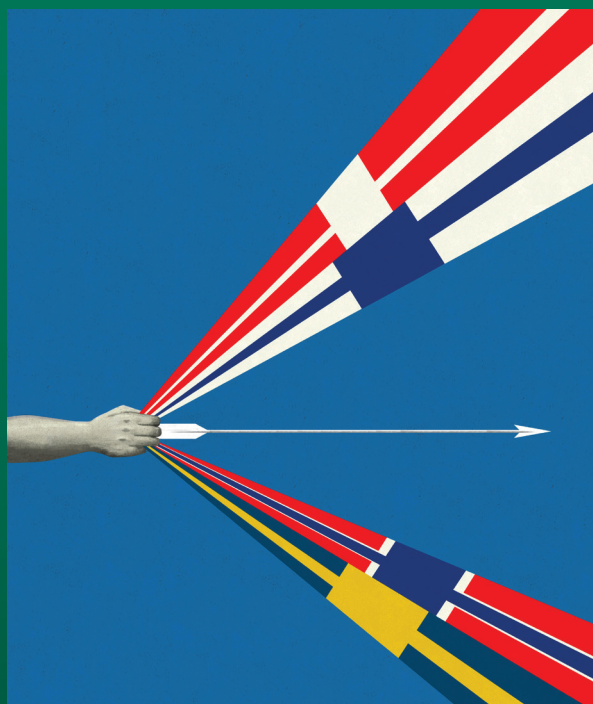


NORDIC AGENDA

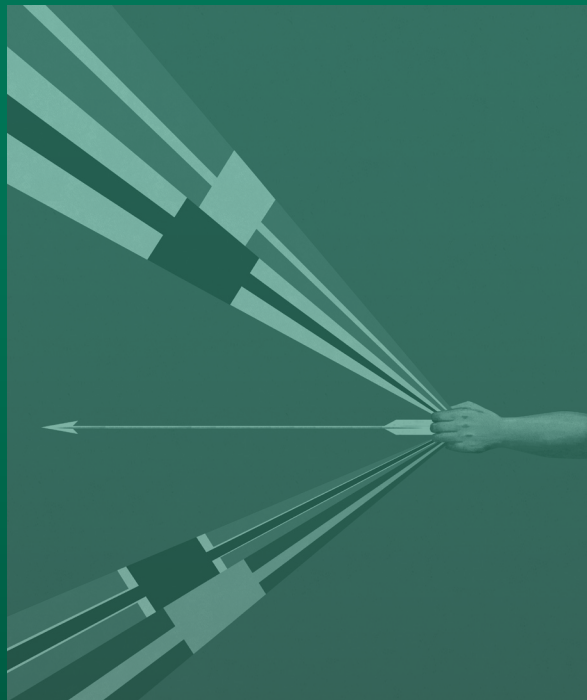
2016: BRINGING GROWTH BACK TO FOCUS



BCG

THE BOSTON CONSULTING GROUP

The Boston Consulting Group (BCG) is a global management consulting firm and the world's leading advisor on business strategy. We partner with clients from the private, public, and not-for-profit sectors in all regions to identify their highest-value opportunities, address their most critical challenges, and transform their enterprises. Our customized approach combines deep insight into the dynamics of companies and markets with close collaboration at all levels of the client organization. This ensures that our clients achieve sustainable competitive advantage, build more capable organizations, and secure lasting results. Founded in 1963, BCG is a private company with 82 offices in 46 countries. For more information, please visit bcg.com.



NORDIC AGENDA

2016: BRINGING GROWTH BACK TO FOCUS

BØRGE KRISTOFFERSEN

FREDRIK LIND

MAI-BRITT POULSEN

TEEMU RUSKA

TUUKKA SEPPÄ

JUUSO SOININEN

ØYVIND TORPP

JOHAN ÖBERG

CONTENTS

- 3 PREFACE**
- 4 EXECUTIVE SUMMARY**
- 7 NORDIC COMPETITIVENESS IS STILL FALLING**
Relative Competitiveness and Innovation Are in Decline
Incentives to Work, Hire, and Invest Are Our Achilles Heel
- 10 RETURNING TO A GROWTH PATH**
By 2030, 1.7 Million New Workers Will Be Needed
Turning the Tide on the Nordic Industry Mix
On the Lookout for the Next Generation of MNCs
- 21 NORDIC AGENDA 2016**
The Progress Made
Inspiration from Abroad
Making It Happen
- 30 FOR FURTHER READING**
- 31 NOTE TO THE READER**

PREFACE

THE BOSTON CONSULTING GROUP invests 2 percent of its time every year in pro bono activities in order to improve the world we live in and make use of BCG’s competencies in areas that are important and for which there is no funding. In the Nordic region, this investment corresponds to eight full-time employees dedicated to only pro bono activities. We define the Nordic countries as Denmark, Finland, Norway, and Sweden and refer to them as “the Nordics.” This report, which focuses on increasing the competitiveness and economic development of the Nordic region, is part of this pro bono effort. It is a topic that BCG is very passionate about, as the firm is an integral part of the Nordic economies, supporting companies and public institutions with a team of more than 400 employees across the four Nordic capital cities. As citizens of the Nordic countries, we want to contribute to a successful continuation of the Nordic model.

In this report, we continue presenting our research on the topic from last year—a transformation agenda for the Nordic countries—and outline our recommendations.

We believe that although the Nordic model has served our countries well in the past few decades, enabling them to become some of the wealthiest and happiest in the world, the Nordics need to transform in order to unleash the large potential they have to continue to create wealth and well-being for their people.

Our recommendations focus on how to maximize wealth in the Nordics and are based on our quantitative and qualitative analysis. We do not take political considerations into account or take political stands. We also do not focus on how to distribute the wealth; that is a task that we will leave to others.

Our recommendations are based on a proven methodology that has been developed from our experience helping more than 500 institutions worldwide implement their transformations. Although this transformation methodology is primarily used by businesses, we will argue that many lessons from business transformations are also highly relevant to the transformation efforts of countries.

EXECUTIVE SUMMARY

THE NORDICS HAVE BECOME wealthy and happy nations by leveraging the Nordic model. They have held top positions in global competitiveness and grown their economies to achieve well-being for their populations. However, the Nordic model has come under pressure, and the Nordic countries are losing their competitiveness. A transformation is needed to change the direction.

In the Nordics, and especially in Denmark and Finland, the economy has been stagnant. We believe that by addressing the workforce gap caused by the aging population and by stimulating the most productive industries, the Nordics could get back on a path of healthy economic growth.

In 2014, we created the Nordic Agenda, a set of ten recommendations to transform the Nordics for competitiveness and growth. We have now followed up on their progress. The Nordics have slowly started to embark on the agenda, but we feel the speed of change is still insufficient and there is a lot more to be done. In order to speed up the process, the Nordic countries should more actively adopt best practices from each other and abroad and utilize talent and transformation knowledge from the private sector.

The Nordics are still losing their competitiveness when compared with the peer group of countries competing in the same export markets. The Nordics continue to face the same challenges that BCG presented in the Nordic Agenda report last year.

- Nordic competitiveness has been on the decline for the past ten years. Compared with the peer group, Denmark, Finland, and Sweden have lost their positions among the top five in the Global Competitiveness Index, and Norway still remains in the third quartile. Also, innovativeness, compared with the peer group, has been declining.
- The Nordics still fare well in competitiveness indicators that are necessary for a safe and functioning society, such as strong

institutions and trust among citizens. These are the results of past successful policy making.

- However, regarding the business-related indicators of dynamism and future economic growth (for example, the efficiency of the labor and goods markets), the Nordics rank low among all of the 140 nations in the comparison.

Over several decades until 2007, economic growth in the Nordics was a healthy 2 to 3 percent per annum. Now, Denmark and Finland have lost nearly ten years in terms of economic growth, while Norway and Sweden have recovered somewhat better from the global financial crisis. Continued prosperity and well-being of the countries will require restoring at least 2 percent per annum growth until 2030. To achieve this growth, both a significant change in the amount of work (workers and hours worked) and a substantially higher level of productivity growth will be required.

- By 2030, the Nordics will need to increase their labor force by 1.7 million new workers to keep their current economic-dependency ratios constant owing to an aging population. Over the period, 0.5 million new workers are expected to come from natural population growth (with constant employment ratios), but 1.2 million are needed to come from the population currently outside the active labor force or from immigration.
- By 2030, Nordic productivity will simultaneously need to increase by \$14 per hour worked, implying growth of 1.6 percent per annum, compared with 0.1 percent per annum in the past eight years. This calls for substantial changes in the industry mix. The service sectors are growing in size but not in productivity, whereas the more productive manufacturing sector is decreasing in size and the highly productive digital and financial business sectors remain comparably small. To counter these effects, the Nordics need to stimulate the most productive sectors to grow in size and drive productivity improvement through innovation and radical digitization in the service industries.
- The Nordics should put targeted effort in four sectors to drive growth and productivity: catalyzing demand for domestic services, aggressively driving growth in the vibrant digital sector, investing to bring manufacturing back to the Nordics (Industry 4.0 with significantly higher productivity), and revitalizing the public sector to become more productive.
- The Nordics have long relied on their global multinational corporations (MNCs) for economic growth, but only few new MNCs have been founded in the past 20 years and the existing ones are migrating their operations outside the Nordic region.
- There are encouraging signs from the start-up scene, which has become vibrant in recent years. Finland and Sweden are ahead in the amount of venture capital funding and the number of start-

ups. Together, they have created eight unicorns (start-ups that are valued at more than \$1 billion). Norway and Denmark haven't created any yet. The availability of venture capital is increasing, however, it still is behind the level in the U.S.—the global leader in this field.

BCG published the Nordic Agenda in 2014 for transforming the Nordic economies. It consists of ten recommendations for funding the journey (for example, making the size of the public sector sustainable), winning in the medium term (for example, investing more in innovation and digitization), and building the right team, talent, and culture (for example, increasing the workforce through immigration). By following these ten recommendations, we believe the current trajectory and dire economic outlook can be changed and the Nordic model can be transformed.

- The Nordic countries' progress varies by country, and while all have started the journey, the initial pace is still insufficient.
- Going forward, the Nordics should employ best-practice initiatives from one another to speed up their transformation. Prominent examples are Denmark's flexible labor-market model and Sweden's value-based health care for revitalizing the public sector.
- The Nordics should also adopt best practices from other countries. Singapore has excelled in setting a country strategy and measuring government performance, and the UK has created an effective national digital strategy as well as integrated its immigrant workforce successfully with its open labor markets.
- It is crucial for the private sector to take part in order to leverage its talent and program management skills in this common Nordic transformation effort.
- The Nordics will need to use the existing talent pools to the fullest, bring in new talent, embrace the entrepreneurial mind-set, and boldly invest in the right industries to again innovate and become competitive in the globalizing world.
- The Nordics have all of the preconditions to once again become world-leading nations in welfare, happiness, and new innovations.

NORDIC COMPETITIVENESS IS STILL FALLING

OVER THE PAST HALF century, the Nordics have transformed into successful economies that have managed not only to generate strong economic growth but also to continue to endow the citizens with generous welfare provisions. Today, the Nordics are among the wealthiest economies and happiest countries in the world. The high levels of economic prosperity and well-being are also supported by strong institutions, pragmatic policy making, and a very low level of corruption. Indeed, so successful are the Nordics that the Nordic model is widely used as a shining example for other developed economies that seek modernization.

