

NATIONAL STRATEGY FOR SWEDEN

FROM WEALTH TO WELL-BEING



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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 78 offices in 43 countries. For more information, please visit [bcg.com](https://www.bcg.com).



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PREFACE

THE BOSTON CONSULTING GROUP, founded in 1963, 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. In this report, we draw on our global position to outline a strategy for Sweden.

In celebration of BCG's 50th anniversary, we have conducted a study of the underlying fitness of the Swedish economy. It is in the interest of our firm and our employees to contribute to the continued well-being of Sweden. In 1978, BCG published its first report on the Swedish economy.¹ Written during an economic downturn, the study became subject to intense debate and was the basis for a government proposition to reform Swedish industrial policy. We hope for this report to have the same impact.

The Swedish political landscape is characterized by debate on a broad array of important topics; however, we see a need for a clearer long-term strategic direction. Our intention is not to exhaustively and systematically review the Swedish system; rather we aspire to put forward a set of strategic and tactical priorities to ensure a competitive and prosperous Sweden. We hope that this report will lift the public discussion to address these strategic priorities and to ensure that Sweden remains the successful and happy country that it is today.

KEY CONTRIBUTORS

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EXECUTIVE SUMMARY

SWEDEN HAS COME FAR since the gloomy days of the 1970s and 1980s, when the country struggled with an increasingly uncompetitive industry. Since 1993, Sweden has enjoyed nearly continuous positive growth (+2.2 percent annually) in gross domestic product (GDP) per capita. This success has been enabled by reforms enacted in the 1990s, including comprehensive tax reform, pension reform, a floating currency, and price stability targets. Combined with an increasingly open economy, EU membership, and free trade agreements, these reforms have allowed the Swedish economy to benefit significantly from globalization.

Sweden now boasts the fifth-happiest population in the world and ranks as the ninth-highest wealth creator, the tenth-most productive user of the available labor pool, and the fourth-largest investor in R&D relative to GDP. Growth since the early 1990s has been driven both by positive growth in hours worked per capita (+0.3 percent annually) and in productivity gains, i.e., GDP/hour (+2.0 percent annually), which is among the highest of western European countries. It is clear that Sweden has enjoyed a favorable position the last two decades. Looking ahead, however, there are a number of dark clouds on Sweden's northern skies as powerful global, demographic, and macroeconomic factors push on the levers of labor availability and productivity.

We argue that, to preserve Sweden's quality of life until 2030, a balanced agenda needs to be established that works in parallel on three levers: increasing working hours among under-worked segments of the population, providing enablers for productivity growth, and finding more efficient means to converting wealth into well-being—all this while staying true to Swedish values and sustaining social stability.

The size of Sweden's working population is estimated to have peaked and therefore the number of hours worked will be under pressure; overall hours worked per capita is projected to decrease annually by

0.5 percent on average through 2030. To counteract this turning tide, it will be increasingly important to drive reforms and targeted initiatives to increase the number of worked hours in the economy, especially among young people, older workers, and immigrants, the groups with the highest potential to increase hours worked. Recent policies instituted of tax deductions for household services (*RUT-avdrag*) and payroll tax deductions for companies hiring young employees, as well as the introduction of vocational training, are good examples of such targeted reforms. Nevertheless, there are a finite number of Swedes with finite hours and days of the year to work—the negative per capita trend cannot be reversed through deployed hours alone. As in the past, Sweden’s productivity growth versus global competitors will be the main factor that determines living standards of Swedes in the long run.

We feel that drivers of productivity gain, especially in companies facing international competition, are not sufficiently high on the public agenda. As an illustration of the power and importance of productivity, a decline in productivity growth by 0.40 percentage points yearly until 2030 (which would place Sweden on average western European growth levels) would have to be offset by increasing the retirement age by three years or by individuals working three hours more per week to enjoy the same wealth level in 2030. Productivity growth across the western world has been in steady decline over the last fifty years. During the last two decades, Sweden has enjoyed strong productivity growth relative to peers, but absolute growth rates have decreased and emerging markets are now closing the gap more quickly. The result is that the global buying power of a unit of Swedish “work” is set to weaken as hundreds of millions of new workers around the world bring their products and services to the market. At the same time, the country-based competitive advantages that Sweden previously enjoyed, such as good infrastructure and relatively cheap energy, are no longer unique. This makes the country more dependent on the advantages of its corporations. These businesses will in turn be subject to a more volatile market environment, which will require them to become even more adaptive. Sweden cannot rely on its past advantages—it needs to look forward, into the changing world, and make sure it is ready to adapt to the challenges that lie ahead.

Economic growth alone is not sufficient for long-term success, and is not, in fact, an aim in and of itself. The ability to create wealth (i.e., GDP per capita) does not guarantee sustainable social well-being. As Swedish per capita GDP growth slows, it will become increasingly important to address the conversion of wealth into well-being and the securing of social sustainability—in short, to secure the greatest possible well-being outcomes for each krona spent.

GDP growth: Generating income going forward

At its simplest, GDP is determined by the available supply of labor and capital and the rates of productivity at which these are deployed to create wealth. Productivity improvements are theoretically unlimited in potential (as opposed to labor, which is finite), but are notoriously hard to predict and even harder to control on a macro level. Few

could have foreseen the true impact that innovations such as the steam engine, electricity, internal combustion engine, telecommunications, and Internet technologies would have on productivity. However, on a micro level, the continuous improvement of companies and individuals is a controllable driver of productivity enhancement. Policy makers and corporate stakeholders need to ensure that the ingredients for this continuous improvement are available, with a focus on:

- Talent management, through education and retention of domestic talent along with attraction of international talent
- Innovation and adoption of new technologies, along with a healthy climate for company growth—especially small and medium-sized enterprises
- Accelerated digitalization of both government and corporations to fully leverage a powerful driver of productivity growth that has not yet been fully exploited

There are worrying trends in all of these key focus areas: deteriorating performance in education standards, a rigid approach to international talent, declining corporate R&D spending, slow re-growth of new large companies, and weakening measures of digitalization on international benchmarks. If unaddressed, these trends will have a profound impact on Sweden's ability to generate income growth.

Quality of life: Converting wealth into well-being

In light of the focus on sustained rapid economic growth and uncertain productivity development, it becomes even more important to efficiently convert income earned into well-being. As it is neither easy nor desirable to directly control the consumption choices of 9.6 million Swedes, the burden of improving consumption efficiency via policy will fall primarily on the public sector. Two key topics should be prioritized:

- Implement a “value-based” approach in the public sector, i.e., leverage outcome transparency to drive innovation and competition and thus improve both quality and productivity in tandem
- Implement adaptive government practices, encouraging local experimentation and best-practice sharing, investing in talent and innovation, and removing regulatory barriers to growth

As with workforce productivity, there is no theoretical limit to the wealth creation potential from the public sector at any given level of spending. In practice, there are several examples in healthcare and education provisioning, where costs have been cut while at the same time quality of outcomes have increased. Management based on actual outcomes also creates potential for a true measure of productivity in the public sector, which can be applied to all welfare providers. As an example, rather than regulating teacher density (an input variable) in schools, students' actual knowledge (i.e., the “outcome”) should be the focus for setting goals and measuring outcomes. The actual knowl-

edge of a set of students should then be measured in a standardized manner and be made fully transparent to the public, who can then observe the value for money they receive.

National strategy in five brush strokes

We believe that there is a true desire among decision makers to do the right thing for Sweden and that many of the right priorities have been identified and are a part of the political debate. However, for Sweden to truly maximize the well-being of the whole country, it becomes crucial that resource allocation matches a coherent set of long-term strategic priorities:

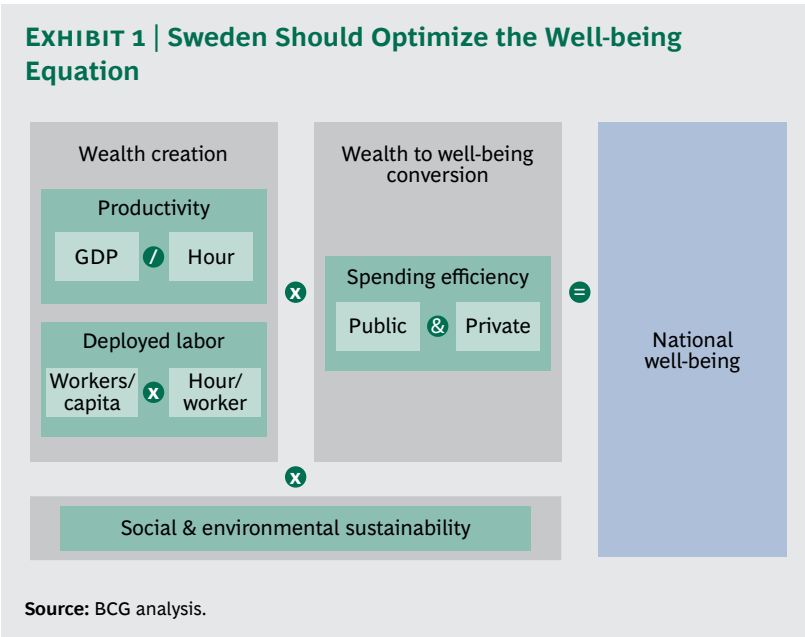
1. **Increase focus on productivity development, especially in the tradable sector**, to ensure long-term economic growth.
2. **Continue to deploy new approaches to slow the decline in hours worked** to meet the demographic challenge and manage rising welfare costs.
3. **Encourage adaptability in government and commercial institutions** to be prepared for a world of accelerated change.
4. **Shift toward an outcomes-guided public sector** to drive productivity and quality gains, primarily for healthcare and education but also in other welfare services.
5. **Ensure social and environmental sustainability** by acknowledging the tradeoffs and possible synergies and positive externalities with economic growth.

In this report, we will provide our view on Sweden's current state and where the country is heading. Our recommendations strive to strike a balance between initiatives to secure income generation and increase efficiency in spending while at the same time sustaining social sustainability and respecting Sweden's prevailing values. The proposed strategic priorities for Sweden, along with a selection of concrete recommendations of how to achieve the outlined strategy, can be found in the end of the report.

INTRODUCTION

WE BELIEVE THAT THE ultimate goal for Sweden is to ensure the well-being of its citizens. Economic growth alone is not sufficient for long-term success, and should not, in fact, be an aim in and of itself. Rather, for countries that aspire to create outstanding well-being for all citizens, economic growth—i.e., wealth creation—is one of three key levers (illustrated in Exhibit 1). The second lever is the conversion of wealth into well-being, which is to a large extent determined by public and private spending efficiency, i.e., the ability to make the most out of the income generated. Furthermore, there are social and environmental interdependencies with both wealth creation and conversion, which need to be accounted for and, if ignored, could decrease well-being despite economic growth.²

Sweden performed very well through the turn of the century: steady growth in wealth-creating capacity (i.e., GDP growth), even during global recessions, has enabled a long run of years with improving living standards and national well-being.³ The successful reforms and EU entry in the 1990s enabled the country to weather dramatic shifts in global economic, financial, and social conditions during the past two decades. In fact, Sweden has fared very well in terms of globalization thanks to the strength of its industry and a number of important political reforms. Sweden entered the millennium with a stable financial system, modern infrastructure, high rates of technical innovation and adoption, a stable of strong multinational companies, and a for-



ward-looking and internationally oriented society supported by capable and pragmatic institutions. While we would expect these strengths to continue to serve Sweden well in the next twenty years, the question arises: are they enough for Sweden to be internationally competitive in a future in which many of these factors seem to converge internationally? And, if not, what needs to be done to find new competitive advantages, thus ensuring Sweden's competitiveness in the future?

Further, several domestic forces are now increasingly challenging Sweden's ability to maintain steady GDP growth. An ageing population (i.e., increasing dependency ratio) and continued declining performance on international education benchmarks suggest the stock of human capital will decrease in quantity and potentially affect the quality of key skills. Weakening of the traditional manufacturing base and shifting of R&D spend by Swedish firms outside the country are indicators that breeding grounds for innovation may also be reduced in the future. Additional examples of challenges for Sweden are increasingly rigid unemployment, signs of social unrest, lagging investments in infrastructure, and a shortage of housing. Is Sweden well positioned to deal with these challenges?

This report presents what we believe is required for Sweden to ensure continued positive development in the well-being of its citizens. We will discuss the three different well-being levers—economic growth, well-being conversion, and social sustainability—and finish by laying out the suggested strategic priorities for Sweden, along with concrete recommendations on how to enact our suggested reforms.

ECONOMIC GROWTH IN A CHANGING WORLD

INCREASED GLOBALIZATION AND INTENSIFIED international competition are making it more and more difficult for industrialized countries such as Sweden to remain competitive. The results of these changing conditions are outlined below.

Previous country advantages no longer enough

There are two main trends to consider in creating long-term competitive advantage for Sweden. First, the specific country advantages that have supported historic Swedish growth are now converging globally as other countries catch up in their development. This makes the country dependent on the competitive advantages of its corporations to sustain Swedish competitiveness. Second, as the world becomes more volatile, these corporate advantages are becoming less reliable. The combination of these trends requires increased adaptability by society, government, and companies.

Traditional country advantages become less relevant. Swedish productivity growth has historically been driven by a number of structural country advantages, i.e., modern infrastructure, low energy prices, a highly skilled and English-speaking population, high-quality public institutions, beneficial regulations, and a stable macroeconomic environment.

For most of these factors, the relative advantage is eroding quickly, illustrated by the fact that the gap between the first and tenth country on global competitiveness rankings closed by 50 percent in just ten years.⁴ While historically differentiating, these qualities are now becoming hygiene factors; i.e., they will need to be maintained to sustain Sweden's competitive advantage, but they alone will not be enough to ensure success going forward.

Traditional country advantages are becoming hygiene factors

For example, while Sweden's high share of proficient English speakers still constitutes an advantage for trade and attracting talent, the rest of the world is catching up in English-language proficiency. Furthermore, most investments in Swedish infrastructure were made decades ago, and significant investment will be necessary during the coming decades to maintain the nation's vitality. The announced investments in Swedish infrastructure will partly but not fully close the investment gap. In order to close the remaining gap, Sweden should investigate the potential for further public/private partnerships.⁵ Lastly, while Swe-

den has had advantageous corporate tax policies, other jurisdictions are improving their systems; the overall regulatory burden, when accounting for employment laws, could become a disadvantage for Sweden when competing for international talent and business.

That said, there are a number of country advantages that remain for Sweden to leverage. Sweden has stable, cooperative, and trustworthy public institutions and a transparent judiciary, which is highly valued by companies. The country has a stable macroeconomic position, enabled partly by reforms made during the 1990s, which helped maintain a balanced budget during the recent financial crisis.

We have identified three focus areas that risk generating national disadvantage if conditions are not improved. Of these, education is the most urgent. Accelerating growth of global brainpower, coupled with the deteriorating quality of Swedish education, risks eroding Sweden's capacity for a leading economy. Secondly, inexpensive energy has historically been among the main advantages for Sweden, thanks to cheap hydropower and nuclear energy. Increased energy taxes and harmonization of tariffs will diminish this advantage. Rapid increases in the production of shale gas, especially in the U.S., is also widening the gap between energy prices in Sweden and other markets, putting pressure on the competitiveness of the Swedish energy-dependent industries. Volatility in domestic energy production only makes this challenge more difficult. Thirdly, the non-liquid housing market and the subsequent lack of housing in Sweden's largest cities is impeding mobility and having a negative impact on economic growth. The gap between demand for housing and supply is expected to continue to inhibit growth going forward.⁶

Corporate advantages are becoming more difficult to sustain. As countries' structural advantages become less relevant, they are becoming more dependent on corporate advantages. Simultaneously, corporate advantages are becoming less reliable in the long term.

There are signs of accelerated corporate change, which raise new demands on compa-

nies to become more adaptive to stay competitive. The share of firms able to maintain a top-three position in their field over five years dropped by 50 percent between 1970 and 2010. In addition, only 30 percent of the companies that are the largest in their sectors are also the most profitable, compared with approximately 50 percent in the 1990s (see Exhibit 2). At the same time, few of the 20 biggest spenders on research and development made it to the top 20 list of most innovative companies.⁷ It appears that scale advantages increasingly fail to offer guarantees for future success, and that big spending on research offers no guarantee for making it over the next technological leap. Instead, the future will require corporations to create an innovative and challenging environment within the company, to be able to identify new corporate advantages, and to refocus quickly.

Corporate advantages no longer guarantee future profitability

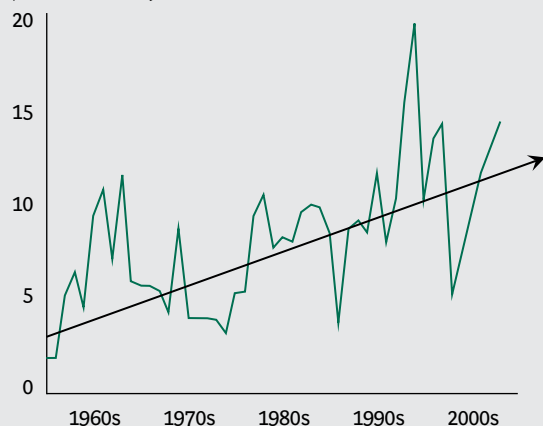
Increasing corporate volatility is being driven by three factors. Firstly, innovation intensity is increasing as new innovations are being adopted more quickly. Secondly, economic growth and better living standards are driving demand for niche and tailor-made products, which partly negates the benefits of scale. Finally, businesses are now exposed to a global market, where lower transaction costs and fewer barriers to trade mean competition can emerge quickly from almost anywhere.

Swedish companies seem to adapt well to changing market conditions, which is illustrated by the fact that almost all of the country's 50 largest MNCs have been in business for more than 40 years. Examples range from SCA, which began as a forestry company and has been transformed into a consumer products company, to Ericsson, which started as a switchboard producer and today is the world's largest provider of wireless network equipment. Swedish companies have been able to reshape and adapt to changing mar-

EXHIBIT 2 | Volatility in Corporate Advantages Accelerating

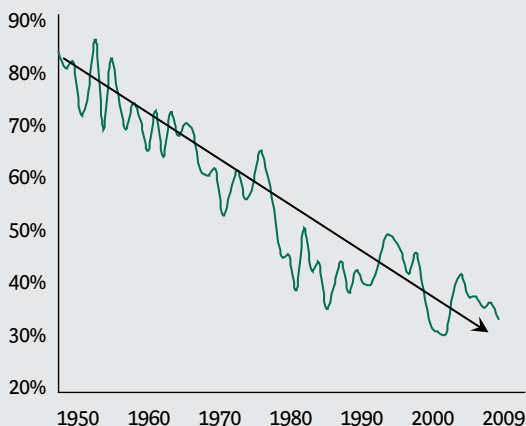
Historically successful businesses are losing their competitive strength faster

% of firms that drop out of top 3 industry position within a year



Advantage of being largest company is decreasing

Probability of share leader also being profitability leader¹



Source: BCG, *Adaptability: The New Competitive Advantage*, Harvard Business Review, (July 2011).

