasing investment, there is ample room for creative funding solutions that involve international financing. According to a 2016 estimate, institutional investors and banks have \$120 trillion in assets under management, some of which could be directed into project finance.<sup>41</sup> Solid cross-border investment principles will need to be put in place to attract institutional investors to global infrastructure projects. The world also needs mechanisms for sharing best practices in areas such as engineering, project finance, project management, construction technologies, sustainable infrastructure, and clean energy.

### **Commit to principles of better global governance**

After an era in which globalization came to be viewed with skepticism, it will be critical to secure popular buy-in. Proclamations alone will not be sufficient to rebuild trust; the public will need to see tangible steps toward reform and inclusiveness. This starts with putting the right frameworks in place and putting the resources of existing multilateral institutions into addressing the most critical externalities such as climate change.<sup>42</sup>

While the global economy has become more interconnected, standards, regulatory regimes, reporting requirements, and legal systems remain fragmented—and in many cases, global actors have capitalized on these differences to engage in arbitrage and evade accountability. Including labor standards and ethical sourcing requirements in trade agreements can end some abusive practices and dispel the impression held by many skeptics that global trade is largely a “race to the bottom.” Healthy competition is one of the most powerful spurs to productivity and innovation. Countries can create a level playing field that enables this dynamic by lowering market barriers rather than sealing off local industries from the effects of foreign competition.

As the Internet grows more global, many areas of its governance are still regulatory vacuums. The world urgently needs frameworks to govern fast-growing cross-border digital flows. It is critical to establish international standards and a multilateral regulatory regime so that SMEs and consumers are not disadvantaged. This will need to include standards for protecting personal data privacy and consumer protection from online fraud; mechanisms for cross-border enforcement; multilateral responses to cybersecurity; and intellectual property protection. Countries will also need to address barriers to e-commerce such as

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<sup>38</sup> Ibid.

<sup>39</sup> *Infrastructure productivity: How to save \$1 trillion a year*, McKinsey Global Institute, January 2013.

<sup>40</sup> See, for example, Lawrence Summers, “The age of secular stagnation: What it is and what to do about it,” *Foreign Affairs*, February 2016.

<sup>41</sup> *Secular stagnation and low investment: Breaking the vicious cycle*, McKinsey Global Institute discussion paper, April 2016.

<sup>42</sup> Andrew Sheng, “Funding global public goods for world’s recovery,” *China Daily*, May 25, 2016.

customs, differential access to the Internet, and geo-blocking. Data protectionism could limit the potential value of cross-border capital flows.

Rather than minimizing the problems associated with globalization, policy makers need to anticipate and acknowledge them frankly in order to solve them. When trade deals are being considered, it is far more effective to recognize the possibility of job losses up front and consider the need for retraining and reinvestment to mitigate those losses rather than sweeping the negative consequences under the rug.

Policy makers should also look for initiatives that have tangible benefits people can see in their own lives. This does not have to be limited to investment from advanced economies to build infrastructure or establish production bases in the developing world. It can involve making creative deals to bring investment into disadvantaged communities in high-income countries as well. It may also involve the diffusion of knowledge, which many consider to be the primary mechanism by which globalization contributes to growth.<sup>43</sup> In many areas of scientific inquiry and technology, breakthroughs occur when the best and brightest minds come together, regardless of nationality, to share data and ideas. New mechanisms for international collaboration might include expanded student exchange programs or international medical research initiatives.

Innovations fostered in one part of the world also need to make their way to the broader global populations who stand to benefit. This is especially critical in terms of expanding access to medical breakthroughs. But it also extends to other areas, such as digital finance. Around the world, some two billion people and millions of small businesses lack access to financial services. Delivering payments and financial services by mobile phone and the Internet has proven to be a powerful tool for improving lives and promoting growth in countries such as Kenya.<sup>44</sup> Many other countries lack adequately developed banking systems, and the diffusion of financial technology could make an enormous difference to disadvantaged populations.