Relative Competitiveness and Innovation Are in Decline

In the Nordic Agenda report last year, we identified that the Nordic model is increasingly becoming an illusion. (See *Nordic Agenda: Transforming for the Next Wave of Success*, BCG report, November 2014.) Since 2006, Sweden and Norway have been on a par with the OECD's average GDP growth; however, Finland and Denmark have fallen far behind, having no GDP growth since then. Looking at comparative country rankings, competitiveness is declining in the Nordics.¹ During the past ten years, Finland, Sweden, and Denmark have all lost their positions among the top five countries in the Global Competitiveness Index (Finland did so during the past 12 months), and Norway still remains worry-

























ingly in the third quartile, below average. (See Exhibit 1.) Innovation, a key driver for creating new products for export, has also weakened, compared with our peers: all of the Nordic countries have seen their global ranking decline since 2012. The notion of Nordic competitiveness is still eroding.

Incentives to Work, Hire, and Invest Are Our Achilles Heel

The Nordic model created stable, peaceful, and safe societies with strong institutions and welfare systems after World War II. The Nordics are among the top countries in the world when assessed according to backward-looking indicators in areas such as institutions; health care and primary education; and trust between the governments and their people as well as trust among people. (See Exhibit 2.) These are welfare enablers that were established in the Nordic model long ago.

However, the Nordics rank globally at the very bottom in several indicators of labor and goods market efficiency and other business areas—essentially, in drivers that incentivize people to work harder and innovate, thus being crucial for dynamic societies aiming for sustainable long-term economic growth. For instance, on average, the Nordics placed 127 on flexibility of wage determination out of 140 countries; Finland ranked 140. The Nordic model hasn't improved these forward-

EXHIBIT 1 | Nordic Countries' Competitiveness Rankings Have Declined Over Time, Compared with Those of Key Competitors

GLOBAL COMPETITIVENESS INDEX (WEF)			GLOBAL INNOVATION INDEX (WIPO) ¹				
	2006–2007	2014–2015	2015–2016	2009–2010	2014	2015	
1	Switzerland	Switzerland	Switzerland	Sweden 	Switzerland	Switzerland	First quartile
2	Finland 	U.S.	U.S.	Switzerland	UK	UK	
3	Sweden 	Finland 	Germany	Denmark 	Sweden 	Sweden 	
4	Denmark 	Germany	Netherlands	Finland 	Finland 	Netherlands	
5	U.S.	Japan	Japan	Netherlands	Netherlands	U.S.	Second quartile
6	Japan	Netherlands	Finland 	Norway 	U.S.	Finland 	
7	Germany	UK	Sweden 	U.S.	Denmark 	Denmark 	
8	Netherlands	Sweden 	UK	Canada	Canada	Germany	
9	UK	Norway 	Norway 	Japan	Germany	South Korea	Third quartile
10	Norway 	Denmark 	Denmark 	UK	Norway 	Canada	
11	Canada	Canada	Canada	Germany	South Korea	Austria	
12	Austria	Belgium	Belgium	Belgium	Austria	Japan	
13	France	Austria	France	South Korea	Japan	Norway 	Fourth quartile
14	Belgium	France	Austria	Austria	France	France	
15	South Korea	South Korea	South Korea	France	Belgium	Belgium	

Sources: World Economic Forum (WEF); Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO).

Note: Comparison includes the Nordics' key competitor countries that represent the Nordics' top competition in the largest export markets. Other countries from the WEF's *Global Competitiveness Report* are not shown.

¹Copublished by Cornell University, INSEAD, and the World Intellectual Property Organization (an agency of the United Nations).

looking indicators and is now facing serious competitiveness and growth challenges as other nations advance faster with their more business-friendly societies.

A dramatic improvement is needed to recover lost ground and get back to stable economic growth. If nothing is done, the Nordics' loss of competitiveness will only accelerate in the future as each of the macroeconomic challenges the Nordic corporate and public sectors are facing worsen and the world globalizes ever faster. The need for transformation is therefore both clear and urgent. Competitiveness

largely needs to be driven by the private sector, but it is the governments' responsibility to create the right conditions and the incentives.

NOTE

1. Comparative countries are a peer group of eleven countries that compete with us in our top export markets. They consist of world-leading advanced industrial economies (for example, France, Germany, Japan, the UK, and the U.S.) and small, open, complex economies that bear similarities to the Nordics (for example, Austria, Belgium, Canada, the Netherlands, South Korea, and Switzerland).

EXHIBIT 2 | The Nordics Rank High in Institutions and Trust but Low in Business Competition

TOP INDICATOR RANKINGS ¹					BOTTOM INDICATOR RANKINGS ¹								
PILLAR	INDICATOR	NOR	Finland				PILLAR	INDICATOR	NOR	Finland			
			Denmark	Norway	Sweden	Denmark				Norway	Sweden		
Business sophistication	Willingness to delegate authority	#3	1	5	2	4	Labor market efficiency	Flexibility of wage determination	#127	105	140	130	133
	Ethical behavior of firms	#4	3	1	5	8		Effect of taxation on incentives to work	#93	130	109	37	94
Institutions	Judicial independence	#6	5	2	3	14	Hiring and firing practices	#77	5	87	109	106	
	Diversion of public funds	#7	7	2	6	13	Pay and productivity	#40	31	42	41	44	
	Irregular payments and bribes	#7	6	1	4	18	Country capacity to attract talent	#36	37	61	20	25	
Technological readiness	Individuals using the Internet (%)	#5	3	7	2	6	Goods market efficiency	Imports as a percentage of GDP	#91	67	90	120	85
	Availability of the latest technologies	#8	23	1	3	4		Total tax rate, percentage of profits	#76	27	81	85	112
Labor	Reliance on professional management	#6	8	3	2	10	Effect of taxation on incentives to invest	#73	112	70	46	62	
	Cooperation in labor-employer relations	#9	2	22	4	7	Intensity of local competition	#54	45	89	50	33	
Macroeconomic environment	Country credit rating, 0–100 (best)	#6	9	10	2	3	Number of days to start a business	#52	24	79	18	87	
Innovation	PCT patents, applications per million population	#7	8	4	12	3	Other ³	General government debt, percentage of GDP	#66	69	96	33	67
	Capacity for innovation	#10	11	6	18	4		Local supplier quantity	#65	31	96	74	59
	Company spending on R&D	#12	15	4	20	7		Exports as a percentage of GDP	#61	38	75	71	59
	Availability of scientists and engineers	#16	35	1	12	14		FDI and technology transfer	#47	29	73	39	48
Education ²	Quality of primary education	#22	37	1	17	34	Burden of government regulation	#34	82	15	19	21	
	Quality of math and science education	#25	29	2	24	43	Venture capital availability	#26	72	6	10	15	

Sources: *The Global Competitiveness Report 2015–2016*, World Economic Forum; BCG analysis.

Note: NOR = Nordics. PCT = Patent Cooperation Treaty. FDI = foreign direct investment.

¹Rankings are out of 140 countries; the top ten, the bottom ten, and selected highlights are shown for the Nordics. The indicators related to disease prevalence are not shown, as the countries are in good shape.

²Two pillars: health and primary education; higher education and training.

³Includes macroeconomic environment, business sophistication, market size, technological readiness, institutions, and financial market development.

RETURNING TO A GROWTH PATH

TO HIGHLIGHT THE ECONOMIC situation in the Nordics, we assessed the Nordics' historical economic growth using three factors. The first two—the economically active population (everyone who is employed) and the average amount of work done per economically active person—together define the total hours worked. The third one—the labor productivity measured by gross value added (GVA), which is calculated at constant 2010 purchasing-power parity (PPP) and in U.S. dollars—defines the value of each hour worked. In the past 35 years, a large majority of GDP growth came from productivity improvement (1.8 percent per annum), and a small share came from the increased size of the economically active population (0.4 percent per annum). The hours worked per person have had a small negative contribution (–0.1 percent per annum) to GDP growth.¹ (See Exhibit 3.)

During the eight years since the financial crisis began, the development in these three factors has been disappointing. The size of the economically active population has declined and the economic dependency ratio (which is the ratio of the economically nonactive population to active) has again increased to more than 1 for the Nordics, on average. Labor productivity development has been flat, with any improvements neutralized by changes in the industry mix: manufacturing (with high and rapidly improving labor productivity) has

moved outside of the Nordic region and service industries (with lower and sluggishly improving labor productivity) have increased in size. In addition, the hours worked per person have continued to slightly decline.

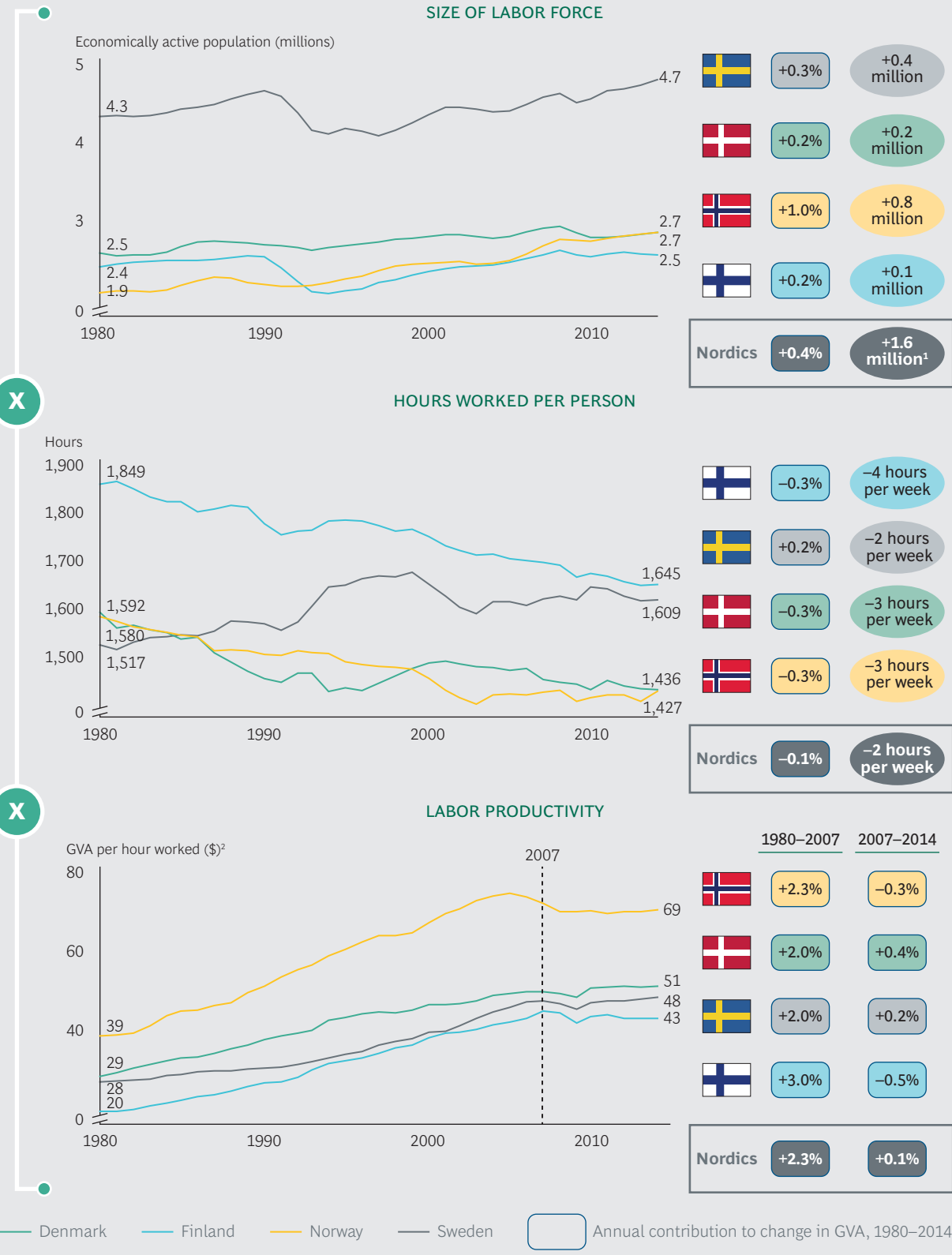
In the past 35 years, a large majority of growth came from productivity improvement.