Note: Analysis only includes industries with more than ten companies.

¹Sales versus operating margin. Weighted average over all public U.S. and Canadian companies in 69 industries.

ket conditions, and this ability to adapt quickly and nimbly will become increasingly important in the more rapidly changing world.

Tradable sector is central to achieving high living standards

Maintaining global competitiveness is especially important for companies in the tradable sector, the part of the economy that produces goods and services that can move across borders, and that determines the overall income levels of a country.

Salary levels are determined by the competitiveness of the tradable sector.

Sweden's current wealth-generating capacity is high compared to many other countries, and this in turn drives high relative wage levels for the working population. For example, a Swedish farmer earns about 65 times as much as his counterpart in Thailand, more or less in line with their productivity difference (a factor of 75).

But why does a Swedish bus driver earn 20 times as much as his peer in, say, Peru?⁸ Surely this is not because he drives 20 times as many kilometers? The answer lies in the tradable sector: while Swedish farmers compete with Thai farmers on the world

market, the bus driver is exposed only to local competition and substitutes. The Swedish farmer must therefore take the bus driver's price, despite having to compete against the Thai farmer for his own income. By contrast, a Thai bus driver's wages are held down because the less-productive local farmers have less wealth with which to pay the fare.

Income differences among countries are thus largely determined by productivity differences in sectors that involve international trade. Even the income levels in sectors that have little exposure to international trade are determined by the competitiveness of the tradable sectors. Mobility within the national labor market further links income levels of tradable and non-tradable sectors. The Swedish bus driver of our example does not owe his relatively high income to his own comparative productivity, but to the high productivity of Swedish farmers. In this case, farmers are synonymous with "tradable sectors."

From three to two sectors. Typically, the economy is divided into three sectors: international, local, and public sectors. However, we argue that for the purposes of determining wealth generation, there are only two sectors in the Swedish economy—tradable

and non-tradable. Understanding this argument entails also understanding the tradability of individual professions. For example, finance personnel in a local trucking company are considered tradable, as the company might outsource the accounting department to India. Vice versa, cleaning staff in a bank, a highly tradable sector, are considered non-tradable (see Exhibit 3).

BCG estimates that about one-third of the Swedish workforce is active in tradable professions, which means that these goods or services could be replaced by international alternatives. Future income levels of most Swedish citizens depend largely on the productivity of this part of the working population; a loss of international competitiveness in the tradable sector would be felt by the entire Swedish population.

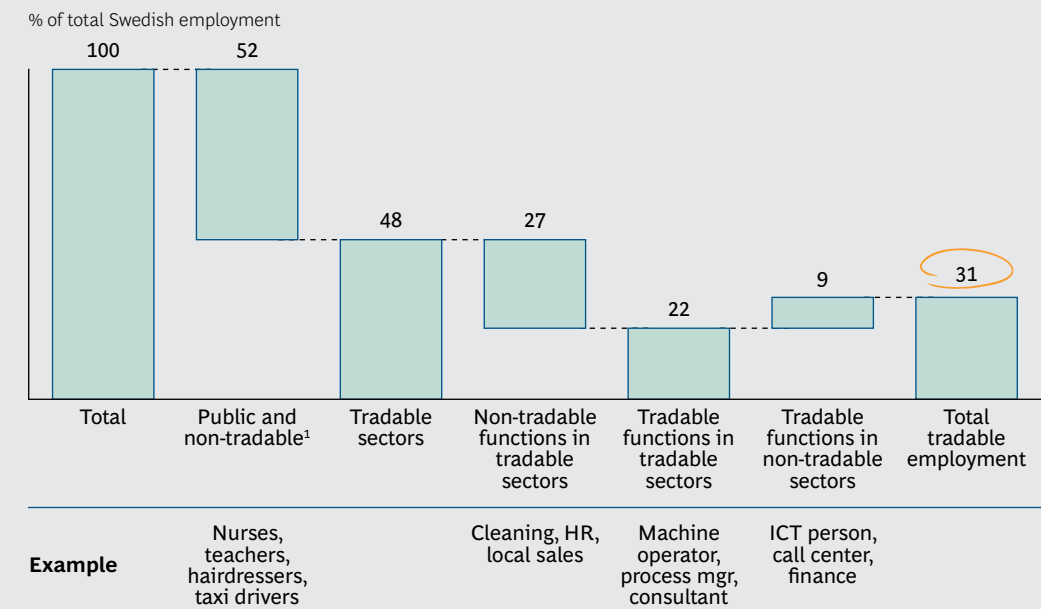
Economic growth directly dependent on productivity growth

Nobel Laureate Paul Krugman wrote in 1994, “Productivity isn’t everything, but in the long run it is almost everything. A country’s ability to improve its standard of living over time de-

pends almost entirely on its ability to raise its output per worker.” Productivity is a powerful driver of economic growth, as it is both unlimited in potential and generates exponential impact. By contrast, increases in labor deployed are both limited and have a linear effect on growth. In spite of this, recent Swedish policy has mainly been focused on increasing hours worked in the economy. The system in Sweden, in which welfare is being financed through taxes, increases the need to maintain the level of hours worked, especially in the light of a negative demographic development and rising welfare costs. Nevertheless, pushing more working hours into the economy will not be nearly enough to secure the country’s future economic growth since hours worked is a finite source of growth (see Exhibit 4).⁹ To maintain economic health, we argue that more focus needs to be on how to secure productivity growth going forward.

Given how crucial the comparative productivity of our tradable sectors is to future income generation capacity in the Sweden, we need to understand the factors that cause productivity differences among countries. The economic models behind much of the govern-

EXHIBIT 3 | One-third of Swedish Jobs are Tradable, Determining Salary Levels of Entire Economy



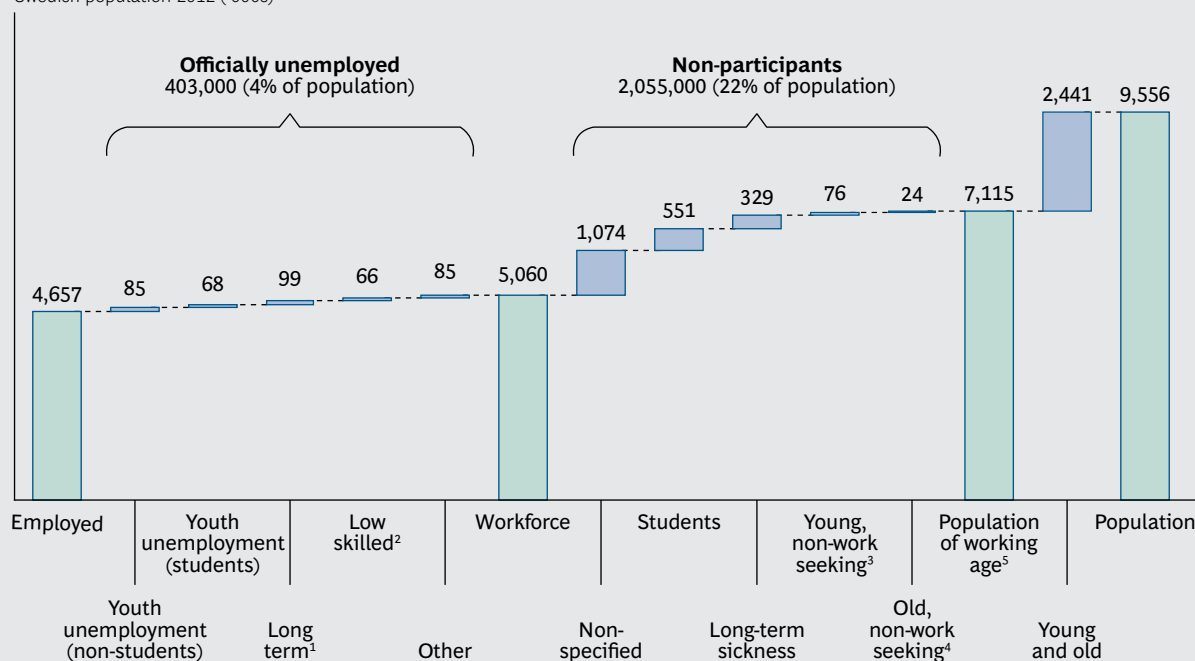
Source: SCB; Institute for International Economics; BCG analysis.

Note: Tradability of each industry sector derived from IIE-article (Spence & Hlatshwayo, 2011); U.S. figures adjusted to fit Swedish conditions.

¹Includes government, education, and healthcare sectors.

EXHIBIT 4 | Increasing Working Hours is a Finite Source of Growth

Swedish population 2012 ('000s)



Source: SCB; BCG analysis.

¹More than 27 weeks, excluding youths (youth = 15-24 years).

²Primary and secondary education, excluding long-term and youth.

³15-24 years old.

⁴55-74 years old.

⁵15-74 years old.

ment's policy-making attribute two-thirds of growth in future productivity to so-called total factor productivity (TFP), i.e., innovation, working methods, operational improvements, etc.¹⁰ Hence, TFP is the single most influential driver of economic growth, but also the least well understood. As such, it often proves difficult to link government policy and productivity growth. While we acknowledge the difficulty, we argue that this does not make it less of a priority. We therefore intend to focus our efforts in that direction.

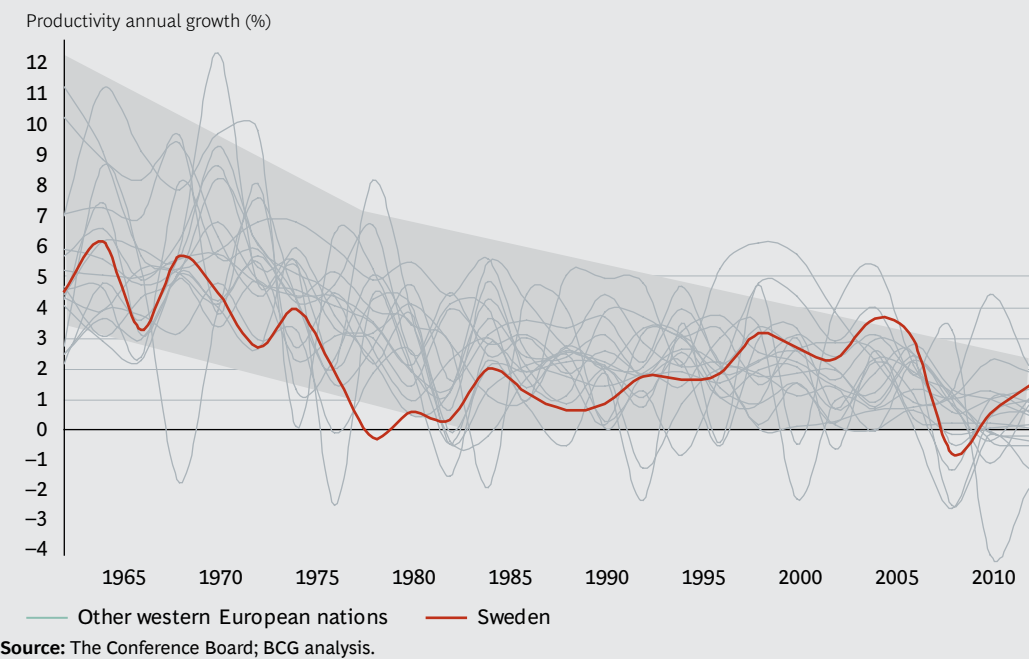
Productivity. Between 1993 and 2012, Sweden achieved 0.4 percentage points higher yearly productivity growth than the average western European country, after going through a period of slower productivity growth during the 1970s and 1980s (illustrated in Exhibit 5).

While it has out-performed many western peers since the beginning of the 1990s, Sweden has for the most part stayed within the normal bounds of productivity growth defined by its main trading partners—no

surprise as new technologies and improved business methods travel quickly across borders, encouraged in part by global strategy consulting firms.

But to sustain economic growth in a globalized economy, it is essential to maintain high relative productivity versus all competitors in the tradable sector. Even if productivity remains high, losing relative competitiveness over time will eventually lead to absolute declines in living standards in a world with finite resources. Reduced relative competitiveness makes it more difficult to export, thus generating lower purchasing power to finance import-based consumption upon which much of Sweden's high living standards are based. It is, therefore, vital to continue to drive productivity growth. In the short term, productivity is affected by the economic cycle to a large extent. However, over the long term, it is affected by other, more complex factors. There is still large potential in driving continuous productivity improvements in the

EXHIBIT 5 | Can Sweden Escape the European Productivity Slowdown?



industry, through automation and process improvements, for example. However, the large leaps in productivity growth will be enabled by factors such as talent, innovation, and digitalization, which we will return to later in this report.

We acknowledge that a too-high rate of productivity growth could be affecting the Swedish exchange rate, and could also raise the salary costs for public services. Therefore, as a short-term lever to impact economic growth, increasing labor availability appears to be an easier task. Although, without substantial immigration (which will not solve the long-term challenge in any case), there are limits to what can be achieved by

increasing hours worked (see sidebar: The power of productivity).

Hours worked. After decades of positive demographic development, the tides are now turning. A rapidly ageing population means fewer working citizens will have to support a larger number of older and sicker people who are expected to live longer than any previous generation. Sweden is expected to experience a yearly decline in the supply of worked hours per capita of -0.5 percent until 2030.¹¹ As the supply of hours worked is affected by factors such as the length of the working week, average retirement age, workforce entry, female workforce participation, immigration, and unemployment, there is still scope to

THE POWER OF PRODUCTIVITY¹

Small changes in productivity can offset major shifts in available working hours. For example, if Swedish productivity had increased in line with the western European average from 1993, i.e., 0.40 percentage points less per year, each worker today would need to toil an additional 130 hours (more than three working weeks) per year to generate the same GDP per capita that

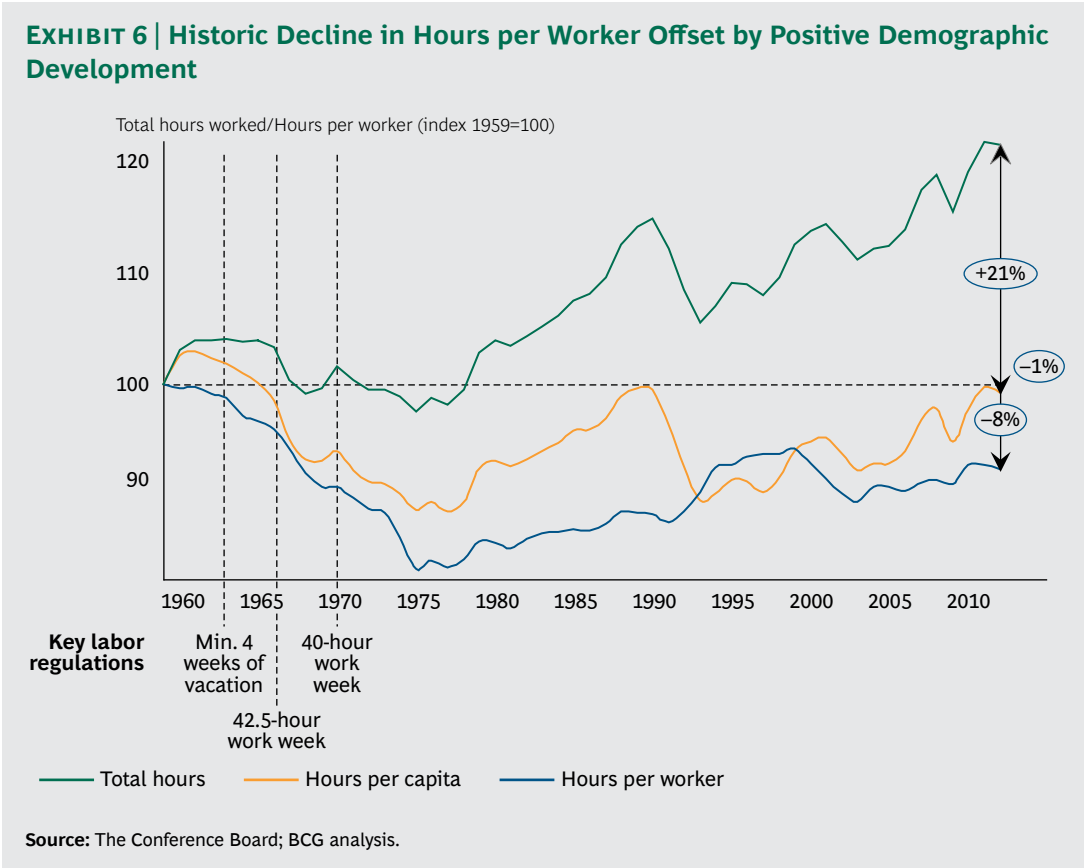
the country currently enjoys. Going forward, if productivity gains cannot be secured, major trade-offs need to be made—less vacation time and delayed retirement will be required to maintain living standards.

NOTE
1. BCG analysis based on figures from SCB databases.

impact this trend through better utilization of human resources. Sweden has some of the highest labor force participation rates in the OECD but also has a low average of number of hours worked per worker.¹²

During the last 50 years, beneficial demographics has allowed Swedes to work fewer hours individually while enjoying overall growth in hours worked per capita (see Exhibit 6). In other words, despite working fewer hours per worker, Swedes have at the same time seen a tremendous increase

in their living standards, which points to the impact of productivity growth on increased living standards. This “demographic dividend” is expected to reverse over the next 50 years and will instead become a “demographic tax” borne by all Swedes, but especially those of working age. Encouraging more people into the workforce will help to spread the burden of this tax more evenly and discourage migration of Sweden’s most talented workers to more benign economic climates.



IS SWEDEN POSITIONED TO MEET FUTURE CHALLENGES?

AS OUTLINED IN THE previous chapter, the conditions for economic growth are changing rapidly and countries and corporations will have to adapt accordingly. Is Sweden positioned to meet these future challenges? To answer this question, we will outline the historic path that Sweden has taken and explore a novel analysis of “economic fitness,” which provides a new view on the relative competitiveness of countries.