### **CHINA CAN PLAY A MAJOR ROLE IN STEERING GLOBALIZATION IN A MORE POSITIVE AND INCLUSIVE DIRECTION**

China has expressed its desire to lead on international issues, and now the world will be watching its follow-up actions intently. Assuming a global leadership role can be in fact the safest and most effective way for China to continue its transition to a modern economy as well as to deal with the challenges of climate change, volatility, and inequality worldwide. At a moment when many of the world's advanced economies are turning inward, a successful reset of globalization may well depend on whether China throws its considerable weight behind a new approach and more fully embraces the idea of openness.

The four global strategies discussed in the previous section can launch a new and healthier phase of globalization. Within each of these, we believe that China can and should make a bold statement and a distinctive contribution (Exhibit 4).

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<sup>43</sup> Gene M. Grossman and Elhanan Helpman, "Globalization and growth," *American Economic Review: Papers and Proceedings* 2015, volume 105, number 5, May 2015.

<sup>44</sup> *Digital finance for all: Powering inclusive growth in emerging economies*, McKinsey Global Institute, September 2016.

## Exhibit 4

### Globalization needs a reset, and China can play a greater role

Priorities	Global strategies	China's role and contribution
<b>Educate and equip workforces for labor market adjustments</b>	<ul style="list-style-type: none"> <li>▪ Prioritize investing in human capital</li> <li>▪ Prepare the next generation to work with technology; make lifelong learning available</li> <li>▪ Invest in hard-hit communities; provide better retraining</li> </ul>	<ul style="list-style-type: none"> <li>▪ Upgrade the skills of a vast workforce and address disparities. Take advantage of size and diversity to experiment; share best practices</li> <li>▪ Globalize higher education. Develop and attract world's top talent; take Chinese institutions abroad. Spur global innovation; bring research capacity to shared global challenges</li> </ul>
<b>Expand the digital economy</b>	<ul style="list-style-type: none"> <li>▪ Bring the entire world online</li> <li>▪ Encourage SMEs to capture export growth using global digital platforms</li> <li>▪ Establish standards and open data ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>▪ Bring digital infrastructure and devices to other developing nations</li> <li>▪ Support SMEs in going digital</li> <li>▪ Lead global innovation in frontier areas such as artificial intelligence</li> </ul>
<b>Build infrastructure that supports global flows and stimulates demand</b>	<ul style="list-style-type: none"> <li>▪ End chronic underinvestment and build infrastructure needed to boost productivity and improve quality of life</li> <li>▪ Develop solid cross-border investment principles for infrastructure projects</li> <li>▪ Share expertise and best practices</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide needed capital for global infrastructure projects in both developing and developed economies</li> <li>▪ Advance green technologies to combat climate change</li> </ul>
<b>Commit to principles of better global governance</b>	<ul style="list-style-type: none"> <li>▪ Promote accountability and transparency in labor and environmental practices and tax regimes</li> <li>▪ Establish regulatory frameworks and standards for healthy cross-border digital flows</li> <li>▪ Ensure that the benefits of knowledge and technology reach everyone</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lead by example</li> <li>▪ Bridge between developed and developing nations within multilateral organizations; forge new institutions where needed</li> <li>▪ Explore new bilateral opportunities for investment and development</li> </ul>

SOURCE: McKinsey Global Institute analysis

### Educating the 21st-century workforce

China is undertaking a massive project to upgrade the skills of its vast workforce as its working-age population declines and the world grows more digital. As the economy shifts toward a productivity- and innovation-driven model, labor market restructuring is inevitable, potentially creating the need to redeploy hundreds of millions of workers. China will need to draw on all the resources of its industrial economy to meet this challenge by sharply expanding vocational training programs and closely partnering with private industry.