The Nordics can and should, however, achieve a healthy economic growth of at least 2.5 percent toward 2030.² This requires considerable changes in the historical development of the size of the labor force, the hours worked per person, and labor productivity. (See Exhibit 4.) Addressing two of these factors, the size of the labor force and labor productivity, can alone bring economic growth in the Nordics back on track. (See Exhibit 5.)

By 2030, 1.7 Million New Workers Will Be Needed

The Nordics are facing a significant increase in the economically nonactive population due to the retirement of the baby boomers. In our Nordic Agenda report last year, we identified a need to add 2 million people to the Nordic workforce to keep the demograph-

EXHIBIT 3 | Productivity Has Historically Been the Main Driver of the Economic Growth of the Nordics



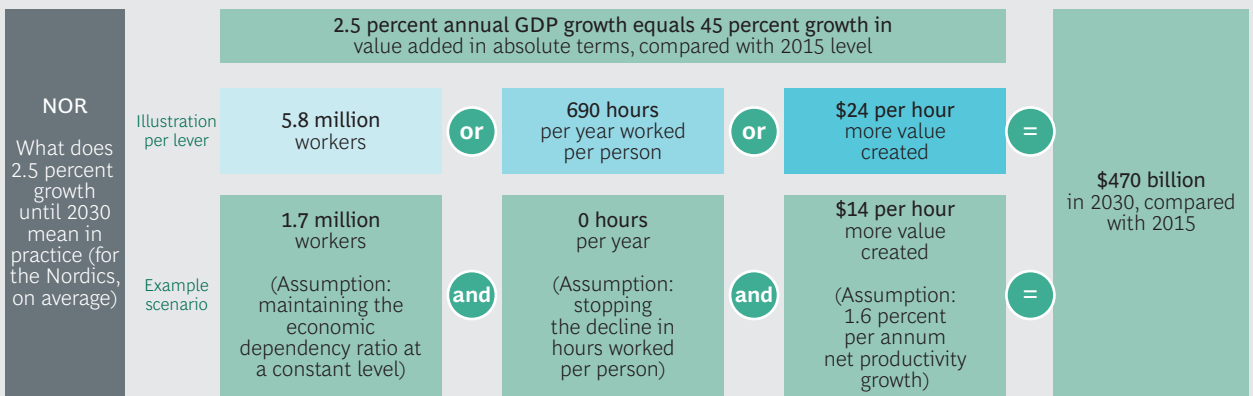
Sources: OECD; BCG analysis.

¹Because of rounding, not all numbers add up to the totals shown.

²GVA = gross value added. The GVA was calculated at constant prices and constant purchasing-power parities, with 2010 as the base year.

EXHIBIT 4 | What Would 2.5 Percent Growth Look Like for the Nordics?

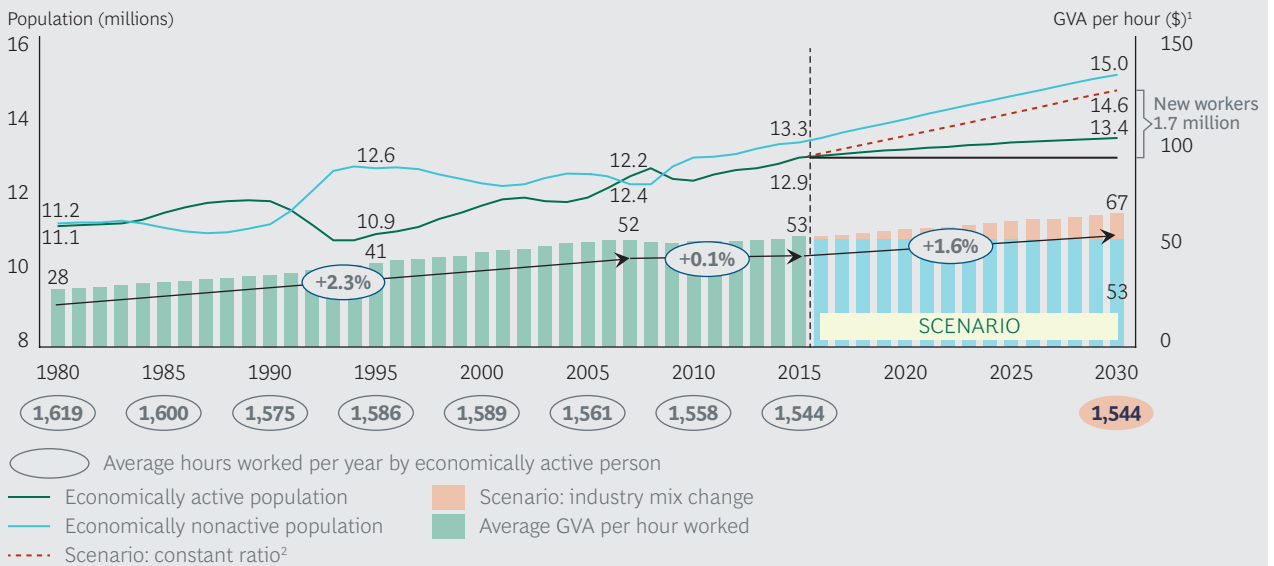
	SIZE OF LABOR FORCE	HOURS WORKED PER PERSON	AVERAGE LABOR PRODUCTIVITY	VALUE ADDED (\$, IN CONSTANT PPP)	
Historical development 2007–2014	Denmark	2.84 → 2.73 = -0.10 million	1,456 → 1436 = -20 hours per year	49.4 → 50.8 = \$1.4 per hour	207 → 203 = -\$4 billion
	Finland	2.51 → 2.50 = -0.01 million	1,691 → 1,645 = -46 hours per year	44.7 → 43.0 = -\$1.7 per hour	189 → 177 = -\$3 billion
	Norway	2.54 → 2.75 = 0.21 million	1,426 → 1,427 = 1 hour per year	71.0 → 69.4 = -\$1.6 per hour	258 → 273 = \$15 billion
	Sweden	4.52 → 4.74 = 0.21 million	1,612 → 1,609 = -3 hours per year	47.3 → 48.1 = \$0.8 per hour	345 → 366 = \$21 billion
	NOR	12.4 → 12.7 = 0.31 million	1,554 → 1,540 = -14 hours per year	51.6 → 51.8 = \$0.2 per hour	999 → 1,018 = \$19 billion



Sources: OECD; BCG analysis.

Note: NOR = Nordics. PPP = purchasing power parity. Because of rounding, not all numbers add up to the totals shown.

EXHIBIT 5 | GDP Growth May Come from 1.7 Million New Workers and 1.6 Percent Productivity Growth Per Annum



Sources: OECD; World Population Prospects, United Nations, 2015 revision; BCG analysis.

Note: Economically active population forecasts assume constant employment rates at 2012 through 2014 levels. Numbers have been rounded.

¹GVA = gross value added. The GVA was calculated at constant prices and constant purchasing power parity, 2010 as the base year.

²Ratio of economically nonactive population to economically active population is based on United Nations' population forecast and constant employment rates at 2012 through 2014 levels.

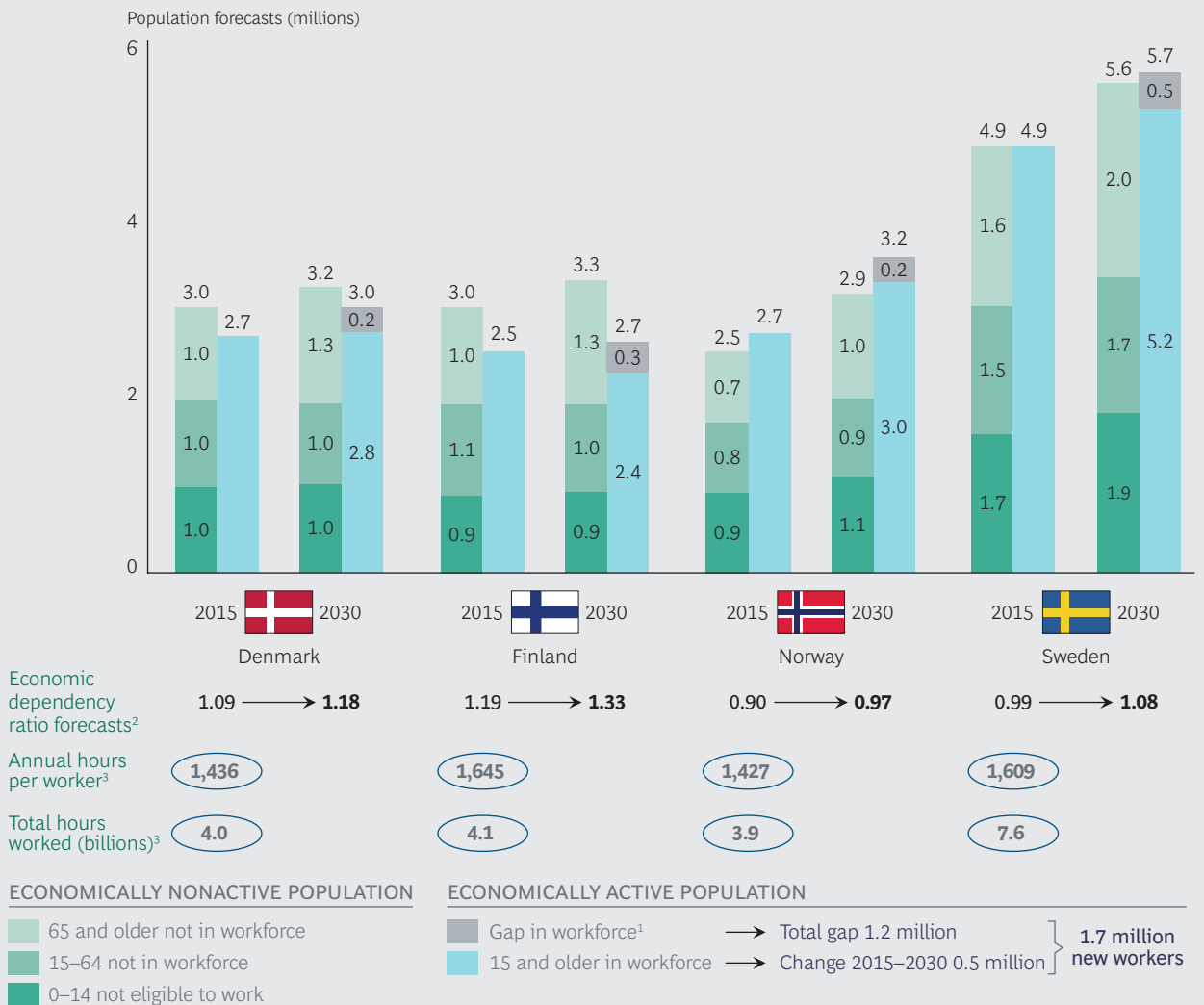
ic dependency ratios at the current levels. This year, we update our view by looking at the economic dependency ratio, meaning the ratio of the total economically nonactive population (for example, children, students, and those who are unemployed, retired, and otherwise not active in the labor force) to the total economically active population, and with the most recent population forecasts.