Historical development and Sweden’s current position

After enjoying many prosperous post-war decades, the 1970s were challenging for Sweden, due to the combination of a turbulent domestic political landscape, a general economic downturn that had been triggered by the international oil crisis, and an increasingly uncompetitive industry. Economically, the 1980s started positively, driven by currency devaluation, which temporarily restored competitiveness, and deregulation, most notably in the financial sector. Unfortunately, deregulation also served to enable some of the imbalances that led to the financial crisis of the early 1990s.

The crisis in the early 1990s resulted in a slowdown in growth, increased unemployment, and a budget deficit that came to mark the turning point for the Swedish economy. Following this, a number

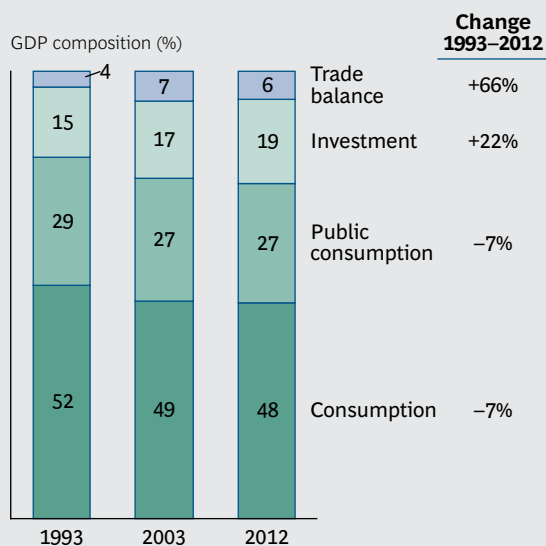
of monetary and fiscal reforms were implemented. These measures established a more stable platform, which fared well in the face of the global crises in 2001 and 2009. During this time, Sweden became a member of the EU and continued to deregulate a number of important sectors, such as education, electricity, healthcare, and telecommunications. Sweden was able to maintain GDP growth above that of most other western European countries; the country’s strong export sector, enabled by its open economy, helped drive this growth, which has been faster than the OECD average.

In 2012, Swedish GDP amounted to SEK 3,562 billion (USD 526 billion), of which the industrial and public sectors made up 20 and 24 percent respectively. The public sector was also the largest employer, engaging about one-third of the working population (see Exhibit 7).

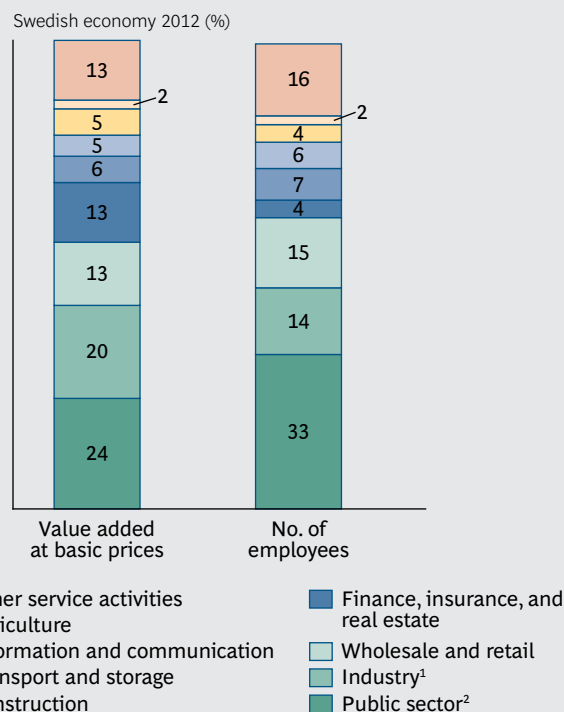
Much of this recent GDP growth is due to the export sector, which has strengthened again following setbacks in the 1980s and the financial crisis of the early 1990s. Sweden now exports goods and services equal to half the value of GDP—similar to Germany and the Nordic neighbors, but significantly more than most of its western European peers.¹³ Sweden has a relatively low dependency on imports (33 percent) to enable gross export, reflecting availability of raw materials and well-inte-

EXHIBIT 7 | Composition of the Swedish Economy

Swedish economy increasingly export driven



Industrial sector strong engine of Swedish value added



Source: OECD; SCB; BCG analysis.

¹Includes manufacturing and energy.

²Includes public authorities, education, and healthcare, etc.

grated domestic value chains. However, the corollary of this self-sufficiency is that any losses in export value will strongly affect the economy, as those losses cannot be as easily shared with sources of imports.

Over the last 40 years, Swedish export industries have experienced significant change. Pharmaceuticals, transport, machinery, and electronics have increased their share of exports while shipbuilding, mining, wood, metals, and pulp and paper have decreased in importance, reflecting an economic transition from resource extraction to more value-adding activities. In parallel, Sweden has taken market share in the global trade in services, despite losing overall share of international trade since 2000. Sweden appears to be successfully navigating into increasingly valuable activities, offsetting the impact of the phenomenal growth in global resources and labor supply.

By international comparison, Sweden has a large financial sector. The “big four” financial institutions (Nordea, Swedbank, SEB, and Handelsbanken) have assets worth 3.7 times Sweden’s GDP. This is a higher ratio than many of the western European countries that are facing significant financial challenges,¹⁴ and demonstrates that shifts to more value-added economic activity can also bring increases in risk and volatility. Ireland and Iceland showed how vulnerable nations can become when balance sheets expand beyond the means of the economy to support them—peaking at assets worth 4.4 and 9.8 times GDP,¹⁵ respectively, they eventually collapsed with severe consequences for their citizens. To date, the asset quality of Swedish banks has withstood the current financial crisis well, with non-performing loans worth less than 1 percent of assets, compared to the 1990s crisis, when Sweden absorbed losses worth 4 percent of total loans.¹⁶ However,

high economic leverage, in particular significant levels of private debt, will make Sweden more vulnerable should it lose any of its underlying economic fitness.

Economic fitness

Sweden seems to be doing well on many key financial measures. Thus the question arises: is the nation competitive enough to take on the challenges of a more globalized world?

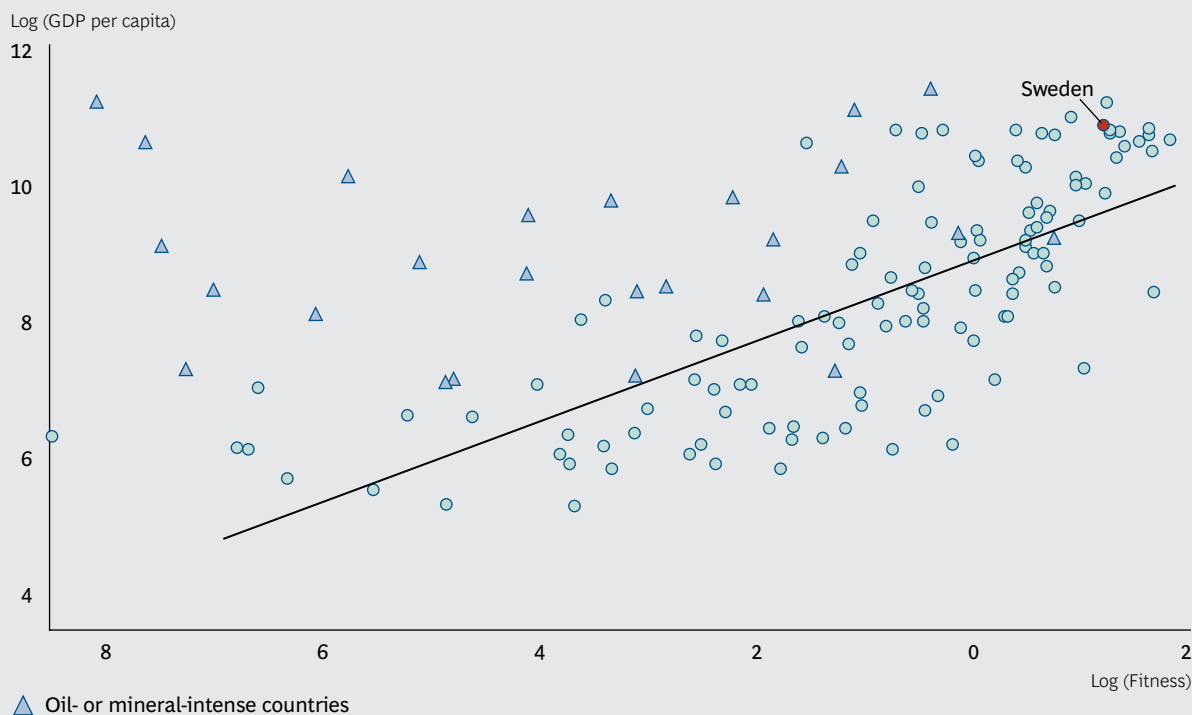
In order to ascertain Sweden's international competitiveness, a means of comparing competitiveness of the tradable sector among countries is necessary. Traditional measures such as GDP, trade balances, and productivity give a picture of how Sweden is performing as an entire economy, which is a useful scoreboard, but offer limited potential to explain the underlying relative competitiveness of the country's tradable sector specifically. We have therefore drawn on a new metric called "economic fitness," developed by Professor Luciano Pietronero's team at Rome University, in an effort to diagnose the nation's vital signs.¹⁷

It appears that the economic fitness of a country also correlates with the economic level of the country—outliers are, as expected, oil- and mineral-intense countries whose richness is not directly attributed to the competitiveness of the sectors that are subject to international trade (as illustrated in Exhibit 8). Simply put, the greater the diversity of products, and the more highly specialized or complex those products are, the better a nation can be expected to perform over the long term against international competition on the global market.

Western countries have declined in overall economic fitness

In general, western countries have declined in overall economic fitness as a result of competition from emerging markets (see Exhibit 9). In Dr. Pietronero's methodology, the average of the world's "fitness" is kept

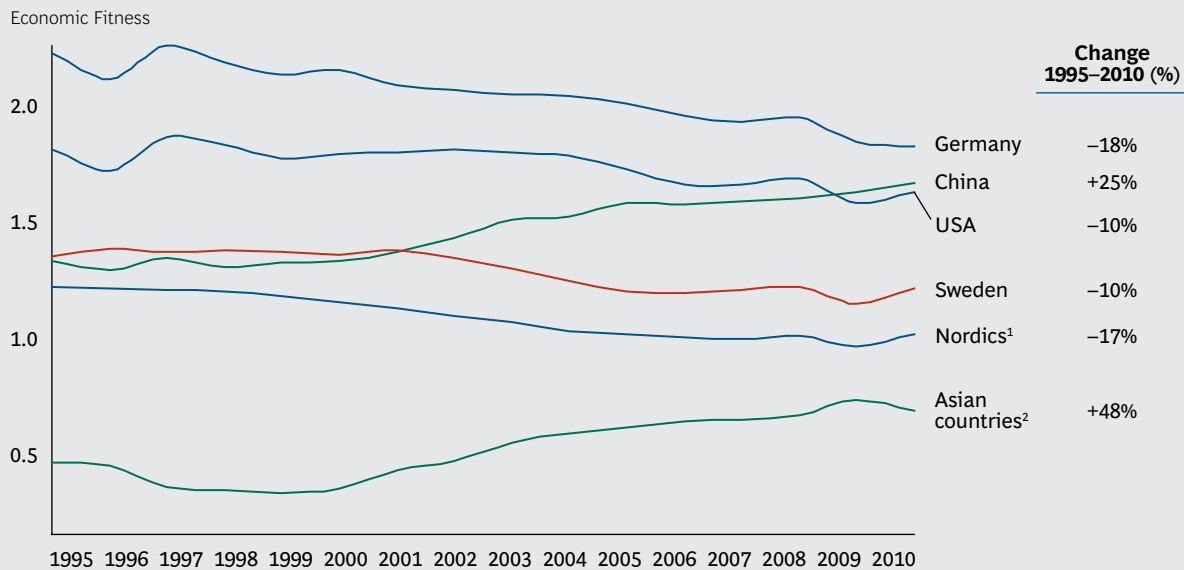
EXHIBIT 8 | Fitness Correlating with GDP/capita



Source: Research by Guido Caldarelli, Matthieu Cristelli, Luciano Pietronero, Andrea Tacchella, and Andrea Zaccaria.

Note: Outliers such as Iraq, North Korea, Angola, Chad, Brunei, and Libya excluded for readability; trendline shown for countries that are not oil- or mineral-intense.

EXHIBIT 9 | Sweden has Maintained its Fitness Levels Better Than Nordic Peers



Source: Research by Guido Caldarelli, Matthieu Cristelli, Luciano Pietronero, Andrea Tacchella, and Andrea Zaccaria.

Note: Weighted averages for Nordics and Asian countries.

¹Excluding Sweden and Norway (due to Norway's very non-diverse focus on oil, which is a low-complexity product).

²India, Vietnam, Thailand, and the Philippines.

constant so that national fitness levels are always relative. As new countries emerge on the global market, the previous industrial leaders will become relatively less fit (i.e., less competitive) due to the new challengers, even if their absolute production levels have not decreased. Gains from trade may have increased the overall pool of wealth in the world, but it will be slightly more difficult for the former leaders to command that wealth. For this report, we are more interested in Sweden's ability to access wealth through trade than the absolute size of the global economy (which is almost certain to increase through 2030). One sign of the increased competition from emerging markets are the so-called global challengers, i.e., large companies from rapidly growing markets, which are starting to compete with Swedish MNCs.¹⁸

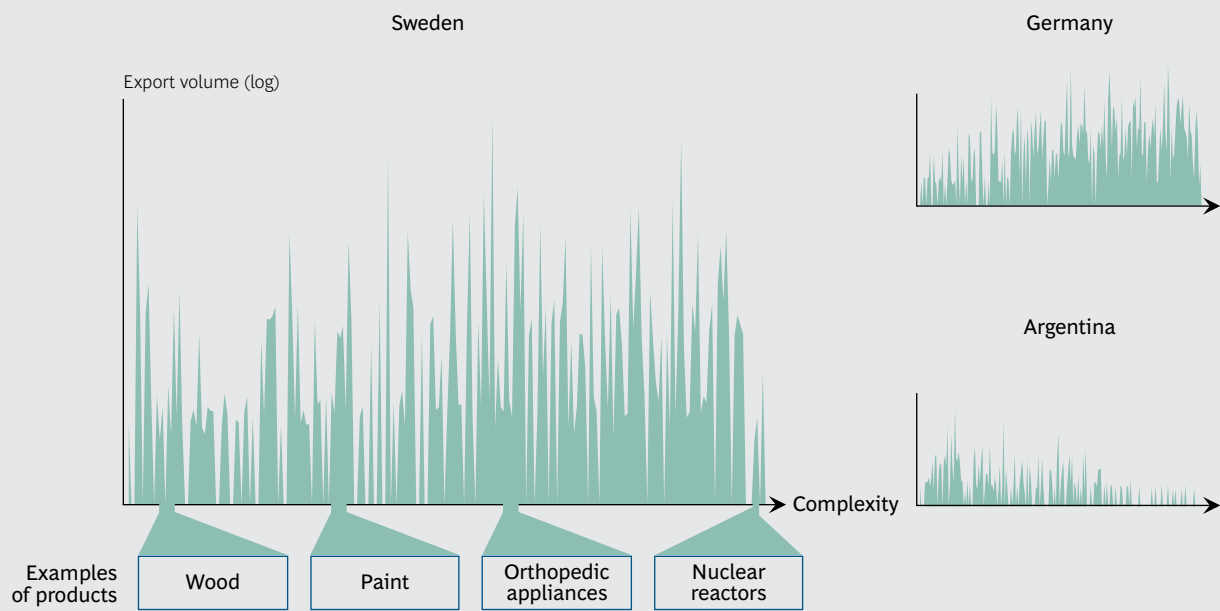
The analysis suggests Sweden has a higher economic fitness than its Nordic peers, but a lower economic fitness than several other mid-sized European countries such as Switzerland, which trades on an even more diverse, high-value, and specialized economic foundation. Over time, Sweden has improved its ranking compared to other western coun-

tries, indicating that the economy is less affected by competition from emerging markets than many peers. It is also interesting to note that Sweden was one of the few countries that recovered in fitness following the recent financial crisis in 2008.

Sweden is less affected by emerging markets than its peers

Sweden's economic spectrograph (shown in Exhibit 10) illustrates the breadth of product exports and shows the numerous peaks in the areas in which Sweden is especially strong in both high- and low-complexity markets. Sweden has a comparatively flat profile across the complexity scale, which suggests a healthy diversity, but also an opportunity for continued growth in more high-complexity product areas where export volumes are currently low. The additional graphs illustrate the extremes of higher-complexity focus (Germany) versus more of a commodity-focused economy (Argentina). While Norway can continue to rely

EXHIBIT 10 | Sweden has a Highly Complex Economy, Albeit with Potential for Further Diversification



Source: Research by Guido Caldarelli, Matthieu Cristelli, Luciano Pietronero, Andrea Tacchella, and Andrea Zaccaria.
Note: Products sorted by complexity (x-axis), not by technological similarity. Logarithmic scale applied for export volumes (y-axis).

on oil commodity exports, Sweden’s low-complexity sectors are likely to face increasing pressure from emerging market competitors.

The economic fitness method offers potential for further analysis of technologically adjacent areas, since the algorithm can identify products that are technologically related (i.e., those that are often produced together in many countries). These adjacent products suggest areas in which potential synergies may exist when produced together. Sweden has established several competitive clusters in areas such as specialized industrial machinery and medical lab equipment, among others, where further innovation and growth of new companies might be especially promising.

Although based on data that does not include services, the measure of economic fitness is able to give valuable insights on the potential for growth and on the resilience of countries, quantifying those intangible assets that drive the competitiveness and the success of a country. It also provides an initial overall assessment of Sweden’s health: holding up strongly compared with peers, but losing ground to emerging markets. This message is not new, but the magnitude of change relative to emerging markets, which have closed one-third of the lead previously held by Sweden, signals the urgency to maintain a high pace of development.

SUSTAINING ECONOMIC GROWTH

AS ILLUSTRATED BY THE economic fitness measure, it will be increasingly difficult to maintain superior competitiveness against emerging markets. It is therefore important that Sweden continue to excel vis a vis its current peer group of western nations to ensure it is best placed to compete in the new global paradigm. In the following sections, we will set out the main drivers of economic growth: talent management, innovation, growth of firms, and digitalization. *Talent management* and *innovation* are cornerstones for long-term productivity growth, as they will enable corporations to identify and realize new corporate advantages faster. *Growth of firms* is essential to compensate for the jobs that are “lost” during productivity increases. Finally, *digitalization* is a strong productivity driver that has not yet been fully exploited.