While China has achieved a great deal in public education over the past decades and now has more university students than any other country, access to high-quality education is uneven across the country, due in large part to funding disparities. Educational outcomes remain very different between regions, and a rural-urban divide persists. In the long term, MGI has estimated that by 2030 China could have about 40 million too few medium- and high-skill workers—and addressing this gap will be essential for companies to raise productivity and create jobs that will support a larger and stronger middle class.<sup>45</sup>

Just as China has invested heavily in building physical infrastructure, it now needs to emphasize investment in human capital. China has already increased public investment in education from 2.6 percent of GDP in 2000 to 4.2 percent in 2014—but this still lags behind

<sup>45</sup> For further discussion of this issue, see *China's choice: Capturing the \$5 trillion productivity opportunity*, McKinsey Global Institute, June 2016.

the 5 to 6 percent spent by France, the United Kingdom, and the United States.<sup>46</sup> A dramatic step up in education funding would prepare Chinese students from all regions for the challenges and opportunities of a more digital and knowledge-intensive world.

In addition to increasing overall spending on education, China will need to distribute funding more equitably across regions and income groups. But that is not to say that it needs to pursue a one-size-fits-all education and training strategy. China's huge size and diversity can provide a laboratory for experimentation and piloting new approaches, including the use of technology platforms and a greater role for the private sector. If China can forge successful education models, particularly in the realm of digital and remote learning, it could be of tremendous value to other countries where similar transitions are playing out.

Additionally, China can open up and globalize its higher education systems. Given its size and its goal of creating a more innovation-driven economy, China should aspire to play a greater role in developing and attracting the world's top talent. The nation has expanded its science and engineering programs, and now turns out some 30,000 graduates with PhDs each year. China also accounts for 35 percent of global patent applications.<sup>47</sup> According to the Nature Index, 40 out of the world's 100 most improved research institutions are in China, indicating that the country's innovation capacity is not only substantial but rapidly growing.<sup>48</sup>

But China can aim even higher. Despite its leadership position in trade flows, its global rankings for people and data flows are much lower in the MGI Connectedness Index.<sup>49</sup> These flows allow ideas and innovation to ricochet around the world and bring together the best minds. There are major opportunities to establish international research collaborations and two-way student exchanges, welcoming more of the best global talent to China. In addition to sending Chinese students abroad, Chinese universities can expand their presence globally.

China can also direct its considerable research capacity into tackling any number of challenges, whether developing affordable drugs and conquering chronic diseases or combating climate change and increasing agricultural yields. The entire world stands to benefit from the contributions China can make to global research and innovation.

### **Bringing the rest of the world online and contributing to frameworks for the global digital economy**

The digital divide reinforces inequality within and between nations. More than half of the world's population still lacks access to the world's most dynamic source of knowledge, information, and opportunities. Bringing them online will be an enormous task—and China, with its manufacturing prowess and expertise in building huge infrastructure projects, is one of the few global actors in a position to advance this goal. The Chinese government recently called for directing more technical and financial assistance to help developing countries seize digital opportunities. But making a bold move to lead this effort would inject new momentum into the global economy and demonstrate a tangible commitment toward inclusiveness.

China's future approach to cross-border digital flows will also be the subject of global interest. These represent the fastest-growing component of globalization and also the area most in need of global frameworks and leadership. China recently issued a statement on the need for international cooperation on issues such as data standards, data sharing,

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<sup>46</sup> Ibid.

<sup>47</sup> World Intellectual Property Organization press release, November 23, 2016.

<sup>48</sup> "Catch them if you can," *Nature*, volume 535, July 2016.

<sup>49</sup> *Digital globalization: The new era of global flows*, McKinsey Global Institute, February 2016.

cybersecurity, and other foundational issues.<sup>50</sup> It can help to convene this effort and create momentum.

MGI's work underscores that cross-border digital flows are a source of data, ideas, innovation, research, and connections that can boost productivity and growth. Taking a more open approach and participating more fully in global data flows could have real economic payoff—not only for China but for the world as a whole. China is one of the most advanced digital nations in terms of consumer adoption, with more than 700 million internet users. It is the world's biggest e-commerce ecosystem, accounting for more than 40 percent of global transactions, and it represents a lucrative market. The leading Chinese internet players are branching into multiple sectors and generating massive troves of data as they do so. However, China ranks only 36th in the world for its volume of cross-border data flows, which points to a significant opportunity to increase its digital connectivity to the world. Given the immensity of its own potential data sets, sharing more of China's own information with the world could also help to drive global growth.