We estimate the workforce development by using constant employment rates for each age bracket and demographic changes forecasted by the United Nations. On the basis of our

modeling, the Nordics' population growth alone would drive a net increase of about 0.5 million workers by 2030. However, at the same time, the net increase in the economically nonactive population amounts to about 1.7 million. This increase is largely driven by an increase in the population of those who are age 65 or older. (See Exhibit 6.)

In order to keep the economic dependency ratio constant, the Nordics would need to add about 1.2 million new workers to the 0.5 million forecasted to come from population growth. The goal of 1.2 million workers needs

EXHIBIT 6 | The Nordics Need 1.7 Million New Workers by 2030



Sources: OECD; World Population Prospects, United Nations, 2015 revision; BCG analysis.

Note: Because of rounding, not all numbers add up to the totals shown.

¹Gap in workforce to keep economic dependency ratios at 2015 level. Forecasts assume constant employment rates at 2012 through 2014 levels by age group, and demographic development is based on United Nations' population forecasts.

²Economic dependency ratio is defined as the ratio of the economically nonactive population (for example, children, students, the unemployed, and pensioners) to the economically active population.

³For 2014.

to be attained by integrating immigrants into the workforce, reducing unemployment, and increasing the workforce participation rate.

Naturally, increasing the working hours of the existing economically active population is a viable alternative to increasing the size of the working population. The 1.2 million worker gap can be translated to being equal to an increase of three hours of equally productive work per week by each and every economically active person in the Nordics in 2030—approximately 13.4 million in all. However, it has proven to be politically difficult to achieve such changes, so adding new workers becomes more important.

A way to fuel demand for local services is to make them more economically attractive.

In total, the increase of about 1.2 million new workers by 2030 would mean, in practice, adding about 80,000 workers to the Nordics' workforce every year. If this is achieved by immigration, successful integration of immigrants into the workforce is needed in order for them to start contributing to the economy.

Turning the Tide on the Nordic Industry Mix

On an aggregate country level, labor productivity can be improved by increasing the productivity of each industry or by influencing the industry mix by growing the more productive industries. Since the early 1990s, the Nordics have seen two unfavorable developments in the industry mix. The manufacturing industry, which has high labor productivity, has decreased in size (measured by total hours worked), and the various service industries, which have lower average labor productivity, have increased in size. To keep productivity growing in the future, the Nordics need to influence the industry mix in a more favorable direction by ensuring the growth and success of current and future high-productivity industries. Specifically, the Nordics need to

make sure that the already-productive industries keep growing in size and that the service industries improve their productivity. (See Exhibit 7.)

As an example, the average GVA per hour worked in the public-service sector in the Nordics in 2014 was \$37, compared with \$76 in the digital industries.³ Thus, the Nordic countries would need to add two workers in the public-service sector to achieve the same output increase that adding one worker in digital industries would produce. In addition, we can expect the gap to widen; labor productivity growth in digital industries has doubled in the past 15 years, while labor productivity development has remained constant in the public-service sector during the same period.

The Nordics can turn the tide by taking four actions.

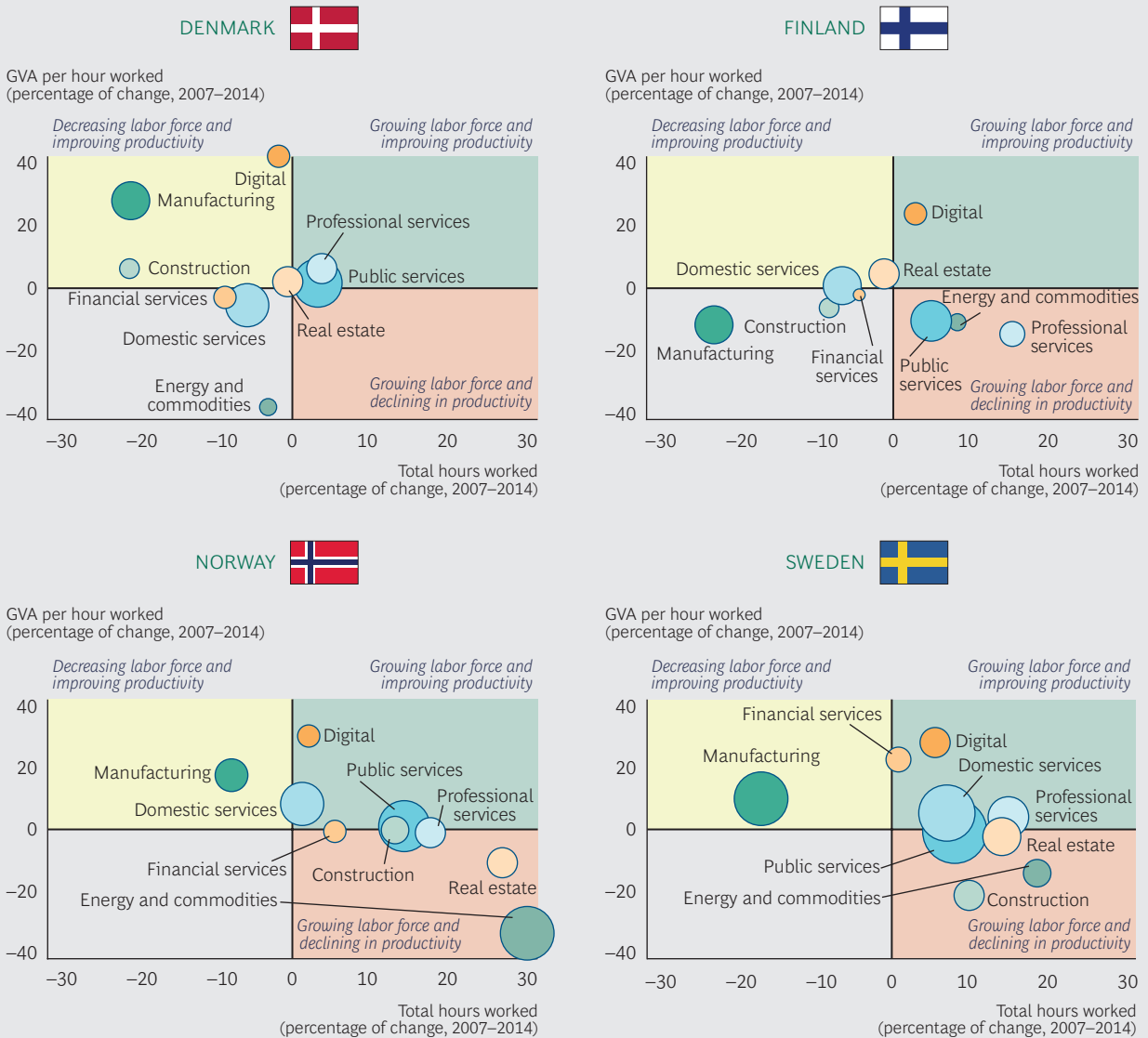
Catalyzing Demand for Domestic Services.⁴

The industry mix development naturally varies among the four nations. (See Exhibit 8.) Although the GVA of the domestic services sector in Sweden and Norway has increased by about 10 percent from 2007 through 2014, in Denmark and Finland the trend has been exactly the opposite. This industry is the single largest contributor to the Nordic GDP after the public-service sector and, thus, has a high potential to have a large contribution to the overall economy. The domestic demand of services has naturally been affected by the dire economic outlook and the resulting low consumer confidence. In addition, it has been affected by the alternative spending opportunities that consumers increasingly enjoy—opportunities such as capital investments in housing and purchasing foreign goods and services, including travel.

An ideal way to fuel demand for local services is to make them more practical and more economically attractive for the consumer. This can be done by loosening regulations, such as those that restrict the hours of retail establishments. Denmark and Sweden have allowed retailers to extend their shopping hours, and Finland is planning to do so. Digitization and other productivity-improving innovations would also be needed to ensure a

EXHIBIT 8 | The Changes in the Industry Mix Have Differed Among the Nordic Countries

MANUFACTURING IS DECLINING IN SIZE, PUBLIC SERVICES ARE INCREASING IN SIZE, AND THE DIGITAL SECTOR IS INCREASING IN PRODUCTIVITY ACROSS THE BOARD



Sources: OECD; BCG analysis.

Note: Excluded agriculture and other services owing to small values and simplification.

competitive cost level and the affordability of the local services. In addition, lower costs to increase demand can be achieved by lowering wages or providing subsidies, such as tax benefits for using local services.

Making the Digital Industry the New Nordic Flagship. In the digital industry, a common theme across the countries was the increase in labor productivity by 25 to 42 percent from 2007 through 2014, but Denmark stood out by having a decreasing labor force (by 2 per-

cent), compared with the other countries' increasing labor force (by 2 to 5 percent).

The Nordics are well positioned to capture a high proportion of the share of growth in the global digital industry, with their emerging technology start-up scene, with global-leading MNCs in the field of telecommunications, and with a technology-savvy population using electronic services (such as online banking, governmental e-services, and online shopping) through various smart devices.

Governments and companies should develop more relentlessly digital skills, competencies, and knowledge to support this growth in the future. Educating new talent in advanced sciences, engineering, digital skills, and computer programming will take time and thus needs to be started immediately in order to be ready for the world of 2030.

Furthermore, investing in digital technologies can itself be a trigger for growth in other industries. The European Commission comments that if the framework conditions are met, digitization can drive productivity and innovation growth, contributing to GDP growth in the same way that electricity did in the nineteenth and twentieth centuries.⁵ The highest opportunity lies in labor-intensive service industries that could raise productivity by several means: digitizing services where plausible, making service operations less complex (for example, by adopting the lean thinking from manufacturing), and using different means of automation.

No workers were laid off, and productivity and total output improved by 60 percent.

Taking Advantage of the Returning Opportunity in Nordic Manufacturing. Manufacturing has historically been a very important industry for the Nordics, but the manufacturing MNCs have offshored many operations—especially ones requiring low skill levels—in the past 15 years, resulting in a loss of approximately 1 million manufacturing jobs since the 1980s. (See *Revitalizing Nordic Manufacturing: Why Decisive Action Is Needed Now*, BCG report, August 2013.) To make Nordic manufacturing economically attractive again and enable companies to keep the remaining jobs in the region, and eventually to invest in new ones, the Nordics need to improve manufacturing productivity.

Although in all of the four nations the hours worked in manufacturing from 2007 through 2014 have declined (by as little as –7 percent in Norway and by as much as –22 percent in

Finland), Finland is the only country where labor productivity has also declined. This can be explained by the mix of changes within the manufacturing industry, for example, due to the faster decline of the highest value-adding electronics-manufacturing sector, compared with the other manufacturing sectors.