Talent management

How a country manages its stock of human potential will be one of the most important factors for economic growth in the future. Doing this well has potential to drive both productivity and availability of labor in tandem.

In order to achieve outstanding country talent management, Sweden will have to effectively develop, allocate, leverage, attract, and retain its talent. Its recent performance on these levers has been mixed.

FIRST: DEVELOP AND ALLOCATE

Primary and secondary school should be the basis on which to provide equitable opportunities for all pupils to excel, regardless of gender, socioeconomic status, or ethnic background. Furthermore, tertiary education is not sufficiently differentiated to prepare the workforce for the modern economy, leading to a poor fit between skill levels and job requirements. Because there is so little transparency on potential careers and salaries, it is nearly impossible for students and their families to make informed choices about how best to design an education strategy.

An equitable primary education system is necessary

Primary and secondary education. A high-quality common educational system has the potential to correct for many inequitable preconditions in life by providing tools for young people to realize their full potential. With the assumption that intelligence, ability, and drive are relatively evenly spread across the population at birth, logic holds that achievement would also be evenly spread across population, regardless of family conditions (socioeconomic status, geographic

location, ethnicity, etc.). In reality, this is not the case; there are both formal and non-formal obstacles to social mobility and students' ability to achieve their full potential.

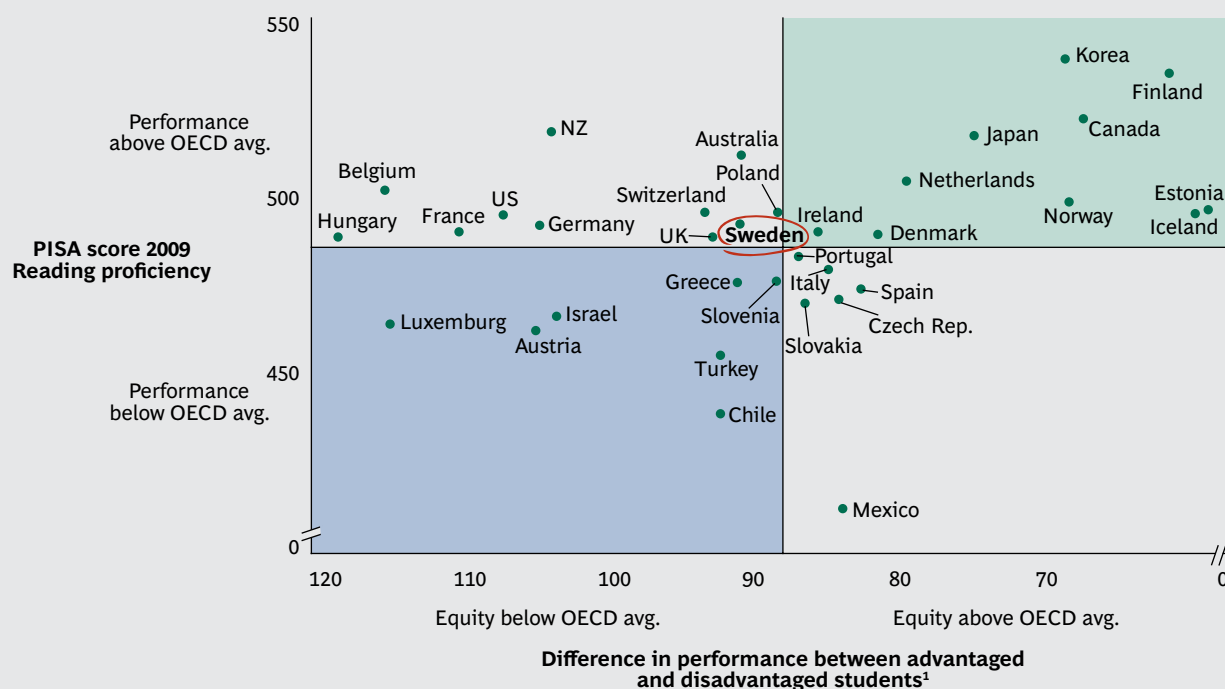
OECD's PISA studies indicate that the best-performing educational systems are also typically those with the highest levels of equity (as illustrated in Exhibit 11). Unfortunately, in Sweden, both the quality and equity of primary and secondary education are declining rapidly. Among OECD countries, Sweden was the second-worst performer in terms of quality and equity development between 2000 and 2009.¹⁹ While the recent reform to introduce school vouchers (*fria skolvalet*) has opened up the system to solutions, it has also increased demands on students and families to make informed choices, which has promoted polarization of access and results.

There is a need for more supervision from control bodies to secure a high minimum level of both quality and financial stability of all schools. It is also important to allow for customized education methods that cater to individual needs and abilities. Weaker

students need access to special support, while stronger students should have the opportunity to be challenged and excel to their full potential. Swedish academic results are declining the most across the top and middle bands of students.²⁰ Sweden needs an equitable educational system that nurtures talent on all levels, so that all students are given the opportunity to excel (see sidebar: The Finnish educational wonder).

The rapid changes to the Swedish education system have reduced stability and morale among teachers and school professionals. The reduced focus on professional development and depth of knowledge and the transfer of responsibility to municipalities have also been important drivers of the educational decline. Finally, lack of standardization has made the administrative burden for teachers very cumbersome. Systemic inertia also means the curriculum is not being adapted to new conditions: it still contains mandatory courses on woodworking and sewing but more modern courses, such as computer programming or personal finance courses, are not required.

EXHIBIT 11 | Swedish Average on Both School Performance and Equity



Source: PISA.

¹Measure of equity is defined as difference in PISA 2009 scores between top and bottom quartiles of PISA index of economic, social, and cultural status (ESCS).

THE FINNISH EDUCATIONAL WONDER¹

Finland is widely recognized as a role model for primary and secondary education. However, it was not designed to be the best education system but rather the most equitable system, providing equal opportunities for all pupils to excel. Finland has actively promoted equity through measures such as focusing on fundamental skills and basic knowledge, re-allocation of top-per-

forming teachers, targeted and flexible resource allocation, improved best practice sharing, high-quality teacher's education, and freedom for teachers to design their own curriculum.

NOTE

1. Pasi Sahlberg, *A model lesson – Finland shows us what equal opportunity looks like* (2012).

With that said, there are skills that are developed during school that are not easily measured. These skills, such as social competence, independent problem solving, and critical thinking, can still constitute an advantage for Sweden going forward. However, they will most likely not compensate for the declining basic knowledge, which needs to be corrected for in order not to lose the country's talent advantage going forward.

Increased available information and guidance on possible careers can be an effective tool for allocation of talent. With the increasing range of choices that young Swedes face and the subsequent shift in information burden, need arises for even more extensive and accessible information on the probable outlook of different career paths.

According to a recent BCG survey on secondary education, high school students with foreign backgrounds and/or from families with low socioeconomic status rely to a higher degree than other students on guidance from teachers and school personnel for career advice, but feel the current system lacks sufficient support.²¹ This exacerbates Sweden's poor social mobility relative to other Nordic countries.

The current Swedish career counseling system is a low-priority area with little cooperation within and outside of schools.²² There is a need for better transparency and guidance of the "business case" for different educational options, including post-graduate employment rates, short- and long-term salary levels, long-term career prospects, etc. Providing a digitalized registry of these data would make

it accessible and easy to update, radically improving the transparency of career choices, improving opportunities for social mobility, and potentially helping to address the mismatch in the labor market's allocation of Sweden's educated resources.

Tertiary education. University-level education should be designed to optimize talent to best fit the needs of the economy and promote top talent. The objectives should therefore be: i) enable rising skill levels of the population, ii) develop internationally competitive talent, iii) match skills to the needs of the economy, and iv) provide a differentiated range of educational options.

i) Rising skill levels of the population

The main objective of universities is to provide highly skilled people to the economy. Today 34 percent of Swedes have tertiary degrees, which is higher than the OECD average of 30 percent. However, Sweden is losing position relative to other countries and ranked 16 in 2010, compared to 11 in 2000.²³ The increased sophistication of the economy combined with increased global competition continues to drive the need for a higher level of skills and experience in the Swedish workforce. But more important than the number of degrees awarded is whether the skills and experience acquired correspond to the needs of the economy or society. The quality and availability of tertiary education both need to be a priority.

Swedish university students start at an older age, on average two years later than their OECD peers, and graduate less frequently (61

percent compared with an OECD average of 70 percent). This represents a very inefficient system for developing the workforce. If corrected, it would improve both productivity and add to total hours worked.²⁴

ii) Developing internationally competitive talent

As outlined earlier, traditional country advantages are being replaced by corporate advantages as determinants for country success. It takes more talent and creativity to identify and develop new corporate advantages than it does to utilize a country advantage. Similarly, more capabilities are required to develop and commercialize more complex technologies. Mediocrity is not a recipe for success in a globalized world.

Swedish higher education is failing to meet market needs

Despite relatively high expenditures on tertiary education and research,²⁵ Sweden has few universities with strong international reputations. Karolinska Institute and Lund University were the only universities included in recent rankings of top 100 global universities.²⁶ BCG's E4 Education Index, which ranks the higher education system in different countries, provides the same view—Sweden spends significant resources on higher education, but falls short of developing world-class talent.²⁷ We acknowledge that it might be unrealistic to believe that large universities like Sweden's can compete in all fields of expertise. Moving toward “centers of excellence,” or knowledge clusters, in certain fields in which Sweden is strong is a more realistic and feasible path. Spreading these clusters out geographically would promote increased regional development, creating a variety of growth engines in different parts of Sweden. Examples of potential clusters in which Sweden is currently strong include cardiovascular and endocrinology research, mobile systems, commercial vehicles, mining equipment, consumer products, and forestry. Future strengths might lie within clean tech and digitalization. Building centers of excellence will require close collaboration

among academia and industry, which can be powerfully symbiotic if done well.

iii) Improve matching of skills to the needs of the economy

Between 2007 and 2012, some 30 to 40 percent of students did not have a qualified job one year after graduation; at the same time companies failed to find the right skill set in one out of five planned recruitments. Across educational programs, there is high variation in graduating salary levels and employment rates.²⁸ At the same time, there is a projected gap of more than 30,000 engineers in Sweden by 2030.²⁹

Investments in more and better degrees are not translating into the right skills for the economy, forcing over-educated people to take lower-skill jobs while high-skill positions remain empty, and fueling unproductive education inflation for mid-skill jobs. Exhibit 12 illustrates this trend.³⁰

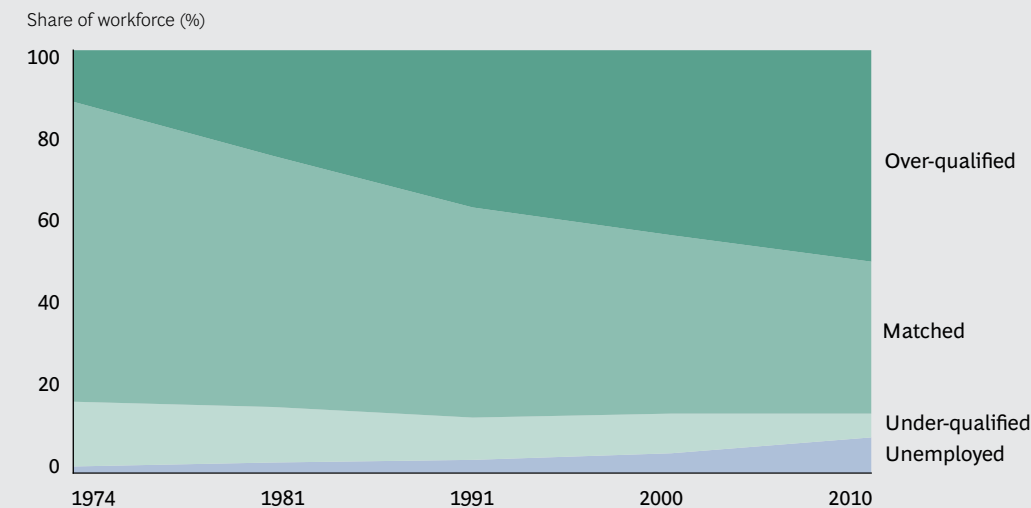
BCG does not suggest Sweden is over-educating the populace, rather the opposite—general skill levels need to rise to adapt to a more complex world. However, Sweden must manage the mismatch that is resulting in under-utilized educational investment and at the same time is driving less-educated people out of work that they might otherwise be qualified to do.³¹

iv) Provide a differentiated range of educational options

Shockingly, 22 percent of tertiary education curricula in Sweden are judged as “not satisfactory.”³² Today, all institutions of higher education are being measured by the same parameters, instead of having different goals for different institutions. This creates a situation in which the tertiary educational system is neither competitive at the top level where international performance is critical, nor able to supply the skills required by local employers in Sweden.

The value of know-how. It is important to point out that by *talent* we do not mean only academic knowledge. We use talent to signify all knowledge, including know-how and

EXHIBIT 12 | Sweden has Increasing Matching Problem, When High-skill Workforce Take Lower Skill Jobs



Source: Vid arbetslivets gränser, Statlig utredning; LNU; SCB; BCG analysis.

craftsmanship, that can contribute to creating an internationally competitive economy (see sidebar: The need for revitalization of Nordic manufacturing).

Sweden lacks a “middle path” in education that would provide companies with workers equipped with the right skills as well as help youth establish themselves in the labor market. The German system of vocational training is an example of where this gap has been successfully bridged. It is considered to be a key driver of Germany’s low youth unemployment rates (9.9 percent in Germany

versus 24.8 percent in Sweden in 2012³³); the system also contributes to a better supply of suitably-skilled workers for German companies. It is important to account for investment in re-training in the vocational system, since the labor market will continue to evolve and the required skills will change.

LEVERAGE

In order to assess how Sweden is making use of its population, we have chosen to analyze Swedish integration of immigrants and gender equity. While integration shows how well Sweden utilizes the resources that are

THE NEED FOR REVITALIZATION OF NORDIC MANUFACTURING¹

There are some worrying signs in the development of Swedish know-how. A recent BCG report projects the further loss of 75,000 manufacturing jobs by 2020 due to off-shoring, representing 12 percent of the current manufacturing labor force. These losses mainly affect positions held by youths, which will worsen the job situation for this age group. This decrease in available opportunities will deprive a generation of the chance to develop the skills needed to take over from the present generation, which is quickly approaching

retirement age. In Sweden, 17 percent of manufacturing workers are set to retire within the next coming ten years. Furthermore, the loss of manufacturing jobs puts other jobs, such as those in R&D, at risk, since development is often done in proximity to production.

NOTE

1. BCG, *Revitalizing Nordic Manufacturing* (2013). Available online at https://www.bcgperspectives.com/content/articles/lean_manufacturing_revitalizing_nordic_manufacturing_why_decisive_action_needed_now/.

brought in by immigration, gender equity pinpoints how well all resources are utilized regardless of gender.

Integration. Sweden has opened its borders to immigrants and should now focus on giving them the best possible conditions to contribute to the economy and realize their full potential. Currently, Sweden is not succeeding in this regard, which is illustrated by the emergence of turmoil in Swedish suburbs. Immigrants suffer 70 percent higher youth unemployment and four times higher long-term unemployment than Swedish-born citizens. In 2009, only two-thirds of immigrants had a job commensurate with their foreign educational level, compared to nine out of ten for Swedish-born workers. Three times more immigrants reported difficulty finding relevant employment than natives—current mechanisms for matching supply and demand are evidently not sufficient.³⁴

By halving the gap in worked hours and salary between immigrants and Swedish-born, Sweden could improve its economic growth by about 0.2 percentage points per year until 2020.³⁵ This figure points to the potential available by better leveraging Sweden’s entire stock of human capital. The solution is not easy, but testing more flexible and innovative solutions (see sidebar: Introduction of newly arrived immigrants), improving social mobility through a more equitable education system, and providing immigrant communities with greater transparency on career opportunities would improve integration.

Gender equity. Despite strongly equity-oriented legislation and social culture, Sweden

seems to have a thicker glass ceiling than many other countries. Men graduating from university are five times more likely to become senior managers than women, a much higher imbalance than for peers in Italy and France, in which men are two and four times more likely to reach the corner office than their female colleagues, respectively.³⁶ Among professional services, the gap is even more striking. Taking the example of the “career funnel” for law graduates: while 60 percent of all graduates are female, less than half become fully-fledged lawyers, and, among the top 50 law firms in Sweden, only 12 percent of partners are female.³⁷

Better leveraging women and immigrants could increase productivity

Swedish women earn 7 percent less than their male counterparts even after correcting for age, education, working hours, sectors, and professions.³⁸ While workforce participation is almost equally distributed between genders, entrepreneurship is lower for women and only about one-third of entrepreneurs are female.³⁹ Women also spend more time away from work: only 7.7 percent of all Swedish couples split their parental leave equally,⁴⁰ and women are four times more likely to work part-time than men.⁴¹

These figures probably do not come as a surprise, which illustrates the significance of the challenge. Nevertheless, the under-utilization

INTRODUCTION OF NEWLY ARRIVED IMMIGRANTS¹

Falkbergsskolan, Botkyrka, provides an example of successful integration of newly arrived immigrants into a Swedish primary school. By using a combined teaching of the standard curriculum in both Swedish and the children’s native language, the school has enabled the children to learn Swedish without falling behind in their general studies. The first trial proved

successful: eight out of ten students have passed their subjects, which is higher than the national average level and more than three times as high as schools with comparable demographics.

NOTE

1. See http://www.svd.se/nyheter/inrikes/bussen-snabb-vag-till-svensk-skola_8290538.svd.

of such a large portion of the population represents an opportunity cost worth 9 to 15 percent of productivity growth.⁴² Tapping into it would contribute significantly to economic growth.