China can also support greater participation in the global economy by SMEs. Digital platforms have already proven to be a springboard for SMEs to reach global customers, and China's e-commerce ecosystem has been one of the world's most powerful incubators for small merchants and manufacturers. China can continue to build on this momentum by following through on the commitments made at the recent G20 meetings in Hangzhou to reduce barriers and increase funding channels for SMEs globally, ensuring that small firms and entrepreneurs have the opportunity to become part of global value chains.

At the very frontiers of technology, China is one of the nations at the forefront of developing machine learning, robotics, and artificial intelligence. Further advancement will require international cooperation that promotes broader access to data, algorithms, capital, and talent. Given the unprecedented capabilities of intelligent machines, it will also be important to establish an international governing body to regulate AI, establish standards, and develop a code of ethics for its peaceful use. China is well positioned not only to facilitate this effort but to take a leadership role in it.

### Raising global infrastructure spending

Infrastructure investment was a major component of China's own economic rise, and now China is putting capital and momentum behind projects that can spur both economic and human development beyond its own borders. China has been leading initiatives to support the development of global infrastructure through new institutions such as the Asia Infrastructure Investment Bank and the New Development Bank. Perhaps the most ambitious manifestation of these efforts is the One Belt, One Road initiative (see Box 1, "One Belt, One Road in action").

China played a pivotal role in securing the Paris Agreement to combat climate change. Its leadership and follow-through will be essential to the success of this initiative, particularly as other nations may waver in their commitments. Building resilient and sustainable infrastructure is a pivotal part of preparing the developing world to cope with the effects of climate change. And as the world's largest investor in renewable energy, China can continue to advance green technologies—not only at home but around the world.

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<sup>50</sup> International Strategy of Cooperation on Cyberspace, Ministry of Foreign Affairs and the Cyberspace Administration of China, March 2017.

### **Box 1. One Belt, One Road in action**

One Belt, One Road is an ambitious development strategy to strengthen China's ties to markets in Central Asia, Europe, and Africa that are home to almost two-thirds of the world's population. The Chinese government is expected to facilitate more than \$2 trillion in investment, including energy, port, road, and railway projects. If successful, this initiative would expand the world's physical, financial, and business connections, drawing many underdeveloped regions more fully into global markets. Below we outline sample projects from a much broader portfolio to illustrate the potential.

- **Building a nationwide transportation network to jumpstart**

**Myanmar's economic development.** A new development plan has been proposed to the government of Myanmar for a nationwide transportation infrastructure network of highways, railroads, and waterways connecting 23 selected cities. In addition, six free trade zones, three special economic zones, and four industrial parks would be created to attract foreign investment. The project is meant to foster high-potential industries such as modern agriculture, tourism, and logistics, creating better jobs in a country where much of the population faces poverty. Total investment in the network is expected to reach \$140 billion to \$150 billion by 2020, drawing on public-private partnerships as well as development aid. The plan is a linchpin of the overall One Belt One Road goals, given Myanmar's strategic location at the crossroads of China, India, and Bangladesh.

- **Developing the Yunnan-Laos-Thailand Cooperation Pilot Zone.**

This project is meant to forge a new model for a transnational free trade zone. It builds on the backbone of the Kunming-Bangkok Expressway and the China-Laos-Thailand Railway to facilitate the exchange of goods, services, capital, and people. All three countries and the private sector would participate in development, planning, and governance. By 2030, the project aims to handle \$40 billion in trade and to boost the region's GDP per capita to \$12,500, 2.5 times its current level. The project aims to be a pilot that can be replicated elsewhere, offering a roadmap for China-ASEAN integration as well as the development of other transnational projects.