However, we see that there are ways to change the declining trend. Technological advances have increased industrial productivity since the steam engine, and now we are in the midst of another advancement driven by digital industrial technologies—such as autonomous robots, big data and analytics, the industrial Internet of Things, and additive manufacturing—that are collectively known as Industry 4.0. BCG has estimated that the connectivity and interaction among parts, machines, and humans will make production systems faster and more efficient, contributing to considerable productivity gains (5 to 8 percent in Germany, for example). (See *Industry 4.0: The Future of Productivity and Growth in Manufacturing Industries*, BCG Focus, April 2015. See also *Man and Machine in Industry 4.0: How Will Technology Transform the Industrial Workforce Through 2023?*, BCG Focus, September 2015.) Furthermore, the growth that digital advancement stimulates in manufacturing is expected to increase manufacturing employment by 6 percent during the next ten years. The work created by Industry 4.0 will, however, require different skills from the employees, such as competencies in software development and digital technologies, instead of more traditional manufacturing capabilities.

Many of the findings about Germany are likely to also apply to the Nordics, and encouraging examples of Industry 4.0 in the Nordics can already be found. An ABB electronics factory in Finland, for example, has automated its operations with 24 robots.⁶ No workers were laid off, and productivity and total output improved by 60 percent in five years (almost a 10 percent annual increase) as a result. It is easy to believe that such investments will be paving the way for a possible return of the manufacturing industries in the Nordics.

Revitalizing the Public Sector. The Nordic countries have large public sectors providing

a comprehensive welfare system. This has given the Nordic citizens a strong education, social security benefits, and health care, all of which are covered by some of the world's highest taxes. Although a large public sector is a core part of the Nordic model, it poses a significant challenge. The public-sector share of employment ranges from 26 percent in Sweden to 33 percent in Norway—while the OECD average is only 19 percent—and demand for services is not likely to decrease due to an aging Nordic population.⁷

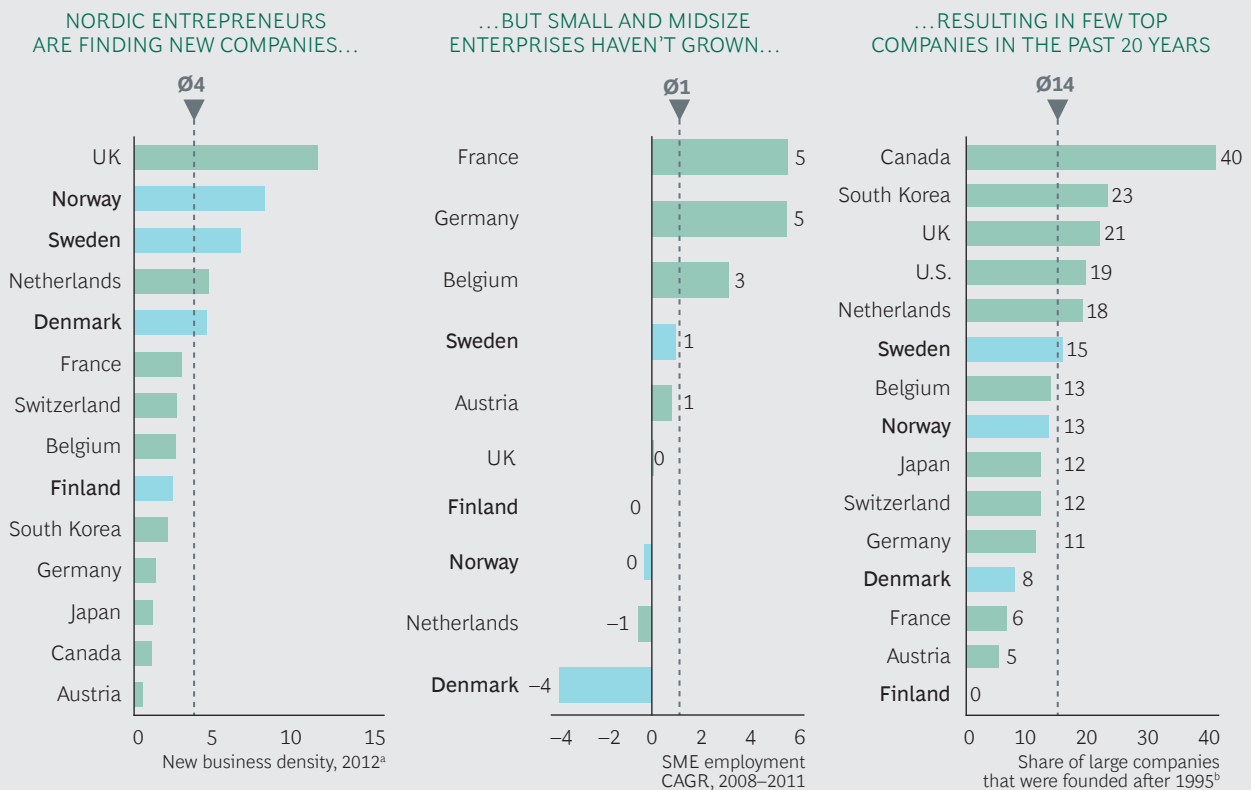
Accurate labor-productivity data for the public sector is difficult to obtain, but productivity is most likely lower than the private sector and more difficult to increase because of the lack of exposure to competition—a key driver of growth and innovation. For the private sector, low performance results in lower market share, but this is not the case for public services. As there is no market mechanism to penalize the public sector for low performance,

the public services need clear structures to measure outcomes to drive productivity improvement. This could be achieved through value-based approaches (that is, measuring public services on the basis of outcomes rather than focusing only on inputs and costs) in key service areas, such as health care, education, and public order.

On the Lookout for the Next Generation of MNCs

The Nordics have many successful MNCs, and their contribution to the Nordic economies is unquestionable. Large businesses account for about 34 percent of employment, 37 percent of value added in the Nordics, and from 51 percent (Denmark) to 68 percent (Finland) of exports in terms of value. But the majority of Nordic MNCs were founded more than 20 years ago, and the emergence of new ones is unsure, as small and midsize enterprises (SMEs) are not growing fast enough. (See Exhibit 9.)

EXHIBIT 9 | The Nordics Are Struggling to Create New Multinational Corporations



Sources: World Bank; Capital IQ; Orbis; Eurostat; BCG analysis.

Note: SME = small and midsize enterprises. Latest comparable data available.

^aNew business density is the number of newly registered companies with limited liability per 1,000 working-age people (those ages 15 to 64).

^bLarge companies are defined as the biggest publicly listed companies that, together, constitute about 95 percent of all listed companies by market capitalization, in their respective countries.

Compared with their peers, the Nordics create few new MNCs. Only 15 percent of Sweden's top companies were founded in the past 20 years, compared with 40 percent in Canada and 21 percent in the UK, for instance. Norway and Denmark are in the bottom half of the key competitor group, with only 13 percent and 8 percent, respectively, while none of Finland's top companies were founded during this period. There is a clear need to build new big companies in the Nordics, and this can be achieved by fostering entrepreneurship in order to get new innovative high-growth businesses and by supporting existing SMEs.

The groundwork has been laid by the start-up scene. It is imperative for the Nordics to encourage and support a new generation of sophisticated companies in order to compensate for the lack of new MNCs. The first signs of future high-growth companies are visible, as start-ups are emerging, especially in the technology field, and capital is available. Venture funding is at a good level in Sweden (0.07 percent) and Finland (0.06 percent) as a share of GDP, compared with a peer group average of 0.06 percent. However, Denmark and Norway both generate venture funding that is only 0.03 percent of GDP, and even Sweden and Finland should aim ambitiously to reach the level of the global leader: the U.S. at 0.28 percent.

It is encouraging for continued growth that the start-up climate is generally strong and that there are many great initiatives to foster further growth. A good example is Slush, Finland's annual start-up and venture-capital conference, which has 15,000 people joining from around the world and has generated about \$200 million of venture capital funding. A further positive sign is Finland's and Sweden's strong performance in generating technology start-ups valued at more than \$1 billion, so called unicorns. Both countries are among the top when compared with their European counterparts: Finland has generated two unicorns and Sweden has produced six, which is the second largest number in Europe.⁸ Sweden's success is explained by its technological savvy population, its government's investments in digital infrastructure, and its focus on global markets from the be-

ginning. On the downside, neither Norway nor Denmark has generated any yet.

The Nordics need to enable the entrepreneurial drive. The Nordics need to dramatically improve business conditions to encourage the finding of innovative start-ups, support SMEs' growth, and to foster the next generation of big companies. This requires a strong infrastructure, an efficient marketplace, a flexible job market, and government investment in talent, innovation, and digitization. As an example, Niklas Zennström, cofounder of the unicorn Skype, has stated that the Nordics also need to be at the venture capital frontier not only for early stage start-ups but also for later-stage companies to finance global expansion strategies. This is often what is required to make unicorns out of start-ups.

Finland has generated two unicorns and Sweden has produced six.

A central element for the Nordic SMEs to stay competitive is digitization. BCG research on Swedish SMEs shows that the top quartile of the most digitized companies grows, on average, 1.8 percentage points faster and is 0.7 percentage points more profitable than the bottom quartile. (See *Digital Sweden: How Consumers Are Setting the Pace and Creating Opportunities for Businesses*, BCG report, May 2013.) For SMEs to flourish, the Nordic governments need to find ways to motivate SMEs to increase exports and find growth through productivity enhancers, such as digitization.

What will enhance the finding of innovative start-ups and support SMEs' growth so that they become MNCs is cross-border cooperation among the Nordics. Thus, the Nordics need a regional strategy to build a brand of globally competitive industry clusters to attract talent and conduct world-class R&D. Implementing the strategy will help develop SMEs into MNCs and start new companies through increased focus and collaboration. The Nordics have competencies in the same

industries and should leverage them together to achieve more scale and depth in know-how. Strong industry clusters are also of high importance to increase foreign investment. Several industries can be further marketed to attract international attention, including gaming, the Internet of Things, medical technology, and sustainable energy. A prominent example is data centers, for which the Nordics have a dual benefit: being at the forefront of technology and having a cold climate that reduces the cooling costs. A plus, of course, is the stable political climate and geology. The data center industry has been successfully marketed abroad, yielding foreign direct investment (FDI) from foreign MNCs: Facebook has invested in Sweden and Google has invested in Finland.

Equally important to improving business conditions and collaborating in competitive industry clusters is creating the right mind-set and spirit for entrepreneurship. The Nordics have traditionally fared poorly in this respect, as the Nordic model has provided a stable and safe society that doesn't encourage risk taking. Only 28 percent of the Nordic population, on average, agrees with the statement, "I would rather take a risk and build my own business than work for someone else," compared with 43 percent, on average, in the peer group countries.⁹ What is needed here is to lift the status of entrepreneurship in each country and to encourage people to take risks and build growing businesses.