ATTRACT AND RETAIN

Sweden is competing on a global talent market in which people increasingly choose their place of residence first and then their employers. In a flattening world, enterprises will increasingly follow talent instead of the other way around. Also, the fact that high-skilled jobs have a multiplier effect on other, less skilled jobs in the local service economy⁴³ is another argument for opening up the economy to more high-skill immigrants. To ensure future success, it is crucial to attract top researchers, entrepreneurs, and professionals to Sweden. There has been a consistent rise of 5 percent each year in the number of immigrants with higher education, although the share of these among the total immigrant population has decreased from 29 percent in 2005 to 23 percent in 2012.⁴⁴ This share is low relative to other EU countries, and the proportion of highly qualified immigrants as a share of the total workforce is only 3.1 percent versus an EU average of 4.2 percent.⁴⁵

Several obstacles are commonly identified for expats who want to move to Sweden. The limited rental market for apartments in Stockholm makes it difficult and expensive to find housing close to work. Sweden offers modest after-tax salaries by international standards and expats are ill-placed to benefit from the generous welfare system built on high (marginal) income taxes. Lack of high-quality international schools and few job op-

portunities for spouses and partners are seen as additional obstacles. Nevertheless, Stockholm is number eight on rankings of international future hot spots.⁴⁶

These challenges notwithstanding, the expat community appreciates several dimensions of Swedish society, such as the extensive social welfare system, high democratic values, social equality, accessibility to the outdoors, and the fact that Swedes, to a large extent, are fluent in English. Competition for the world's best and brightest will increase, and the immigration system must adapt to identify and facilitate the entry of high-potential individuals (see sidebar: Canadian immigration policies). The same factors that attract international talent will also be key to ensuring the retention of native talent, so these policies are not specific to immigration per se.

Enterprises are increasingly following talent

Higher education is already part of a global market, in which top students are becoming more and more international. In addition to attracting talent, a small economy such as Sweden needs to work harder than countries with larger economies to ensure that the talent is incorporated in the local economy post-graduation. The number of non-EU/EES⁴⁷ students in Sweden declined by 80 percent after the introduction of student fees for non-EU/EES residents in 2011.⁴⁸ Even though Sweden can offer good universities for a fair price with large parts of the curriculum in English, there

CANADIAN IMMIGRATION POLICIES¹

Canada uses rather selective immigration policies for admitting top talent. According to pre-defined quotas, skilled immigrants are admitted through a “point system” that awards points for age, education, professional experience, and language skills. This system, established to build human capital within the ageing workforce, has led to Canada being on top when it comes to

attracting international talent—almost one-tenth of Canada’s workforce consists of highly skilled migrants.

NOTE
1. OECD, *Main Economic Indicators* (2012).

appears to be limited appetite from international students to pay full price for Swedish education. It can be argued that the previous system had several issues—such as failing to attract ultimate top talent and not charging sufficient fees—and that the high labor market barriers discouraged students from staying. With that said, every international student who stays in Sweden is a good investment for the Swedish society: when staying in Sweden to work after graduation, an average international student “pays back” the cost of their education in 0.9 years, compared to 13 years for a Swedish-born student.⁴⁹

Innovation

Success in innovation is one of the key drivers for maintaining competitiveness in the tradable sector, and Sweden needs to continue being a leading knowledge economy. To do so means excelling at all stages of the development curve (see Exhibit 13). The development curve has two distinct phases that drive economic growth: innovation that drives productivity and growth of firms that ultimately generates new wealth and labor demand. It is important to distinguish between simple invention and true innovation. Innovation is the commercialization of inventions, i.e., new

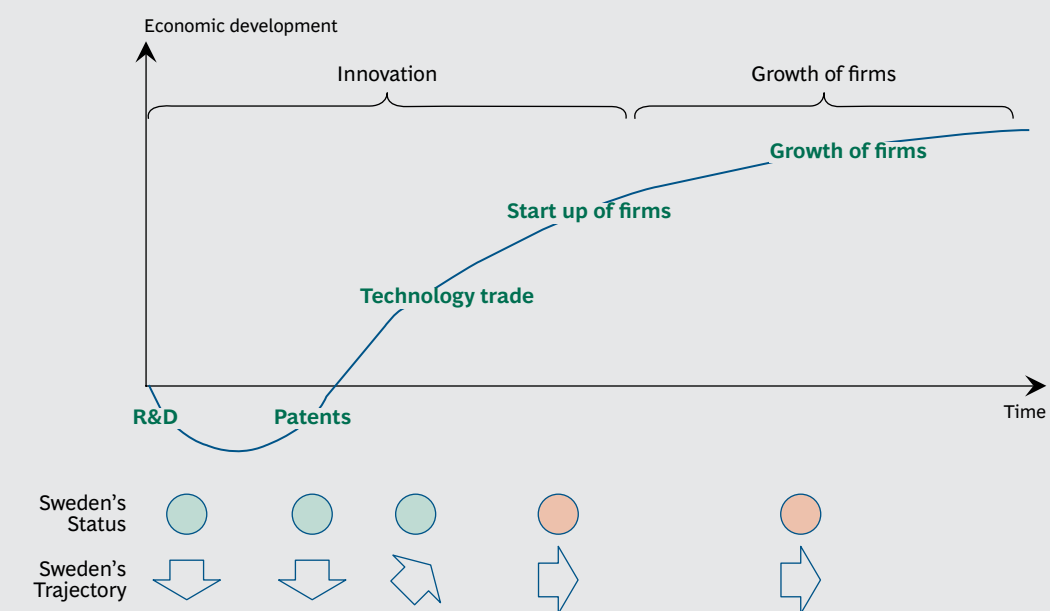
products, processes, services, etc. that leads to productivity gains.

The development curve consists of five main stages: R&D spend as input for innovation, patenting, technology trade as early-stage output, start up of new businesses, and growth of companies built on these businesses. Service innovations do not follow all of the steps on the curve, but the overall logic of innovation, followed by start up and growth of firms, is the same.

R&D. Sweden consistently ranks highly on global innovation standings. However, most of the global rankings measuring innovation are based on input parameters, such as R&D spend and number of patents, which do not take into account their ultimate commercial impact.

Increasingly, even the key inputs, such as R&D spend, are being challenged. Sweden is one of few OECD countries that reduced spending on R&D as a share of GDP between 2001 and 2009. If this trend continues, Sweden will be in the middle range of OECD countries with respect to R&D investment within a couple of years. The decline has mainly been seen in business-financed R&D,

EXHIBIT 13 | The Business Life Cycle Comprises Five Stages of Innovation and Growth of Firms



Source: BCG analysis.

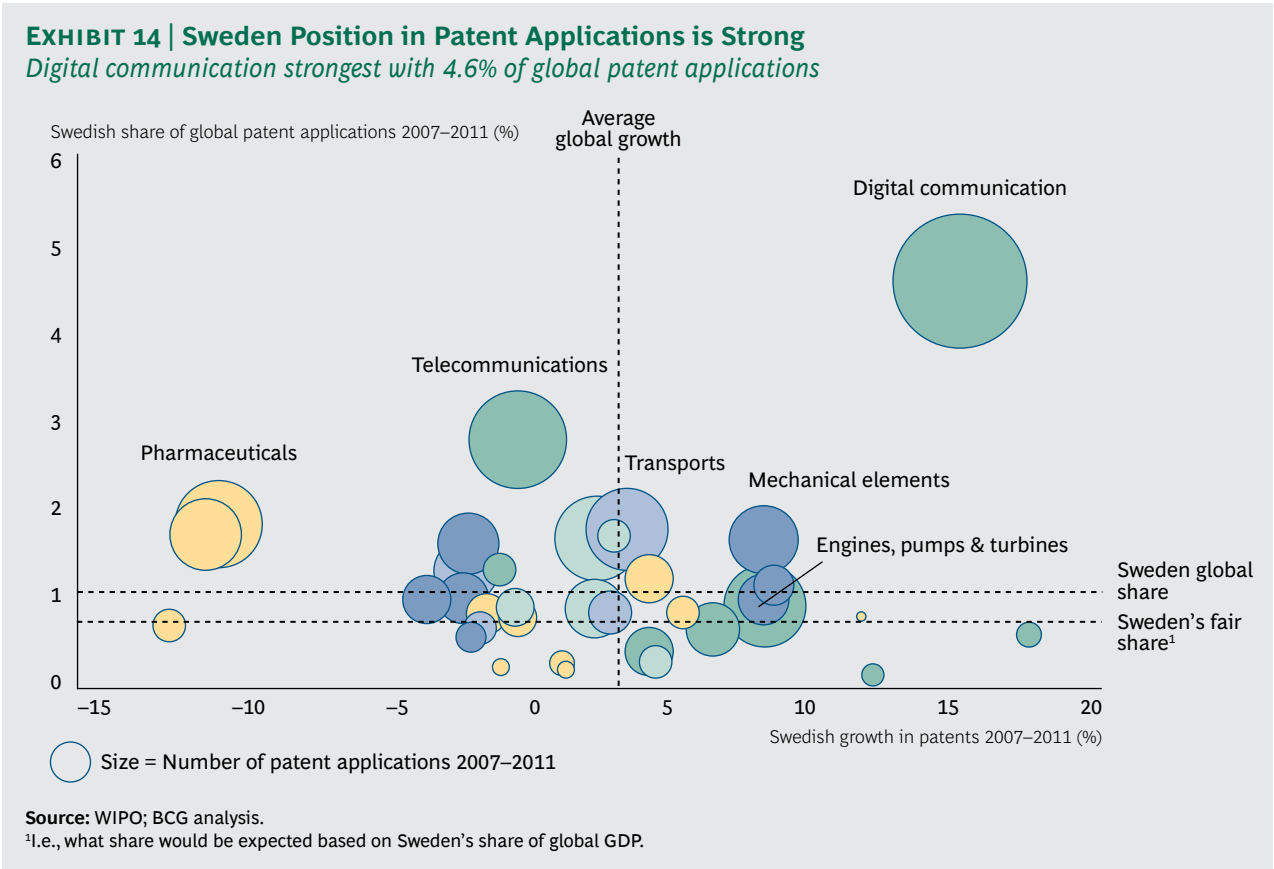
which today accounts for 58 percent of total R&D spending compared with 72 percent in 2001. Government spending accounts for 28 percent, while the remaining 14 percent is financed by other national or foreign sources.⁵⁰ Public spending on R&D is relatively low compared to international benchmarks, especially the sums given to support small and medium-sized enterprises (SMEs). The proposed increase in government spending on research (*Forskningspropositionen*) will offset the stagnation of corporate research funding to some extent within the coming years.

It is important to note that a few large research-intensive multinational companies (MNCs) account for a majority of investment in R&D and high-technology export. The 20 largest Swedish MNCs account for more than 90 percent of the country's R&D investments in the high-tech sector, and 50 percent of overall business R&D investments.⁵¹ This poses a risk for Sweden in that R&D spend is dependent on a few large companies with broad international operations and non-Swedish shareholder base.⁵² The ongoing trend for offshoring manufacturing also poses

a threat to Swedish R&D activities, as companies will likely want to maintain links between research and operations.

Patenting. Sweden generates almost six times more patents in relation to GDP than the global average. While this is positive, recent trends have seen a majority of Swedish industries losing global share of patents. Sweden is very strong in patenting in high-tech areas such as digital communication and computer technology, but is losing ground in areas such as pharmaceuticals (see Exhibit 14). The machinery and transport technology industries by contrast have been increasing patenting by 3 percent and 4 percent per year respectively.⁵³

Commercialization. The first commercialization option for innovation is to generate income from technology trade, i.e., net income from trading patents and licenses. Here Sweden is among the best in Europe, with 1.2 percent of its GDP generated by income from patent licenses and fees. Also, Sweden's net trade balance in technology payments increased by 12 percent per year



between 2005 and 2011, which suggests that the nation is good at producing economically useful inventions.⁵⁴

Another interpretation of this, however, would suggest that Sweden is struggling in the second step of commercialization: establishing new companies based on innovation. Sweden has one of the lowest levels of entrepreneurship in the EU.⁵⁵ One explanation for this is that Swedes do not generally see entrepreneurship as an attractive career option and do not think they have the capabilities that are needed,⁵⁶ even though more and more students are more open to becoming entrepreneurs.⁵⁷ Sweden is also a country with strong “intrapreneurship,” i.e., entrepreneurship within established companies, which may explain why relatively few new companies result from these new patents. Large research-intensive companies play an important role in both incorporating and transferring innovation. One successful example is Volvo Group Venture Capital (previously Volvo Technology Transfer), which works to incorporate external innovations into Volvo and to enable commercialization outside of Volvo for innovations that did not fit the core business.

Because Sweden spends a significant amount of money on R&D, it is important that the transfer of ideas among universities, research institutions, and the private and public sector works well (see sidebar: Public-private R&D partnerships). Sweden is one of only a few countries in the world that still have the “teacher’s exemption,” i.e., the employees of universities own the right to the results from their research. There is sound logic for the exemption, but it limits universities’ incentives

to push commercialization of research. There are positive initiatives to bridge this, such as public-private partnerships. We believe that this model, which both shares risk and funding but also improves commercialization of innovation, will be an important solution to the future of Swedish innovation.

Sweden needs to improve the commercialization of innovation

One area in which there is pressing need for new innovation, which could also serve as an export opportunity, is in the “blue and green technology” space. As outlined in a newly released BCG report about the Baltic Sea, Sweden has the opportunity to become a world-class hub for blue and green tech industries. By improving the health of the sea and by addressing the urgent challenges of eutrophication, the use of hazardous substances, and overfishing, Sweden has the potential to add 70,000 jobs by 2030, compared to a scenario in which the challenges are not met. This demonstrates that the health of the Baltic Sea is not only an environmental concern but an important economic and social one as well.⁵⁸

Growth of firms

Traditional economic theory identifies labor supply as the largest driver for job creation. We acknowledge the link, but do not believe that new business concepts and entrepreneurial incentives can be taken for granted

PUBLIC-PRIVATE R&D PARTNERSHIPS¹

In June 2013, AstraZeneca and the Karolinska Institute announced an agreement to establish a joint center for research on cardiovascular and metabolic diseases in Stockholm. The center, which will employ 20 to 30 full-time scientists from AstraZeneca and the Karolinska Institute for five years, represents the first partnership

between scientists from the Institute and scientists from a pharmaceutical company under the leadership of one director.

NOTE

1. See <http://www.astrazeneca.com/Research/news/Article/20130625—astrazeneca-and-karolinska-institutet-sign-agreement>.

given a suitably educated labor force. It remains critical to evaluate the incentives and barriers (regulatory, tax rules, etc.) that promote or discourage the growth of firms.

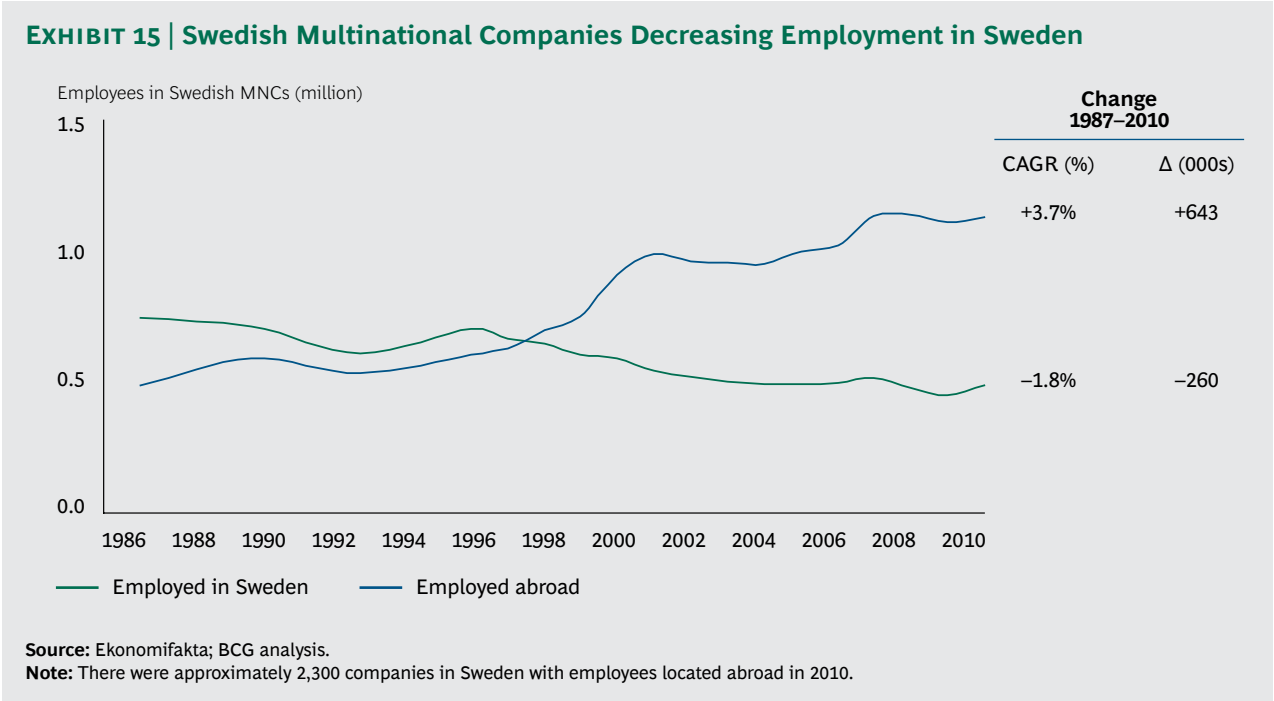
Are Swedish companies growing? A handful of large MNCs have long dominated the business world in Sweden, and continue to play an important role in determining the competitiveness of the Swedish tradable sector. There is merit in this history, as Swedish MNCs have been successful in reshaping and adapting to new market conditions. But it does make Sweden reliant on only a few major firms, with only 20 companies accounting for approximately 50 percent of exports.⁵⁹

Sweden can no longer rely on this small group of companies⁶⁰ to drive future job growth, as the nation’s MNCs are increasingly growing sales and staff outside Sweden and are starting to move R&D and management jobs elsewhere, primarily to emerging markets. Swedish MNCs now contribute negatively to domestic job growth. Since 1998, the majority of Swedish companies’ employees have been located abroad (as shown in Exhibit 15). Some of these lost jobs have been compensated for by an increase in jobs from foreign MNCs—which increased from 200,000 in 1990 to more than 600,000 jobs in 2011⁶¹—but this contributes to Sweden’s marginaliza-

tion, as fewer headquarters are located in the country. With fewer headquarters located in Sweden there are fewer reasons to keep other operations in Sweden, which increases the risk for further job loss.