- **Moving the relationship between China and Saudi Arabia beyond oil.**

China is Saudi Arabia's largest oil customer, and the Kingdom supplies a major share of China's energy needs. But the two countries, which have complementary needs and strengths, are now expanding their ties in other areas. For China, the KSA is strategically located to provide a link to key markets in Africa and Central Asia in order to realize the One Belt One Road initiative. For its part, the KSA can tap into Chinese capital and expertise as it seeks to diversify its economy beyond oil. The Kingdom needs an infusion of investment to build the infrastructure and physical assets needed for competitive manufacturing and service sectors—and those goals dovetail with the One Belt One Road vision. A 2016 visit to China by the Deputy Crown Prince Mohammad bin Salman al Saud produced 15 memorandums of understanding for cooperation in areas including energy, communications, technology, aerospace, the environment, science, and culture.

## **Reshaping global governance and resetting bilateral relationships**

China sits in a unique position to bridge the world's emerging and advanced economies. The nation has stepped up its engagement in regional and multilateral agreements and institutions, engaging more deeply with its neighbors in ASEAN as well as with other developing countries on issues such as finance, security, and trade. Previous generations have undertaken development financing that involved wealthy nations giving prescriptions for market liberalization to poorer nations, with mixed outcomes to show for it. China can forge a new approach with greater credibility, better reflecting the agenda of emerging economies and acknowledging their divergent development paths. Its efforts may include expanding its role within existing international organizations as well as launching new institutions such as the Asian Infrastructure Bank.

China also has an opportunity to reset its own relationships. Just as it is pursuing deeper engagement with Africa, there are opportunities to build ties elsewhere in the world through investment, educational and cultural exchanges, and research collaborations. These types of initiatives do not have to be limited to developing nations (see Box 2, "Chinese investment in the United States: An underappreciated opportunity for forging a more productive relationship").

China can also signal its seriousness about improving corporate governance. As Chinese companies expand, they should adopt global standards in labor, environmental, and business practices, both at home and abroad. Their commitment to sustainable development in developing economies where they establish foreign operations will be essential to fostering productive long-term relationships and creating positive spillover effects, just as China's own economic development benefited from the presence of multinational operations.

### **Box 2. Chinese investment in the United States: An underappreciated opportunity for forging a more productive relationship**

The ties between the United States and China have long been focused on trade, an increasingly politicized issue often tied to loss of US manufacturing jobs. But China's new economic stature is resetting the relationship. FDI flows from China to the United States have increased rapidly since the financial crisis, surpassing flows from the United States to China.

One area where Chinese investment could make a big difference in the US economy is infrastructure investment. Addressing inadequate or aging infrastructure is a clear priority for the United States: the 2017 American Society of Civil Engineers report card gave 16 categories of US infrastructure an overall grade of D+. The average age of America's 600,000 bridges is 40 years old, and more than 50,000 are judged structurally deficient. Its 90,000 dams are on average over 50 years old, and 15,000 are rated high hazard). The ASCE estimates that \$3.3 trillion of investment is needed through 2025 to address US infrastructure shortfalls, which would create a major fiscal strain. China could provide part of the funding solution, however, since it is sitting on a surplus of investment funds generating decreasing returns at home.

Given that most US infrastructure is privately or municipally owned, there are ample opportunities for translating the investment need into viable projects for investors outside of federally funded projects. Chinese funding and engineering know-how developed over two decades of major project development in China could be matched with US investment and expertise under a governing mechanism that optimizes the contributions of both parties. While such an approach may seem unorthodox in the current political climate, the benefits to American workers, aggregate demand, and long-term productivity would be substantial, delivering the benefits of globalization to specific communities in a very tangible and visible way.

In the longer term such an initiative could reignite momentum behind a US-China bilateral investment treaty that would provide legal protections for investments and guarantee mechanisms for dispute resolution. This could pave the way for flows of FDI in both directions to become a pillar of US-Chinese economic cooperation.

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Globalization is not a force beyond our control; the world's policy makers and institutions can take a more active approach to shaping the direction it will take. This will involve building smart, fair frameworks that work for a more digital age and being more responsive to the world's citizens. If China embraces a leadership role and takes action to demonstrate its commitment to principles of transparency and accountability, it will go a long way toward encouraging a wave of investment and bolstering the world's confidence in the future of globalization.



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