NOTES

1. In this chapter, we use comparable figures throughout. All of the financials are presented in real terms, using 2010 as the base year. We are also using constant PPPs to convert other currencies to U.S. dollars to allow for comparability. All of the data is based on database information from OECD.Stat and population forecasts from the United Nations.
2. The Nordics have averaged 2.6 percent annual GDP growth from 1970 to 2007, and economists generally agree that healthy economic growth is 2 to 4 percent.
3. Public administration, compulsory social security, education, and human health were used as proxies for public services. The information and communications technology industry was used as a proxy for digital industries.
4. We used distributive trade, repairs, transportation, accommodation, and food services as proxies for the domestic services industry.
5. *Working Paper: Digital Economy – Facts and Figures*, European Commission, March 2014.
6. "Humans and Robots Work Together ABB's Factory in Vaasa," Confederation of Finnish industries Association, September 2015.
7. *Government at a Glance 2014*, OECD, 2014; Finland data was not available.
8. *European Unicorns: Do They Have Legs?*, GP Bullhound, June 2015.
9. *Entrepreneurship at a Glance 2015*, OECD, August 2015; for the countries available.

NORDIC AGENDA 2016

IN LATE 2014, WE introduced the Nordic Agenda, which is our view on a strategy to transform the Nordics and improve their competitiveness. Using our experience from transforming hundreds of international corporations, we created ten recommendations that should be high on the Nordic governments' agendas. Taking the suggested steps would enable the Nordic economies to get back on a growth path by addressing two drivers discussed in the previous chapter: an increase in total hours worked and an increase in productivity.

The Progress Made

The Nordic Agenda should inspire the Nordics to establish healthy economic growth while maintaining the core of the Nordic model. The Nordic Agenda's ten recommendations support the three steps of a transformation we typically see in corporate transformations as well. (See Exhibit 10.) First, funding the journey involves employing short-term levers to free up resources for future investments. This is what we see the Nordic countries—with the exception of Sweden—have started doing. Second, winning in the medium term involves securing competitive advantage by investing capital and other resources with long-term payback. Third, building the right team, talent, and culture is an essential enabler to successfully complete the transformation. The recommendations enable the

Nordic countries both to increase the total hours worked and to improve productivity.

The Nordic countries have focused on short-term actions to increase competitiveness.

Have the Nordic governments planned actions that will achieve the agenda's goals and secure the Nordics' growth and competitiveness in the future? On the basis of BCG's outside-in assessment, progress varies by country: Denmark, Finland, and Norway have planned actions along the lines of our recommendations, while Sweden has taken a different approach. What all Nordic countries have in common is that they have focused on short-term actions to increase competitiveness and to end the acute recession—but not yet so much on reinvigorating the Nordic model with investments and changes in mental attitude that will support long-term growth and competitiveness. It remains to be seen which plans proceed to the implementation phase and become reality, and it is clear that governments have a lot to do in many areas in order to reach the target states of our recommendations. (See Exhibit 11.) However, it is encouraging to notice that governments are tackling several important issues and that

EXHIBIT 10 | The Nordics Can Revive Competitiveness by Following Ten Recommendations

INCREASE TOTAL HOURS WORKED

INCREASE PRODUCTIVITY



FUNDING THE JOURNEY

1 Maintain public expenditure at a constant level until it reaches a healthy level as a share of GDP. This will free up resources for investments and lower the tax burden.

2 Get more people into the workforce. Incentivize working with targeted actions to reduce unemployment and inactivity.

3 Open the labor market. Lower the minimum wage, subsidize wages, or introduce tax incentives for low-income workers. In addition, ease the rigid labor regulations.

4 Take immediate measures to make the cost of doing business more attractive across industries. Increase labor market flexibility and lower the tax burden (by reducing the energy tax, for example).



WINNING IN THE MEDIUM TERM



BUILDING THE RIGHT TEAM, TALENT, AND CULTURE

8 Leverage the current population to a higher degree. Increase working hours per capita to benchmark levels. Incentivize faster student graduation, encourage workers to stay longer in the labor force, and address the employment rate of anyone outside the labor force.

10 Increase the workforce through immigration. Depending upon our success in meeting the goals set forth in recommendation eight, the Nordics will need up to 1.2 million new workers by 2030 to maintain the current economic dependency ratio. Immigrant labor will provide a solution, but significant effort needs to be put into integration efforts, especially into the current acute immigration situation in Europe.

5 Invest more into and get the most out of talent, innovation, and digitization. Norway needs to increase R&D spending, Denmark, Finland, and Norway must foster entrepreneurship, and all of the countries should incentivize the study of science, engineering, and digital disciplines.

6 Invest to improve the framework conditions for businesses to enable long-term competitiveness. Strive to be in the top quartile of the peer group in efficiency of the goods market, infrastructure, and forward-looking investments.

7 Revitalize the public sector by improving its productivity. Measure productivity, focus on the outcomes, and open public services to competition from private providers. Invest in digitization and other productivity-improving technologies.

9 Become a magnet for international talent. Develop internationally competitive educational institutions, incentivize international students to stay in the Nordics after graduation (for example, by offering tax benefits), and lower local-language requirements. Also, attract international professionals to areas with talent shortages by marketing world-class living and working conditions.

Source: BCG analysis.

the Nordic countries are going in the right direction in many areas.

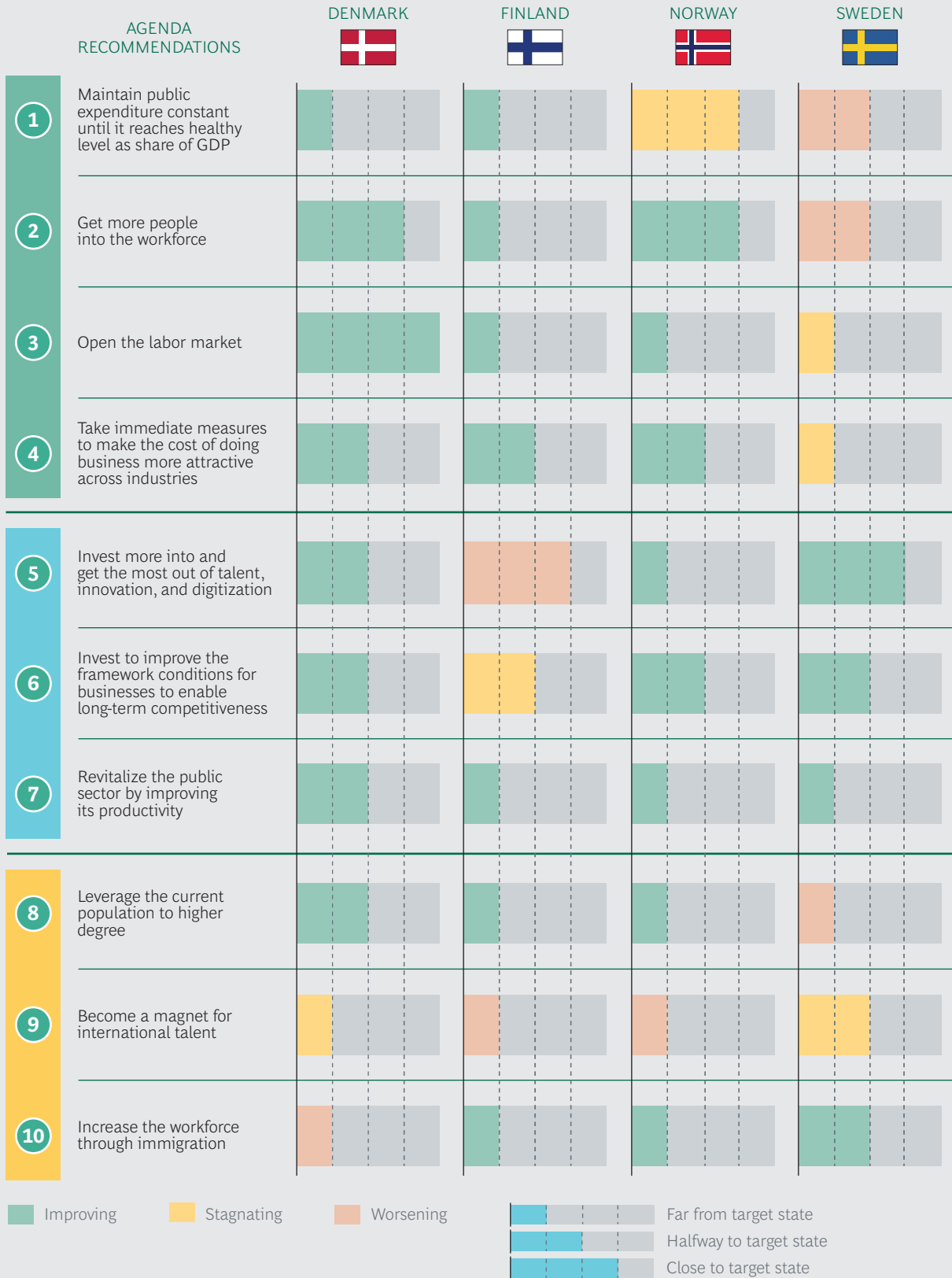
Denmark is acting, but it is not being bold enough. The newly elected Danish right-wing government has started planning transformative actions, but it remains to be seen which ones become a reality. To a reasonable extent, it has planned to incentivize people to work more, to make the labor market flexible for companies, and to establish e-government services in the public sector. Establishing a benefits commission (Dagpengekommisjonen) to make concrete recommendations for a more flexible and limited benefits system

is an example how the government is taking its plans forward. The government has also kept on promoting technical and science degrees, which are relevant for the job market. However, the Danish government's internal stance toward immigration (for example, for plans adding requirements for obtaining citizenship) is counter-productive in terms of securing foreign talent to address the declining workforce owing to an aging population.

Finland has finally woken up. The Finnish center-right government, elected in early 2015, has created a wide-ranging strategic plan and started detailing some of its action

EXHIBIT 11 | The Nordic Countries Are Making Varying Progress

DISTANCE FROM TARGET STATE AND DIRECTION OF PROGRESS



Source: BCG analysis.

points. The most positive plans in Finland have been around reducing government expenditures by €10 billion by 2030 in order to stop incurring more debt (currently increasing at a rate of €0.6 million per hour) and to reduce companies' cost of labor (5 percent of unit labor cost). Long-term investments, although laid out, are not as ambitious. There is only a €0.1 billion additional investment for digitization—which should be a focus area—and a €0.3 billion investment for bioeconomy. These are small compared with cost cuts, which amount to €0.7 in education alone. Finland has responded quickly to process the increasing inflow of asylum-seeking immigrants forecasted to reach 30,000 by the end of 2015, compared with 3,651 in 2014, but the process for integrating immigrants into the workforce has not yet been updated to support these numbers. The integration of immigrants is critical for Finland because it has the worst dependency ratio among the Nordics along with a rapidly aging population.

Our view is that the speed of change taking place in the Nordics is not fast enough.

Norway has realized the problem. Norway has been doing slightly better economically than Denmark and Finland, but its annual GDP growth has been sluggish at about 1 percent since the financial crisis. Norway has identified a need for change—a need that was highlighted recently by the drop in oil prices and no expectation of them recovering in the short term—and has begun diversifying its economy to some extent. Especially its investment in infrastructure (a total of NOK 508 billion that the government plans to spend from 2013 through 2023) has been at a good level, and it is pushing for people to work more by providing incentives and by reducing regulation that discourages companies from hiring. Concrete examples include the reduction of income and corporate tax rates, as well as NOK 250 million in early stage capital for start-ups through grants and cofinancing with private investors. However, these plans are insufficient to

diversify Norway's economy in an environment where government owns a large share of MNCs and private investment is not sufficiently encouraged.