Future growth of the Swedish economy is increasingly dependent on SMEs, which have been an important source of employment growth and the main drivers of value add in the last five years. Thus, it is critical that SMEs are incentivized and enabled to take on employees and risk in order to grow. Historically, few domestic SMEs have grown into large MNCs; only one of the top 50 companies in Sweden was founded within the last 40 years, compared to nine in the U.S., six in Denmark, and 41 in China.⁶² With that said, clusters of small and mid-size businesses together with MNCs create jobs, partly through outsourcing, partly by growth driven by the cluster itself. Small, medium, and large companies live in harmony with each other and cannot be viewed entirely as separate phenomena.

Sweden has few companies (4 percent of all companies) with ten to 500 employees, compared to, for example, Germany’s “Mittelstand,” which makes up 8 percent of the country’s employers.⁶³ These nimble firms are often family-owned, innovative, and high-



ly specialized with an orientation toward exports, while Swedish SMEs have a significantly lower share of export.⁶⁴

Hurdles for growth. There are two major hurdles for SMEs in Sweden: a lack of suitable financing and regulation. Additionally, Swedish culture is limiting the ability of companies to grow, as there is an unwillingness to “stand out” in the local community and there are few good role models that have succeeded in doing this.

Sweden’s future job growth is dependent on SME growth

Limited transparency, a shorter financial history, and often a lack of traditional business plans are common explanations for why financial institutions hesitate to fund SMEs. Moreover, unproven business models add to the cost of financing for SMEs. By contrast, large companies have access to cheaper capital through banks as well as bonds and national/European institutions (e.g., European Investment Bank and Svensk Exportkredit).

There are several public institutions providing funding to SMEs (e.g., Vinnova, Industriefonden) but there is no unified application process for funding, thereby making it cumbersome for SMEs to locate and receive funding. Furthermore, public funds are costly to administer and there is limited state-sponsored venture capital for seed funding, which

means that the majority of capital is directed toward already-established companies.

Whereas Sweden has a well-functioning private equity (PE) industry, venture capital (VC) funds have failed to attract and retain capital following the financial crisis (see sidebar: Success of Israeli venture capital). Among European peers, Sweden seems to have a rather high VC level,⁶⁵ but available capital decreased by two-thirds between 2008 and 2011.⁶⁶ Moreover, the majority of funds are not for early-stage investments. Successful VC markets allow historic losses to be offset against future profits in order to promote risk-taking. The Swedish model, by contrast, is perceived as complicated and discourages risk capital. As result, while PE funds based in Sweden amount to approximately SEK 1,000 billion, or nearly 10 percent of yearly revenues for large companies, VC funds amount only to an approximate SEK 10 billion, equivalent to less than 1 percent of total SME revenues.⁶⁷ The most promising companies still seem to attract VC capital, albeit from abroad, as illustrated by the high share of foreign VC investors in Swedish IT companies.⁶⁸

The tax system also impedes private capital accumulation, which limits access to angel capital, i.e. the first investment in a start up. Additionally, pension funds, which could provide significant long-term capital, typically invest in the stock market and in larger companies instead of venture capital funds. The fact that Sweden still has too few serial entrepreneurs who can contribute with both capital

SUCCESS OF ISRAELI VENTURE CAPITAL¹

Israel is a successful example of how to attract VC capital. In 1992, the Israeli government invested USD 100 million in a fund for seed capital as well as in ten venture capital funds, offering tax incentives for foreign VC investments in the country and promising to match any investment with funds from the government. On top of this, Israel managed to attract significant foreign capital, high-tech companies boomed, and the government

was able to sell off the funds at a profit after just five years. Today, Israel still attracts more VC capital per capita than any other country—USD 170 compared to Sweden’s USD 35. Israel has more companies registered on NASDAQ than any country other than the U.S.

NOTE

1. The Economist, *What is next for the startup nation* (2012).

and experience also poses a hindrance to company growth. SMEs themselves, however, hold major capital reserves; a large capital stock is estimated to lie “unemployed” in inactive companies, locked in by unfavorable tax rules such as the difference between salary and capital tax.⁶⁹

Learning from other successful countries, Sweden should strive to create an environment for new companies with good entry and exit mechanisms, attractive taxes for foreign investors, and a focus on education.⁷⁰

Changes are needed to improve access to funding for SMEs

By international standards, Sweden’s tax rate on capital is low while taxes on labor are high. This strongly favors those who already have capital and not entrepreneurs who are striving to create new economic growth. To make matters worse for the intrepid, employee stock options, which can incentivize entrepreneurs, are taxed as income in Sweden (at 57 percent) compared to 20 percent capital gain taxes in the U.S. Unsurprisingly, stock options are rare in Sweden. The lack of options can also increase an entrepreneur’s risk of losing control of their company, as raising equity to fund expansion may be highly dilutive in early-stage fund raising. This makes it more advantageous in Sweden to sell a company early rather than to retain and grow the business. The imbalance between capital and salary tax also creates an unfavorable situation between passive and active investors. Passive investors who only contribute with investments are taxed lower than active investors who also contribute to developing the company, which does not incentivize active ownership and development of businesses.

Sweden also has an unfavorable position on start-up procedures for new ventures, flexibility of wage determination, the relationship between salary and productivity, and dismissal protection.⁷¹ Swedish employment laws and agreements (LAS, collective agreements)

are important elements of the “Swedish model,” which enforces Swedish workers’ rights and ensures employment security. However, for fast-growing companies, these regulations reduce the flexibility to adapt to changing needs in staff and expertise. The result is a reluctance to expand and hire employees. LAS, along with other regulations governing wages, needs to be better adapted to fit smaller companies with changing needs.

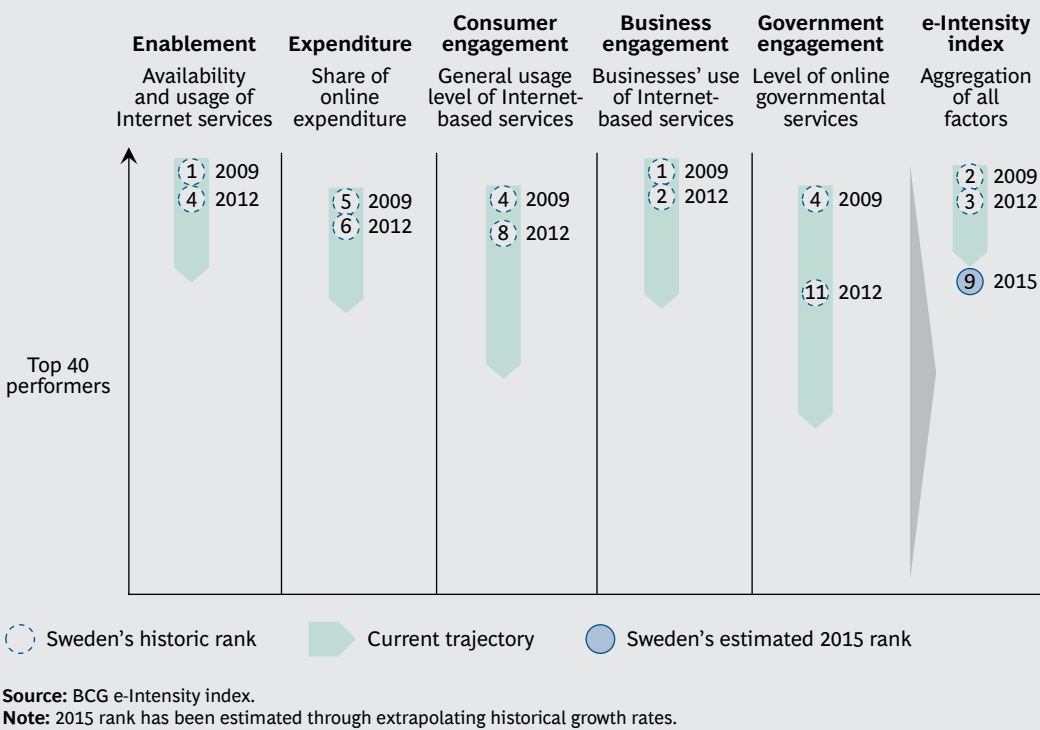
Digitalization

Countries that move quickly and join the digital revolution could have enormous advantages over peers that don’t act as rapidly. Digitalization has the potential to radically lower transaction costs, accelerate and simplify business processes, and improve the flow of information, all with corresponding gains in productivity.

Sweden has a strong position but is losing ground internationally. According to BCG research, in 2012 the Internet contributed an estimated SEK 275 billion, or 7.7 percent of total GDP, to the Swedish economy.⁷² The Internet economy is currently growing considerably faster than the rest of the economy, at 10 percent per year, and has the potential to become a key growth and productivity driver for the overall Swedish economy. It is, however, interesting that almost 90 percent of the growth in the Internet economy today is driven by online consumption, i.e., by the consumers, while government and private investment lags.

From an international perspective, Sweden ranked third in BCG’s 2012 e-Intensity index, a measure of a country’s Internet readiness, engagement, and expenditure. However, Sweden is losing its relative position in all aspects of the index (see Exhibit 16). Neither businesses nor the government are investing sufficiently to keep up with peers. If the current trend continues, Sweden will drop from third to ninth place on the index by 2015, provided other countries maintain their pace of development. Renewed effort is needed if Sweden is to maintain its leadership position. Given the effects of digitalization on productivity, loss of leadership on this index will have consequences for Swedish economic strength.

EXHIBIT 16 | Sweden Used to be Top Performer – Current Development will Change the Picture Going Forward



Digitalization as a tool to boost productivity growth. BCG studies of Swedish SMEs in both 2011 and 2013 confirmed that digitalized firms grow faster and are more profitable than less-digitalized companies.⁷³ Productivity gains from the Internet and digitalization can be split into three main categories: i) activities purely based on digitalization, ii) activities that are a result of digitalization, and iii) indirect impact of digitalization.

Part of the growth of the digital economy is simply a transfer from offline to online forms, but there are nonetheless implicit productivity gains in terms of lower costs due to lower demand for retail space, personnel, and storage, as well as higher revenues from a wider sales reach and more effective marketing efforts. Online penetration levels vary between different product categories but there remains significant potential to increase online retail in some key areas, such as food retail.

As with private consumption, the concept of e-Government is spreading and has great potential to improve productivity within the public sector by improving efficiency, quality

of interactions with citizens, and promoting more transparent outcomes, which may have a significant impact when it comes to identifying improvement areas and sharing best practice methods (see sidebar: Danish e-Government). The dynamic effect of e-Government, which can encourage citizens and businesses to increase digital interaction with each other, may further drive digitalization of the economy.

Renewed effort is necessary for Sweden to maintain its digital position

In addition, digitalization has effects on society that will not appear in any productivity or GDP-based measurements. These include increased consumer surplus⁷⁴ from activities online as well as other welfare gains, such as environmental benefits from increased efficiency and educational benefits from increased information transparency.

DANISH E-GOVERNMENT¹

Denmark has recently launched a new e-Government strategy that makes it almost mandatory for citizens and businesses to receive all public communication electronically by 2014. The goal is to move 80 percent of all transactions with the public sector online by 2015, and to send

all letters to companies digitally by the end of 2013.

NOTE

1. The Danish Government, *The digital path to future welfare* (2011).

Quantifying the actual productivity potential from increased digitalization is an inherently complicated exercise due to the lack of knowledge about business models in the future. However, if the average productivity of a company could be lifted to the level of the most-digitalized companies⁷⁵ by 2030, this would translate into a staggering 1.5 percentage point annual productivity gain, more than offsetting any demographic developments in that time frame. This example gives a hint of the enormous productivity potential of digitalization.

Other major general purpose technologies that have been introduced, such as the steam engine or electricity, did not see true produc-

tivity gains until at least 40 years after their introduction. The first users of a new general purpose technology enjoy improved efficiency in existing tasks, but it is not until the technology is used to make entirely new things possible that the true productivity potential is unleashed. Hence, there is a need for changes in the education system to include things such as programming in primary education, to give the next generation the right tools to unleash the true potential of digital technologies.

RENEWING THE PUBLIC SECTOR

FOR MUCH OF THIS report, we have pointed out the significant challenges that Sweden is facing in maintaining the relative size of its working population and in ensuring that the productivity of that workforce continues to grow. A case could be made that our recommendations might be seen almost as a rear-guard action in the face of relentlessly advancing trends driven by demographics and globalization. To some extent, this would be a fair critique, but we believe Sweden has a tool in its arsenal that could allow the country to maintain national well-being and flourish despite these pressures: how it spends its wealth.

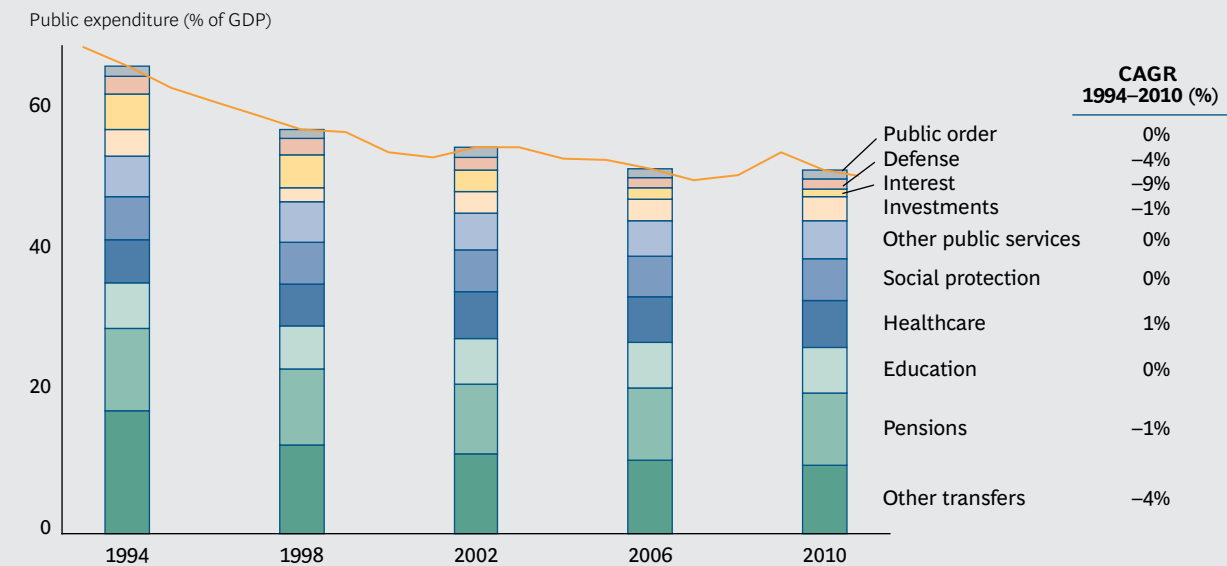
Sweden's ability to ensure well-being will increasingly rely on its capacity to efficiently convert spending, especially public spending, into drivers of well-being. Private spending is also very important, but is subject to individual choices that can be steered with import tariffs and tax policy, but at the cost of personal liberty. In many cases, market mechanisms will provide new solutions; for example the emergence of car-sharing programs will increase productivity of that most under-utilized of private assets, the family car. New innovations to improve household energy efficiency abound. The best that can be done to facilitate smart private consumption is to remove regulatory distortions and economic externalities. The public sector, worth 24 percent of GDP, however, requires more direct intervention.

Sweden has historically been comparatively successful at utilizing its resources well.⁷⁶ However, rising healthcare and elderly care costs and declining returns on investment in education must be addressed without increasing public spending or compromising the quality of health or education provided. There will be pressure from both the earning side (by productivity and hours) and the cost side (healthcare and elderly care costs) of the well-being equation, and Sweden needs to work on both fronts to be able to maintain the welfare system of today. The alternative is to move toward a more privately financed welfare.

Historically, Sweden has been one of the countries within the OECD with the highest public expenditure as a share of GDP, but during the last 20 years, public expenditure has decreased from 68 percent of GDP (1993) to 51 percent of GDP (2012), mainly driven by reduced transfer payments⁷⁷ and lower interest payments on public debt. Public consumption and investments have been stable as a share of GDP (see Exhibit 17). Within the public sector, resources have been redistributed, with more spending on healthcare at the expense of defense.

Through its provision of healthcare, education, infrastructure, police, fire, and other vital services, the public sector contributes directly to the stock of national well-being and is also an important employer

EXHIBIT 17 | Swedish Public Expenditure has Decreased as a Share of GDP



in its own right. But without a profit statement, it is difficult to judge if resources are being converted into well-being efficiently. This means it has often been challenging to improve productivity in the public sector.

Complex decision-making and a lack of personal incentives combine to dissuade efforts to improve performance. But, more importantly, it is not always clear how to define or measure performance or productivity. A much more transparent system, where target outcomes for given activities are stated, measured, and rewarded for being met, is needed. This does not mean micromanaging the inputs; a target outcome for the police should not be “make 1,000 spot checks” but rather “achieve fewer alcohol-related accidents on Stockholm roads.”

Adaptive government

An adaptive government can be seen as a “third way” in national governance, as an alternative to the two current options of social micromanagement or the introduction of market forces into public services. Just as a country’s firms must adapt by creating new corporate advantages to maintain national competitiveness, so must the public sector. Governance is based on being absolutely clear

about the desired direction and outcomes, but allowing for flexibility and creativity on how to get there. Too often the public sector is steered with tighter controls on the inputs and pathway, under the false assumption that these will generate the desired outcome. That is not how successful businesses work.

The government should apply policy guidance that is adaptive to results. First, it should broadly orient the objectives among external stakeholders prior to policy design. One example could be getting input from Swedish MNCs before formulating a new labor immigration policy to define more clearly what is needed from immigration. Secondly, it should allow for a variation in applying policies, for example, by running pilots before large-scale policy roll out. Thirdly, it should build in adjustment mechanisms that explicitly encourage local tailoring of policy during application. Finally, it should apply broader and more frequent evaluations and transparent reporting to encourage feedback loops to develop.

An additional step, which would further emulate successful business tactics, would be to link financial incentives and promotion explicitly to the achievement of target outcomes with the least possible spending. This works best when the means of execution and deci-

sion-making power are controlled by one entity, which is frequently not the case in the public sector, and therefore performance-based incentive structures would not be universally applicable.

Sweden would benefit from an adaptive policy-setting approach

Even the most perfectly designed policy will exist in a world of ever-changing technologies, methods, and demands (see sidebar: Adaptive Dutch policy setting). This requires adaptive execution of public services, and, in order to allow for greater flexibility in the system, the government should define and follow up on the desired outcomes from public services, rather than detailing the processes for how to get there. This is the key principle of the *value-based* approach to public sector, which will be detailed in the following sections.

Value-based public sector

Increasing spending in public services does not automatically lead to improved outcomes, as illustrated in Exhibit 18. In fact, the relationship is frequently inverted, especially in healthcare, in which poor outcomes often result in further medical complications and cost. In spite of this, remarkably little attention has been paid to the target outcomes and most reform related to the Swedish public sector has focused on inputs, costs, and ownership (e.g., more teachers, privatization of schools). The political parties still debate over the control of inputs, recently illustrated by the social demo-

crats' push to adopt national quality laws, regulating a minimum cost or minimum resource input for certain public services. It will still be important to work on minimizing costs and improving public purchasing, but as control of inputs does not affect outcomes, the public sector needs to move to a value-based approach for certain services to increase the value created per tax krona. This is done by clearly defining which outcomes are desired from each individual service area, and then measuring and reporting the results.

Outcomes are defined at the highest level of abstraction relevant for the scope of decision-making and resources being managed. For example, a county council health authority may be tasked with, among other metrics, "maximizing the number of productive life years per capita" in its jurisdiction, while the emergency ward at a given hospital is better measured on a metric such as "survival rates for acute myocardial infarction" (i.e., heart attack survival). Assigning the former target to the emergency ward is hardly relevant, as the physicians and nurses there impact very few of the productive life years at stake, while holding a county council explicitly accountable to heart attack survival is a recipe for uninformed and demoralizing micromanagement.

The value-based approach takes into account both outcomes and costs in order to maximize value in the entire system:

$$\text{Value} = \frac{\text{Outcomes}}{\text{Cost}}$$

Without measuring outcomes it is not possible to measure the true productivity, as there is no real price mechanism in public services. As the emergency ward example above dem-

ADAPTIVE DUTCH POLICY SETTING¹

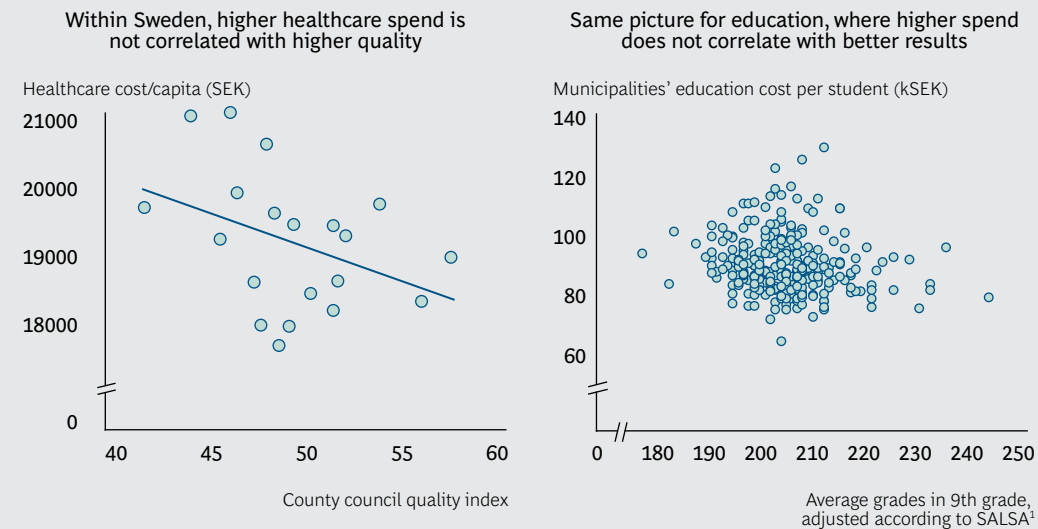
In 2008 the Dutch government asked a committee to determine the different feasible climate change scenarios, each with their required preventive actions. Instead of big spending to prevent the worst case scenario, early warning indicators for the worst case scenario have been

determined, allowing the government to decide to invest in the most expensive preventions only if absolutely necessary.

NOTE

1. See <http://www.deltacommissie.com/>.

EXHIBIT 18 | In Healthcare and Education, Higher Spend Appears Wasted and not Related to Higher Quality



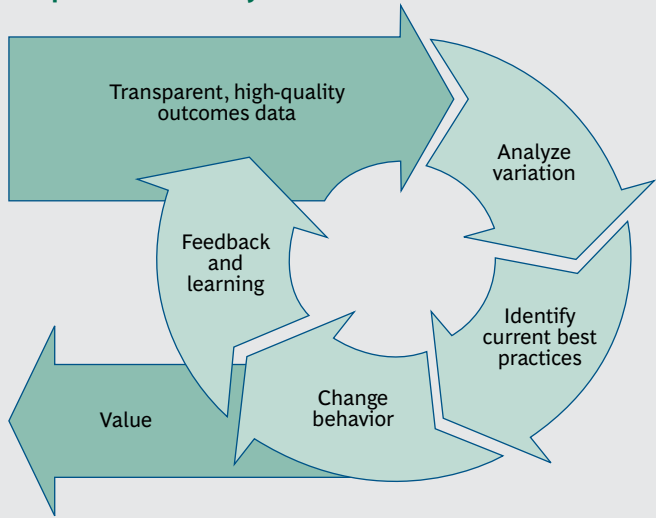
Source: SCB; SIRIS; SALSA; Skolverket; BCG analysis.
¹Adjusted by SALSA = Skolverkets arbetsverktyg för lokala sambandsanalyser. Adjusts grades for factors such as parents' education level, native language, etc.

onstrates, data on actual outcomes is needed in order to identify and spread best practices, as well as creating relevant incentives for actors in the system to improve (illustrated in Exhibit 19). Incentives can be both non-monetary, e.g., transparency toward the public or facilitated procedures for expansion, and monetary, e.g., creating outcomes-based links to reimbursement models. The latter needs to

be used with care to ensure that it does not corrupt the strong motivational impact of transparency alone.

Public services that are better suited for a value-based approach are those with complex procedures and outcomes, and that involve highly skilled personnel who can drive innovative solutions. Public services that are process

EXHIBIT 19 | Starting Point for Value-based Public Sector is Transparent Outcomes Data to Improve Service Cycle



Benefits with value-based concept: improved outcomes, reduced variation, reduced cost, continuous improvement

Source: BCG analysis.

oriented and based on a pre-defined protocol will still benefit from being optimized from a cost perspective, e.g., through traditional operational efficiency methods. The value-based approach has come furthest within healthcare, but a similar approach can be applied to education, employment services,⁷⁸ or the police.⁷⁹

Deep dive: Value-based healthcare (VBHC). Healthcare is the area in which the value-based concept has been developed furthest, and in a challenging environment it has proven successful in both improving health outcomes and lowering costs.

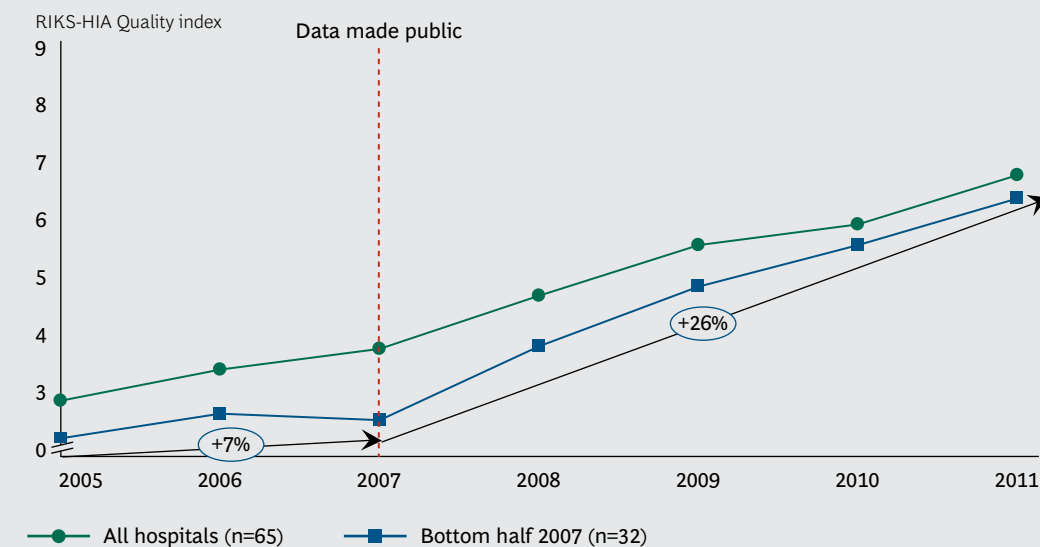
Making data and analysis transparent to both clinicians and the public becomes the catalyst for identifying variations in health outcomes across clinical sites and analyzing their root causes to improve performance. Clinical expert teams will identify and spread best practices that will help poorly performing clinics improve. Increasing transparency also puts pressure on the political leadership in the counties and on the clinicians. Exhibit 20 shows how the adoption of the European Guidelines for treatment of heart attacks became more widespread over time. When outcomes data, e.g., survival rate from heart attacks, was made public in late 2006 through the release of *Öppna Jämförelser*, the poorest performing clinics improved much faster, con-

tributing importantly to the large drop in mortality rates that has been observed in Sweden.⁸⁰ However, there are some possible undesirable consequences of transparency. Primarily, due to the lack of market pricing mechanisms, there is a risk of higher demand at the clinics with the best health outcomes. These clinics then need to find ways maintain their high quality while expanding in volume. The increasing demand will also partly be offset by improvements by the poorest performers.

Sweden is one of the countries on the forefront of VBHC,⁸¹ but to date very little systematic comparison is done between countries. However, collaboration among Michael Porter at the Harvard Business School, the Karolinska Institute in Stockholm, and BCG has initiated an effort to promote international standards for a number of major diseases, led through a jointly formed non-profit organization, the International Consortium for Health Outcomes Measurement (ICHOM).⁸²

Data can also be used to help steer resources toward those interventions and practices that have the highest impact. This would be the effect if reimbursement models covered a full cycle of care and the payment was linked to actual health outcomes rather than the procedures performed, as is often the case in Sweden. Apart from outcomes improvement, this

EXHIBIT 20 | Transparency Speeds up Best Practices Adoption
Example: Swedish myocardial infarction registry



Source: Swedeheart.

also has an effect on lowering costs, as it allows unnecessary procedures to be eliminated, expensive complications to be decreased, and repeat treatments to be avoided.

The so-called “fee-for-service” reimbursement model that is increasingly practiced in parts of Sweden has turned out to be significantly more expensive and deliver lower quality, according to a recent BCG report.⁸³ We acknowledge that the design of an optimal system is no easy task, especially in an integrated national insurance system, and that the current system is indeed an improvement upon the previous system. However, the country needs to be more thoughtful in how it handles deregulation—the recent health-care deregulation has fragmented the health-care landscape, with a risk of increased variation and costs, and has reduced overall quality as a consequence. The deregulation in itself is positive, since it brings new players with new innovative solutions to the playing field, but it needs to be done in a more thoughtful way. Also, there is need for transparency in outcomes before deregulating to achieve the full potential. To improve the current system, there should be incentives for providers to take responsibility for the overall health of the patients, motivate different providers to cooperate with each other, and create a closer relationship between health outcomes and reimbursement (see sidebar: Value-based reimbursement in Stockholm).

The implementation level of VBHC is still in its infancy, indicating a significant potential for Sweden in this area going forward. Health-care spend is 9.4 percent of Swedish GDP and is growing 20 percent faster than GDP, driven

by an ageing population, technological development, and increasing customer demands. VBHC provides the best solution to addressing this cost acceleration. We also see Sweden’s leading position in this space as a major industrial opportunity for the country, by providing attractive platforms for clinical innovation, developing novel ways of testing and evaluating new drugs, and exporting services and knowledge, a topic which will be further detailed later in this report.⁸⁴

Deep dive: Value-based education (VBE). In education, just like healthcare, historical increases in spending appear to have had little effect. Spending per primary school student in Sweden increased by almost 20 percent between 2000 and 2009 while Sweden’s international standing has decreased (see Exhibit 21). This is also true when comparing educational spend and quality on an OECD level. Also, on a municipality level, no clear correlation can be seen between spend per student and results.

A valued-based system would encompass improvement of student outcomes at the same or lower costs by focusing resources on the “right” initiatives. It is more important *how* a school system spends its resources than *how much* it spends, as the Finnish school system shows.⁸⁵ It is a paradox that the current system is standardizing processes that would be better off being subject to continuous experimentation and tailored to the students needs, while processes that would benefit from standardization, such as performance assessments, are not. To remedy this, VBE is based on three main principles: i) transparency in outcomes, i.e. *actual* student understanding and knowl-

VALUE-BASED REIMBURSEMENT IN STOCKHOLM¹

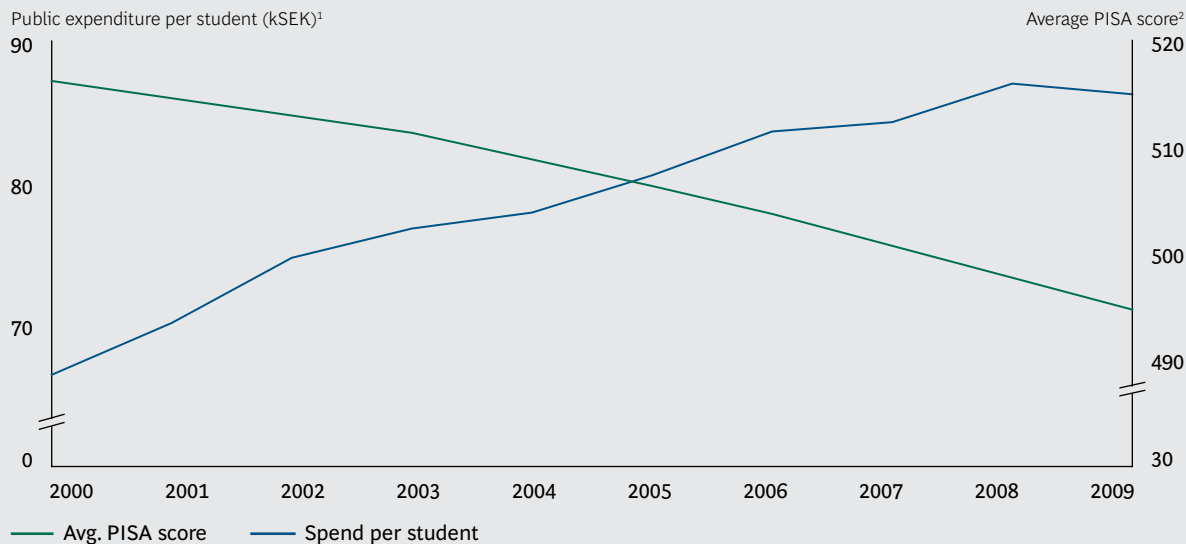
Stockholm’s county council is an international pioneer in value-based reimbursement. In a pilot reimbursement model implemented in 2009, providers received a bundled payment for a two-year commitment to hip and knee arthroplasty patients. More than half of the providers made changes in the work methodology or treatment pathway to increase productivity

and/or decrease the risk of complications. Although the long-term consequences of the reform remain to be evaluated, the development is very promising. Similar models are being put in place for cataract surgery and spinal surgery.

NOTE

1. SLL Vårdval Stockholm, *Vårdvalsområden* (2013).

EXHIBIT 21 | Despite Spending More Money on Education, Swedish Results are Dropping



Source: OECD; SCB; PISA; SIRIS; SALSA; BCG analysis.

¹Fixed prices at 2011 level.

²Sweden's average points for reading proficiency, math, and science categories.

edge, ii) optimal mix of standardization and customization, and iii) digitalization.

i) Transparency in outcomes

Similar to the principles of VBHC, transparency in outcomes, such as comparable test results, is crucial in order to be able to identify best practices, evaluate initiatives, and create incentives for improvement. Top-performing teachers and principals can be leveraged by spreading best practice methods throughout the system or being reallocated between schools to improve equity within the system. Low-performing teachers and principals, on the other hand, can be identified as needing support and training.

Sweden, with its mix of public and charter schools, is in urgent need of a coherent system that ensures quality and continuity of schools. This problem is illustrated by the inflation of grades in certain schools and the recent bankruptcy of several charter schools. Regular central follow-ups of competencies and comparable (and objective) student results should be a minimum in order to ensure the quality of schools. Transparent, comparable, and easily accessible results (i.e., real pupil knowledge) would also increase the inclination for potential students to choose

schools with the highest educational quality, rather than for a free iPad or due to flashy advertisements.

Transparency in outcomes is not only relevant on a school level. It could also be used to create a performance base for teachers' salaries, where progress up the ladder is driven by classroom evaluations as well as students' progress in assessments. Good examples exist, such as in Hillsborough County, Florida, in the U.S., where this effort to create transparency in teacher performance has encouraged teachers to become more efficient and improve student outcomes.

ii) Optimal mix of standardization and customization

The objective of standardization should be to enable transparency and minimize administration for teachers so that cost savings can be used to raise the quality of teaching instead. Processes suitable for standardization include central student evaluation procedures, IT, and other administration services. Other processes with a strong link to outcomes should, to a significant extent, be free for teachers to design individually in order to achieve continuous improvement, e.g., teach-

ing methods and curriculum flexibility. Best practices proven to deliver results need to be efficiently communicated across the system. This could potentially make the teaching profession much more attractive and stimulate innovation.

iii) Digitalization

Lastly, increased digitalization of the education system can be a powerful tool to drive productivity through best-practice sharing and improving transparency. It should also be leveraged more as a teaching tool to have a direct effect on both outcomes and costs.

The digitalization of national tests within primary education is a concrete example of how these three aspects of VBE can be applied at the same time. Digitalizing national tests and having central correction would give better data on outcomes and decrease local bias—a necessity if schools are evaluated on outcomes. Also, it would decrease the administrative burden on teachers, giving them more time to spend on planning and teaching, activities that actually have an effect on these outcomes.

New competition

We have argued that there is strong intrinsic value in driving productivity in the public sector in order to ensure a continued high level of national well-being. However, increased transparency in the quality of public services, combined with reduced barriers to trade, could also expose some previously local public services to international competition. As public services become tradable, they will become potential drivers of economic growth and competitive advantage, or pose a challenge to Sweden's trade balance.

Increased tradability within healthcare takes the shape of patients travelling abroad to get specialized care (often “one-shot care”) and through outsourcing certain components of care such as diagnostics, lifestyle disease management, and phone/email consultations.⁸⁶ Education is affected through increased student mobility and new competition from leading universities posting high-quality lectures and courses online.