Sweden's plans are different, compared with the other Nordic countries. Sweden has been growing economically since the financial crisis, but at a slow rate of about 1 percent. Now Sweden's left-wing government has chosen a path that allows for more investment in social welfare—which can fuel short-term growth and local demand—and less focus on business competitiveness. To highlight it, Sweden's trade surplus of more than \$20 billion has been eliminated during the past ten years.¹ Taxation will be increased, as tax relief for employing youths has been abandoned, and taxes have increased for retirement-aged workers who remain in the workforce. There are some positive developments in innovation, though: the government proposes to focus on investments in innovation and digitization and plans to centralize its venture-capital investing. To facilitate this, an Innovation Council has been established and a system to match private venture capital with earmarked government investments has been proposed. Additionally, Sweden stands out when compared with its neighbors with regard to its open immigration policies, especially for asylum-seeking immigrants. These policies will provide long-term benefits, but the country needs to do more to get immigrants into the workforce (immigrants' employment rate was 64 percent, compared with 78 percent for native-born workers in 2013) and to attract more work-based immigration.

The Nordics are proceeding with a sense of urgency. There is a clear sense of urgency—gradually being realized by governments and the population—when looking at the competitiveness challenges that the Nordics are facing. Still, our view is that the speed of change taking place in the Nordics is not yet fast enough. The governments have focused on short-term actions to end the stagnation, but even those are still partly in the planning stage. In addition, the governments should deploy more tangible plans for structural reforms of the labor markets and public-service offerings, establish a mental attitude to

adjust their investment focus (for example, on innovation, digitization, and talent), enable businesses to grow by reducing regulation to a great extent, and address the looming workforce gap. Many good initiatives have been started to transform the Nordic economies. However, these are not yet sufficient, as the economic situation is not improving except in Sweden and, to some extent, in Denmark. A recent economic forecast for 2015 shows 2.8 percent GDP growth for Sweden and 1.9 percent for Denmark, but only 1.2 percent for Norway and 0.4 percent for Finland (compared with 2.5 percent, on average, for the Nordics from 1980 through 2007).²

To make sure that Denmark and Finland continue on the transformation path, that Norway keeps diversifying its industrial landscape, and that Sweden embarks on a quest to secure its competitiveness in the long term, the Nordic governments and business leaders should systematically assess their countries' progress with regard to the ten recommendations. Only by identifying the areas where no action has been taken or where actions have not had the needed impact can further improvement be made.

Inspiration from Abroad

The Nordics are still far away from the target state and are struggling in several areas that could help revive the Nordic model, such as removing rigidities from the labor markets, leveraging immigration to secure the workforce, and enhancing the performance of the public sector. In order to come up with effective solutions for the major challenges in these areas, the Nordics should look at best practices from one another and from abroad. Applying solutions that have been used successfully in other countries outside the region is an efficient way to start developing actions and bringing novel ideas to each Nordic country.

A natural step among the Nordic countries is to increasingly learn from one another. The four Nordic countries each have some world-leading areas in the public sector that are exemplary on a global scale, and the countries are close enough culturally, politically, and economically for many best practices

to be applicable across the region. To identify areas where best practices are relevant, one can look at the Nordic Agenda's three steps and the politics the Nordic countries have applied and dive deeper into areas where there are large variations among our countries. For example, in funding the journey, Denmark has demonstrated an efficient labor-market model, and in winning in the medium term, Sweden has introduced strategies to improve productivity in health care.

The Nordics should look at best practices from one another and from abroad.

The Nordic countries should also look to global best practices and successful initiatives. Particular focus should be given to areas where the Nordic countries have struggled to match the development of international peers. For instance, to handle the challenges arising from integrating large numbers of immigrants into the workforce, inspiration should be sought from countries that have performed well in this respect, such as the UK. Also, as other countries catch up with the Nordics' digital development, measures need to be taken to defend the position of global leadership in this field. The UK's innovation program works as a best practice in this area. On a strategic national level, Singapore has taken a holistic view in developing and measuring its national strategy

Denmark's Labor Regulation. In the World Economic Forum's competitiveness assessment, labor regulation is identified as the most or second most problematic factor for doing business in Finland, Norway, and Sweden. In Denmark, however, it was only fifth, indicating a clearly more open labor market. Since the 1990s, Denmark has used the flexicurity model, which provides flexibility for employers to scale their workforce up or down and security to employees through a state guarantee of up to 90 percent of their salary should they become unemployed. Denmark supports this model with active

labor-market policies that help the unemployed find jobs or with education and training. The model is also supported by the major unions and the employer association.

Immigrants have integrated into the UK's workforce and contributed to public finances.

The flexicurity model increases employers' willingness to hire new staff and reduces the perceived risk to hire immigrants. From the 1990s, when the model was introduced, until the financial crisis in 2008, Denmark's unemployment rate improved to become one of the lowest among OECD's member countries. After the financial crisis, the unemployment rate has increased more than 3 percentage points, but it is still lower than the OECD average and those in Sweden and Finland. By introducing the Danish model, Sweden, Norway, and Finland could improve international competitiveness for companies by giving them the flexibility to scale up or down the number of employees and, thus, their costs. These countries could also use the model to reduce unemployment and improve the possibilities for immigrants to break into the workforce. Economist and professor Lars Calmfors estimates that structural employment in Sweden could be lifted by 1.5 to 2 percentage points by introducing reforms similar to those in Denmark.³ In addition, the new Danish government has made policies to further enhance the labor market and lift employment, as presented previously. Establishing a model similar to the Danish one would be a first step in reforming other Nordic labor markets, but it would need to be followed by further measures to decrease the other obstacles companies face.

Opening Labor Markets to Immigrants.

Several countries have kept their labor markets open to boost the employment of immigrants. They have successfully attracted and integrated large numbers of immigrants into their workforce by keeping regulation and restrictions to a minimum. As an example, the UK is considered a dynamic

economy with an open stance toward immigrant labor. When ten new countries joined the EU in 2004, the UK didn't impose restrictions that would hinder the new EU citizens from immigrating and working. Workforce integration has been successful: while the annual inflow of immigrants has increased from less than 300,000 in 2000 to more than 400,000 after 2004, the employment rate of the native population has stayed level at 72 percent (contrary to the expectations of critics) and the employment rate of immigrants increased from 63 to 69 percent. Immigrants have integrated well into the UK's workforce and have contributed to the health of public finances: the ratio of overall fiscal revenues to spending has been higher for immigrants than for the British-born population from 2001 through 2011.⁴ In essence, as a result of successful integration, immigrants have subsidized welfare for British-born citizens.

It is evident that flexibility, few restrictions, and an agile labor market are important in integrating new immigrants into the workforce, especially the ones who have fewer skills and lower productivity and who struggle to find suitable jobs. Examples of rigid labor-market regulations that discourage employers to hire are high minimum-wage rates and social security contributions. Also, lavish social security is a disincentive to immigrants to work, so there needs to be a balance.

The UK's Innovation Program. To boost British innovation and technology clusters, Prime Minister Cameron introduced a long-term initiative to improve the country's innovation climate and business conditions for start-ups. The program addresses improvements in four main areas: infrastructure and innovation clusters, access to capital and funding, talent and skills, and supportive regulations and taxation. After the introduction of the program in 2010, the UK's ranking went from 14 to 2 in the Global Innovation Index.⁵ (See Exhibit 12). Similar efforts were undertaken in the Nordic countries as well, but during the same period, the rankings of three of the four Nordic countries dropped. Initiating stronger programs in the Nordic countries could put us back at the international frontier of innovation, which is central

EXHIBIT 12 | The UK's Innovation Program Improved the Country's Ranking in the Global Innovation Index

2009–2010	2011	2012	2013	2014	2015
1. Iceland	1. Switzerland	1. Switzerland	1. Switzerland	1. Switzerland	1. Switzerland
2. Sweden	2. Sweden	2. Sweden	2. Sweden	2. UK	2. UK
3. Hong Kong	3. Singapore	3. Singapore	3. UK	3. Sweden	3. Sweden
4. Switzerland	4. Hong Kong	4. Finland	4. Netherlands	4. Finland	4. Netherlands
5. Denmark	5. Finland	5. UK	5. U.S.	5. Netherlands	5. U.S.
6. Finland	6. Denmark	6. Netherlands	6. Finland	6. U.S.	6. Finland
7. Singapore	7. U.S.	7. Denmark	7. Hong Kong	7. Singapore	7. Singapore
8. Netherlands	8. Canada	8. Hong Kong	8. Singapore	8. Denmark	8. Ireland
9. New Zealand	9. Netherlands	9. Ireland	9. Denmark	9. Luxembourg	9. Luxembourg
10. Norway	10. UK	10. U.S.	10. Ireland	10. Hong Kong	10. Denmark
11. U.S.	11. Iceland	11. Luxembourg	11. Canada	11. Ireland	11. Hong Kong
12. Canada	12. Germany	12. Canada	12. Luxembourg	12. Canada	12. Germany
13. Japan	13. Ireland	13. New Zealand	13. Iceland	13. Germany	13. Iceland
14. UK	14. Israel	14. Norway	14. Israel	14. Norway	14. South Korea
15. Luxembourg	15. New Zealand	15. Germany	15. Germany	15. Israel	15. New Zealand

PROGRAM LAUNCH

Source: Global Innovation Index (INSEAD, Cornell University, and the World Intellectual Property Organization).

to fostering new companies, attracting FDI and international talent, and lifting economic growth.

Sweden's Value-Based Health Care. The Swedish health-care system is often considered a best practice. Though spending less per capita on health care than some other Western countries—for example, spending half of what the U.S. spends—it is ranked among the best in the world and has strong statistics in life expectancy (number 12 globally) and infant mortality (number 6 globally). But Sweden's health-care system faces the same challenges as the systems in most Western countries: rising demand coupled with increasing costs and pressed public finances. Traditionally, hospital administrators have focused on process efficiency rather than on patient outcomes, and this has only exacerbated the problems.

Several Swedish hospitals have now started to implement a value-based health care (VBHC)

strategy, which has also become a high priority for several county councils. VBHC focuses on delivering the best possible health outcomes for the patients at equal or lower cost. By defining what outcomes truly matter for patients, measuring them, analyzing the data, and creating transparency by equipping both medical professionals and patients with the information, VBHC can have a huge impact on treatment quality. Operating hospitals and health care systems on the basis of outcomes, rather than only on process metrics, further encourages collaboration across units within hospitals and across different health-care-system stakeholders. A central part of VBHC is to standardize outcomes measurement, making it possible to compare the results among care providers within and across health care systems to identify the best practices. Sweden is a pioneer in outcomes measurement, with its large number of high-quality disease registries and its key role in establishing the International Consortium for Health Outcomes Measurement, the coopera-

tive effort of Karolinska Institutet in Stockholm, Michael Porter at Harvard Business School, and BCG. (See *The Value-Based Hospital: A Transformation Agenda for Health Care Providers*, BCG report, October 2014.) VBHC is still in its youth, but it holds great potential to curb the increasing health-care costs and, more important, to deliver better outcomes that matter to patients.

Many of the Nordic MNCs have successfully gone through a transformation.

Singapore's Country Strategy and Follow-Up. Singapore's Public Service Division stands out for its effectiveness over several generations in responding to the country's short-term crises and long-term structural challenges through clear target setting and follow-up. First of all, Singapore has created clear strategies and targets for sustaining the nation's economic growth. In 2010, it formed an Economic Strategies Committee that set the future direction for Singapore, recommending that Singapore focus on highly skilled people, an innovative economy, and being a distinctive global city.⁶ Furthermore, Singapore actively tracks the outcomes that its public sector achieves. It has institutionalized regular monitoring of the ministries' achievements and publishes a biennial *Singapore Public Sector Outcomes Review* that focuses on quantifiable outcomes and progress in key areas of national interest.⁷ (See Exhibit 13.) All of this enables action to be taken on the basis of results. Nordic governments should evaluate the need for a similar measurement concept.

Making It Happen

Driving change of the Nordic model means going down a rewarding but bumpy road. There will be considerable political challenges voiced by politicians, officials, and the general population. Beyond the top political layers, execution requires approvals from multiple government agencies and officials owing to bureaucracy and increased cooperation with the corporate sector. Consequently,

a solid implementation roadmap is required for the Nordic Agenda. The implementation process then needs to be rigorously assessed to ensure the desired results. In executing a transformation, Nordic governments can learn from private-sector companies that have knowledge and experience of such programs and can leverage their resources.

Strengthening Cooperation Between the Private and Public Sectors. The dialogue between the private and public sectors needs to be strengthened to support change in the Nordic region. Many of the Nordic MNCs have successfully gone through a transformation where measurable outcomes have been paramount.

To start the collaboration, it is important not only to hire talent from the corporate sector into key positions in the public sector but also to get input from business leaders with proven experience. This input can, for example, be given through councils and boards of directors. Private-sector talent can help the public sector in establishing the right mind-set and processes for measuring and increasing productivity, as it is a constant challenge for companies and necessary for their survival.

In many cases, it can also be helpful to invite the private sector to compete with the public sector. This way, the quality and cost of services provided by public institutions, such as health care and transportation, can be directly compared with the quality and cost of services provided by private companies to determine if the public sector is competitive. The Swedish payer-provider system for health care is an example of a public-sector service that compares its quality and costs to private-sector services. Such comparisons also reveal the minimum level of performance the public services must meet.

A better dialogue between the private and public sectors also helps the latter to fully understand what the private sector needs to increase its productivity and create new jobs. Especially in the dynamic world of technology and start-ups, the public sector needs to be attentive so that the right initiatives are there to support the next generation of MNCs and continue to provide a supportive

EXHIBIT 13 | Singapore Actively Quantifies and Tracks Its Public Sector's Outcomes

A NATION OF OPPORTUNITY		A CITY TO CALL HOME	
Quality growth to benefit all Singaporeans <ul style="list-style-type: none"> • GDP growth rate (%) • Unemployment rate (%) • Labor productivity growth (%) • FDI (\$billions) • Inflation, CPI (%) • Household income from work (index) 		Better public housing for all <ul style="list-style-type: none"> • Home ownership (%) • Debt-serving ratio of home buyers (%) 	
		Enhancing transport and connectivity <ul style="list-style-type: none"> • Customer satisfaction for public survey (%) • Number of delays per train kilometers • Share of frequent bus arrivals (%) • Ranking of air and sea transport infrastructure 	
Abundant work and education opportunities <ul style="list-style-type: none"> • Employment rate (%) • Labor with at least postsecondary qualifications (%) • Training participation rate (%) • Gini coefficient 		Vibrant social spaces for all <ul style="list-style-type: none"> • Satisfaction with living environment (%) 	
		A better environment for the present and future <ul style="list-style-type: none"> • Domestic waste per capita (kilograms per day) • Domestic water consumption per capita (liters per day) 	
A CARING AND COHESIVE SOCIETY			
Singaporeans are at the heart of population policies <ul style="list-style-type: none"> • Composition of population (millions) • Fertility rate (per female) • Divorce rates (%) 		Enabling our seniors to enjoy active and confident aging <ul style="list-style-type: none"> • Employment rate for ages 55–64 (%) • Retirement income sufficiency at age 55 (percent of people) 	
Assurance of good and affordable health care <ul style="list-style-type: none"> • Life expectancy at birth (years) • Coverage of bills by Medisave/Shield (%)¹ 		A caring community <ul style="list-style-type: none"> • Volunteering rate (%) • Charitable contributions (%) • Households assisted under ComCare (number)² 	
A SAFE, SECURE, AND CREDIBLE SINGAPORE		AN EFFECTIVE AND TRUSTED GOVERNMENT	
Maintaining a safe and secure home <ul style="list-style-type: none"> • Crime rate (per 100,000 population) • Ex-offenders' recidivism rate (%) 		Upholding good governance <ul style="list-style-type: none"> • Global rank in government effectiveness and regulatory quality (percentile) 	
		A sound and sustainable fiscal system <ul style="list-style-type: none"> • Budget balance (percent of GDP) • Net benefits of household income by decile (%) 	

Source: *Singapore Public Sector Outcomes Review*, Ministry of Finance, 2014.

Note: FDI = foreign direct investment. CPI = consumer price index.

¹National medical-savings scheme and basic health insurance.

²Social assistance is for low-income individuals and families.

start-up environment to keep innovation and job creation an active part of the government, people, and enterprises.

4. *The Fiscal Effects of Immigration to the UK*, Centre for Research and Analysis of Migration, November 2013; includes immigrants that have arrived from 2001 through 2011.

5. Rankings by Cornell University and INSEAD.

6. *Report of the Economic Strategies Committee*, Ministry of Trade and Industry Singapore, 2014.

7. *Singapore Public Sector Outcomes Review*, Ministry of Trade and Industry Singapore, 2014.

NOTES

1. OECD.

2. Real GDP Forecast, OECD, 2015.

3. *Flexicurity: A Swedish Perspective*, a presentation for the European Parliament.

FOR FURTHER READING

The Boston Consulting Group publishes many reports and articles on transformation and on the Nordics that may be of interest to senior executives. Recent examples include those listed here.

How to Jump-Start Digital Transformation

A Focus by The Boston Consulting Group, September 2015

Man and Machine in Industry 4.0: How Will Technology Transform the Industrial Workforce Through 2025?

A Focus by The Boston Consulting Group, September 2015

The Robotics Revolution: The Next Great Leap in Manufacturing

A report by The Boston Consulting Group, September 2015

Launching a New Digital Agenda: How Sweden Can Become the Global Leader in Digitization and Technology

A report by The Boston Consulting Group, June 2015

Why Well-Being Should Drive Growth Strategies: The 2015 Sustainable Economic Development Assessment

A report by The Boston Consulting Group, May 2015

Industry 4.0: The Future of Productivity and Growth in Manufacturing Industries

A Focus by The Boston Consulting Group, April 2015

Transformation: The Imperative to Change

A report by The Boston Consulting Group, November 2014

Decoding Global Talent: 200,000 Survey Responses on Global Mobility and Employment Preferences

A report by The Boston Consulting Group, October 2014

The Value-Based Hospital: A Transformation Agenda for Health Care Providers

A report by The Boston Consulting Group, October 2014

Revitalizing Nordic Manufacturing: Why Decisive Action Is Needed Now

A report by The Boston Consulting Group, August 2013

Digital Sweden: How Consumers Are Setting the Pace and Creating Opportunities for Businesses

A report by The Boston Consulting Group, May 2013

NOTE TO THE READER

About the Authors

Børge Kristoffersen is a partner and managing director in the Oslo office of The Boston Consulting Group. **Fredrik Lind** is a senior partner and managing director in the firm's Stockholm office. **Mai-Britt Poulsen** is a partner and managing director in BCG's Copenhagen office. **Teemu Ruska** is a partner and managing director in the firm's Helsinki office. **Tuukka Seppä** is a senior partner and managing director in BCG's Helsinki office. **Juuso Soininen** is a principal in the firm's Helsinki office. **Øyvind Torpp** is a senior partner and managing director in BCG's Oslo office. **Johan Öberg** is a senior partner and managing director in the firm's Stockholm office.

Acknowledgments

The authors are grateful for the support of the many people who contributed their time and experience and provided input to the content of this report. We would like to especially thank our colleagues Jaakko Tätilä and Petter Flordal, who helped write this report, for their leadership in developing content and serving as thought partners.

We would also like to thank Lars Fæste and Maria Blomqvist for their valuable input and views, Helena Fogelmark and Laura Karotie for their great support and management of the overall report process, and Katherine Andrews, Gary Callahan, Kim Friedman, Trudy Neuhaus, and Sara Strassenreiter for their contributions to the editing, design, and production of this report.

For Further Contact

For more information, or to discuss our analysis and findings, please contact one of the authors.

Børge Kristoffersen

Partner and Managing Director
BCG Oslo
+47 21 04 68 00
kristoffersen.borge@bcg.com

Fredrik Lind

Senior Partner and Managing Director
BCG Stockholm
+46 8 402 44 00
lind.fredrik@bcg.com

Mai-Britt Poulsen

Partner and Managing Director
BCG Copenhagen
+45 77 32 34 00
poulsen.mai-britt@bcg.com

Teemu Ruska

Partner and Managing Director
BCG Helsinki
+358 9 8568 6000
ruska.teemu@bcg.com

Tuukka Seppä

Senior Partner and Managing Director
BCG Helsinki
+358 9 8568 6000
seppa.tuukka@bcg.com

Juuso Soininen

Principal
BCG Helsinki
+358 9 8568 6000
soininen.juuso@bcg.com

Øyvind Torpp

Senior Partner and Managing Director
BCG Oslo
+47 21 04 68 00
torpp.oyvind@bcg.com

Johan Öberg

Senior Partner and Managing Director
BCG Stockholm
+46 8 402 44 00
oberg.johan@bcg.com

© The Boston Consulting Group, Inc. 2015. All rights reserved.

For information or permission to reprint, please contact BCG at:

E-mail: bcg-info@bcg.com

Fax: +1 617 850 3901, attention BCG/Permissions

Mail: BCG/Permissions

The Boston Consulting Group, Inc.

One Beacon Street

Boston, MA 02108

USA

To find the latest BCG content and register to receive e-alerts on this topic or others, please visit bcgperspectives.com.

Follow [bcg.perspectives](https://www.facebook.com/bcg.perspectives) on Facebook and Twitter.



BCG

THE BOSTON CONSULTING GROUP

Abu Dhabi
Amsterdam
Athens
Atlanta
Auckland
Bangkok
Barcelona
Beijing
Berlin
Bogotá
Boston
Brussels
Budapest
Buenos Aires
Calgary
Canberra
Casablanca

Chennai
Chicago
Cologne
Copenhagen
Dallas
Detroit
Dubai
Düsseldorf
Frankfurt
Geneva
Hamburg
Helsinki
Ho Chi Minh City
Hong Kong
Houston
Istanbul
Jakarta

Johannesburg
Kiev
Kuala Lumpur
Lisbon
London
Los Angeles
Luanda
Madrid
Melbourne
Mexico City
Miami
Milan
Minneapolis
Monterrey
Montréal
Moscow
Mumbai

Munich
Nagoya
New Delhi
New Jersey
New York
Oslo
Paris
Perth
Philadelphia
Prague
Rio de Janeiro
Riyadh
Rome
San Francisco
Santiago
São Paulo
Seattle

Seoul
Shanghai
Singapore
Stockholm
Stuttgart
Sydney
Taipei
Tel Aviv
Tokyo
Toronto
Vienna
Warsaw
Washington
Zurich