Drivers of increased tradability. With increasing globalization, historical barriers to trade are being reduced by digitalization, increasing consumer demands, cheaper travel, and decreasing language barriers. For example, the EU's directive on cross-border healthcare, to be implemented across the EU by October 2013 simplifies cross-border care and calls for national contact points to be set up to provide information on patients' rights, quality, and safety of healthcare. Value-based healthcare with the goal of increased outcomes transparency is also grabbing a foothold in Europe. If it becomes clear to the patients which country or clinic produces the best outcomes, there will be a clear incentive for patients to travel.

The public sector will become increasingly tradable

With the European markets opening up, demand for transparency of information may increase so that customers can compare cost, quality, and outcomes. International trade of public services is currently limited,⁸⁷ but if there are few regulatory barriers and it becomes clear to consumers that cost or quality advantages outweigh the additional inconvenience of purchasing certain public services abroad, trade in these services is likely to increase.

Will Sweden be a net exporter or importer of public services? There is an increasing urgency for increasing productivity as the public sector becomes tradable. This provides a great opportunity for Sweden to become an exporter in even more sectors. However, as illustrated by the off-shoring trend in manufacturing, Sweden also risks having to import goods and services that are today believed to be non-tradable if the country fails to be competitive. The result may be salary cuts, job losses, and associated negative effects on trade balance and GDP growth (see sidebar: Public sector tradability).

This development has concrete implications for both i) healthcare and ii) tertiary education.

PUBLIC SECTOR TRADABILITY^{1, 2}

A top-down estimate indicates that up to approximately 180,000 jobs, nearly 15 percent of total public sector jobs, could become tradable in the next decades. These jobs would not necessarily be lost, but they would have to become internationally competitive. Should Sweden become a net exporter or importer of public services? Becoming a net exporter of public services would result in an improved trade balance and increased job growth, while the opposite is true if the country becomes a net importer. The result will

depend on the relative productivity of the public sector versus the same services in other countries.

NOTES

1. In 2012 there were approximately 170,000 jobs within specialized care in Sweden. Assuming that in-patient care becomes completely tradable and that a share of out-patient care becomes tradable, the result would be approximately 110,000 jobs. There are currently approximately 70,000 jobs within tertiary education.

2. BCG analysis based on SCB databases.

i) Tradability in healthcare

There are major differences in key outcomes between average university hospitals and the best hospitals in Sweden. Take a patient with breast cancer. If this patient has surgery in the best-performing university hospital, the risk of reoperation because of failure to remove the entire tumor is halved compared to the average university hospital. When compared to the worst-performing university hospital, the best hospital has three times better results.⁸⁸

As an example of the urgency, recent research shows that consumers value clinical outcomes to a much larger extent than proximity.⁸⁹ It has also been established that 53 percent of EU citizens are willing to travel to receive care.⁹⁰ It will of course take time for transparency in outcomes to increase and for knowledge to spread to patients but, in the long run, we expect to see a significant increase in patient movement and thus commercial opportunity for countries or organizations with superior outcomes.

ii) Tradability in tertiary education

The recent development in online tertiary education has caused the level of tradability and international competition to increase rapidly. Today's youth are increasingly going abroad for education: since 2000, the number of international students has doubled globally.⁹¹ Several highly prestigious universities, such as Stanford, Harvard, and

MIT, have recently started to offer massive open online courses, so-called MOOCs, to students across the world. This is likely to be the start of a paradigm shift. The MOOC suppliers are in the process of building global education brands, and the next step is to develop new business models to leverage these brands.

This development challenges the traditional structure of higher education and makes it harder for Sweden's universities to attract international talent and retain domestic students. The development becomes even more pressing for countries such as Sweden where higher education already has a quite low level of teacher-interaction and high share of distance learning, thereby making it less differentiated from online education. However, it is important to remember that instead of being seen as a threat, MOOCs can be leveraged as a tool in traditional education systems to decrease costs, improve quality, and individualize speed for learning for different students. Failing to effectively embrace MOOCs and other developments may result in loss of international competitiveness.

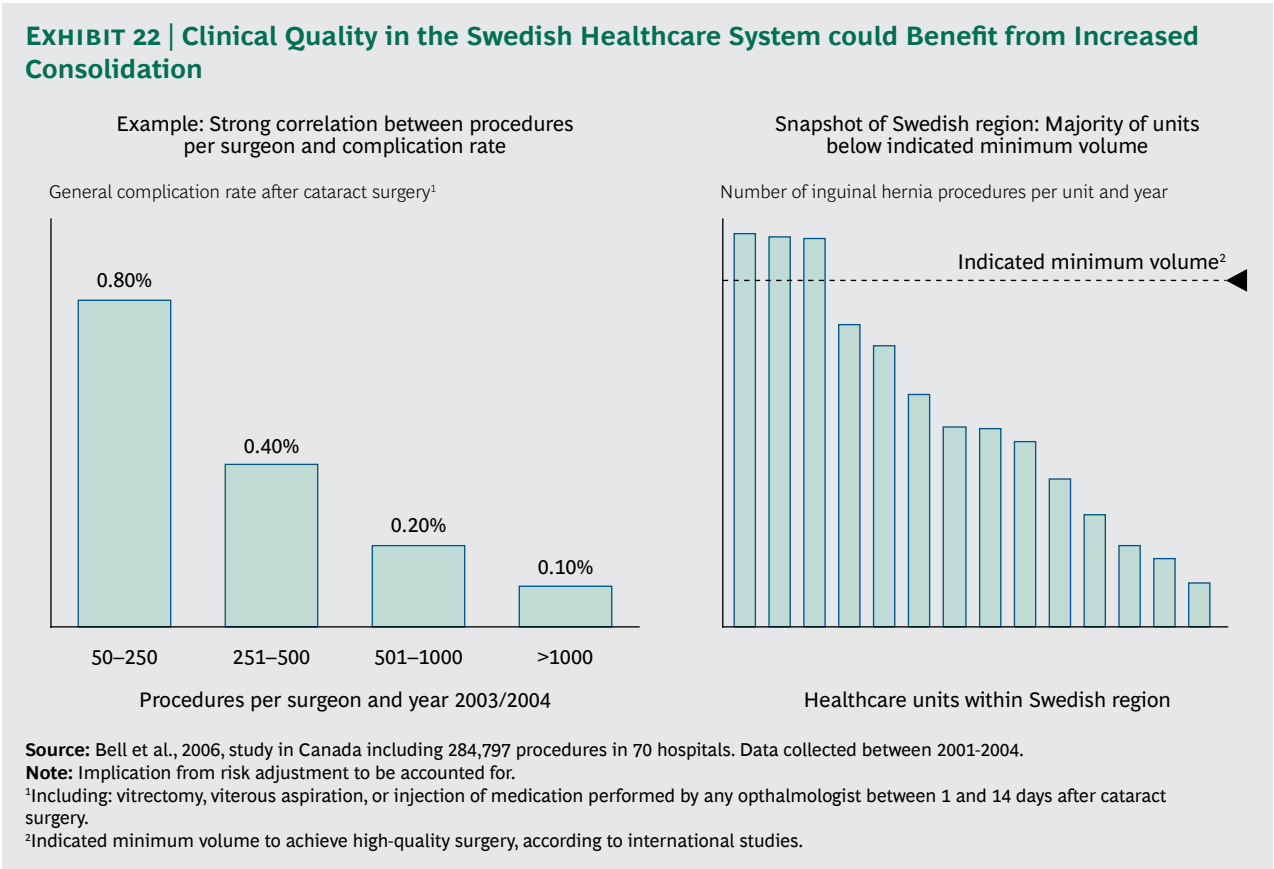
Make or buy. As public services become tradable and re-regulation and protectionism are not viable solutions, the question for Sweden is whether its competitive position is such that it can export public services or at least justify them not being imported. The government will face decisions on whether it is more productive to outsource certain

services to providers abroad while specializing in services where Sweden has a competitive advantage. This “make-or-buy” question is common in the private sector and will increasingly be asked in the public sector. This will require Sweden to make a number of strategic choices with fundamental impact on society and the way public services are provided in Sweden.

Should Sweden become a hub of excellence for certain services while other services are imported or should it continue being a full-service provider? Part of the reason that Sweden has been able to keep healthcare costs from skyrocketing is the limited overcapacity in the system. However, the consequence has been long waiting times, which often is considered the main weakness of the Swedish healthcare system. By outsourcing or importing certain healthcare services, Sweden would tap into more supply without building overcapacity in the system.

By the same logic, Sweden could also specialize in certain treatments and become an attractive destination for patients from all

over the world while improving the quality of treatment for its own patients. Even on a national level, there is a clear logic for moving certain complex, non-acute procedures to fewer locations in order to build experience, thus obtaining higher quality and efficiency. Data shows that a Canadian surgeon who performs 1,000 cataract surgeries each year has eight times better outcomes on average than a surgeon who performs only 250 surgeries. Some Swedish healthcare regions also appear very fragmented, with many small volumes of an average treatment type (see Exhibit 22). Furthermore, the current county council (*landsting*) structure serves as an obstacle to applying national strategies to healthcare. By starting to consolidate certain treatments, thus building experience, Sweden can not only increase the quality of domestic care but also prepare for the international competition that the country will soon be facing.⁹²



ENSURING SOCIAL SUSTAINABILITY

AS OUTLINED IN THE well-being framework, Sweden will have to put more focus on social sustainability, which is one of the three pillars of overall sustainability. Social sustainability is affected indirectly by the measures taken to enable economic growth and spending efficiency.

Swedish society is in general characterized by values such as equity, openness, tolerance, consensus-building, and a combination of individualism and social trust, to name a few common perceptions. Policy making must reflect and respect these values in order to be relevant in the long term.

Generally, Sweden has been successful at promoting social sustainability. As illustrated earlier in this report, Sweden ranks highly internationally in many measures for well-being, such as health, safety, personal freedom, democracy, governance, and education. However, as was also discussed, there are some worrying trends that put Swedish social sustainability at risk going forward.

Income equalities

One of the potential effects of globalization is that while incomes between countries equalize, inequalities within countries increase. Average Swedish incomes have risen steadily for decades and, at the same time, incomes have become more unequal across

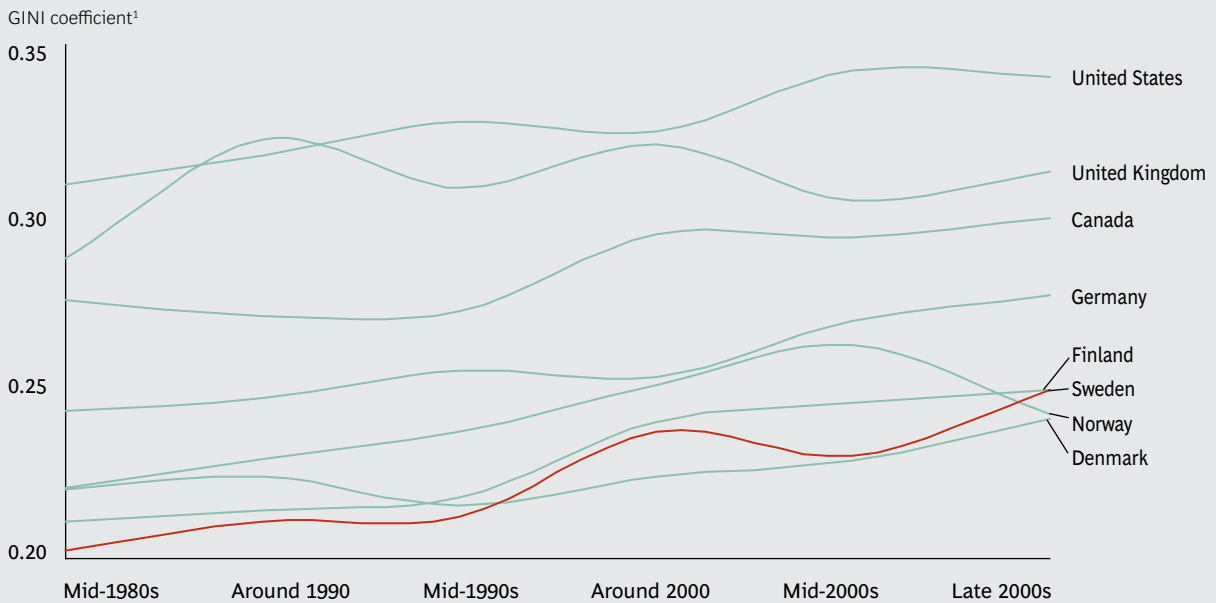
the population, as illustrated by the GINI-coefficient in Exhibit 23. Sweden is still one of the least-financially polarized countries, but inequalities are now greater than those of its Nordic neighbors.

Economic growth is essential for maintaining well-being

The debate on income inequalities is not on whether the differences exist, but rather on whether the Swedish trend of increasing inequalities is worrying or not. While research shows that high inequalities are correlated with poorer health, higher crime rates, and poorer education,⁹³ some point to the fact that Sweden still has a far more equitable society than its peers and that higher inequalities would serve as a motivator for people to make a greater effort.

We acknowledge that some of our proposed initiatives from previous chapters may risk further increasing income inequalities. However, we believe that our proposed changes are necessary in order to stay competitive internationally and to secure absolute living standards for the whole population. Sustained economic growth is also important in order to maintain the country's generous welfare system, which is a key factor for ensuring

EXHIBIT 23 | Swedish Income Inequalities Compared to Peers



Source: OECD.

Note: Selection of OECD countries for illustrative purpose. OECD countries that are not shown are between the U.S. and Sweden on the scale.

¹After taxes and transfers; GINI = 1 means perfect inequality, GINI = 0 means perfect equality.

equal rights and opportunities for all citizens. If the aim is to avoid further income inequalities, tax reforms could be balanced by introducing tax cuts specifically for low income earners.⁹⁴ Regardless, in order to balance a possible trend of increasing income inequalities, there is need for a high social mobility (i.e., the possibility to move up or down from one socioeconomic level to another).

Social mobility

Sweden is one of the most socially mobile countries in the world, but has the lowest level of social mobility in the Nordic region and trails behind countries such as Canada and Australia.⁹⁵ As illustrated in Exhibit 24, there is a correlation between social mobility and income equalities. Sweden seems to have a lower level of social mobility than would be expected given the income inequalities, which indicate a potential for improvement in this area. We argue that one of the more powerful tools for realizing social mobility is an equal primary and secondary education system, combined with transparency of career opportunities, as pointed out earlier in the report.

There are two clear objectives with social mobility. Firstly, it is a strong driver of productivity in that it improves resource allocation and creates incentives to “move up” the income ladder. There is also the moral argument that everyone should have the same opportunities in life regardless of background. This is essential to ensuring social unity, especially when income differences are increasing. Formal obstacles, such as lack of free schools, healthcare, etc., have to a large extent been eliminated in Sweden, while informal obstacles, such as inequitable schools, asymmetrical information, and the need for private networks to find work are still prevalent and hinder social mobility in Sweden. In short, there is a risk that significant talent is trapped in the system despite society’s best efforts, creating frustration and passivity.

Unemployment

Employment is a key driver of wealth creation, but it is also one of the most important social sustainability parameters; high unemployment, left too long, can put social stability at risk. It is also a benchmark indicator of

EXHIBIT 24 | Sweden has Lower Mobility Than Comparable Countries



Source: OECD: *A Family Affair: Intergenerational Social Mobility across OECD Countries* (2010).

¹Wage persistence is measured as the gap between the estimated wage of an individual whose father had achieved tertiary education and the wage of an individual whose father had achieved below upper secondary education. A larger number implies a larger gap, thus stronger persistence in wages or a lower degree of mobility across generations. Corrected for distributional differences.

²GINI coefficient of disposable household income adjusted for household size.

how well a country is utilizing resources and talent.

While the unemployment rate in Sweden dropped to approximately 6 percent before 2000, it started to rise after the sub-prime crisis in 2008. Despite this increase, the current level of approximately 8 percent is on par with the OECD average⁹⁶ and is close to the natural rate of unemployment, which is estimated to be around 7 percent.⁹⁷ It can be argued that from a social perspective, youth unemployment and long-term unemployment are the most worrying, because they signal increasing barriers to the labor market and risk of marginalization respectively. To really understand the true problem of unemployment, it is necessary to sort out what is hidden behind the numbers.

Current unemployment drivers. In total, long-term unemployment represents 30 percent of all unemployment and is increasing slowly. Immigrants are overrepresented, with almost four times higher long-term unemployment levels than Swedish-born citizens, and represent more than 40 percent of all long-term unemployed.⁹⁸ Integration of immigrants and people with low socioeco-

nomic status and provision of relevant education for these groups are keys to solving the long-term unemployment issue.

Youth unemployment in Sweden is high by international comparison (24 percent for 2012, which was higher than the EU average⁹⁹). However, the figures are partly skewed by student unemployment. Using NEET,¹⁰⁰ a metric that is considered fairer as proxy for social marginalization of youths, Sweden comes out in line with comparable countries. Challenges still remain for uneducated 20- to 24-year olds to enter the workforce, and entering the labor market is particularly difficult for immigrants. Data shows that young immigrants have 70 percent higher unemployment and 150 percent higher long-term unemployment rates than Swedish-born youth.¹⁰¹

As outlined above, unemployment is more common in certain groups such as youths, immigrants, and the low-skilled. Therefore, it is advisable to direct measures to these groups specifically, instead of taking general measures across the general workforce. The recent income tax cuts (*jobbskatteavdrag*) are an example of non-optimal tax initiatives—they

have mainly benefited the part of the workforce that already has jobs, rather than helping marginalized groups get back into the labor market.

Further provision of low-skill jobs. Demand for low-skilled labor has declined in most OECD countries, driven by globalization, increasing sophistication of the economy, and the off-shoring of low-skill jobs. Sweden has a long tradition of providing a comparatively high minimum wage, currently some 70 percent of the average wage.¹⁰² Consequently, people with a skill level worth less than the minimum wage find it difficult to secure employment.

The primary solution to this is to continue to raise the actual skill levels of the population, first by improving skill matching in the labor market and second by raising the share of the population with tertiary education. However, there will always be a need for low-skill jobs

for the part of the labor force that cannot meet new productivity requirements. We believe that the disappearing manufacturing jobs will have to be replaced by low-skill service jobs,¹⁰³ partly driven by the expansion of the household and personal services sectors as well as the public sector. Creation of more low-skill jobs will dilute overall productivity, but it will also contribute to increasing economic and social sustainability by diminishing costs and enabling more people to be part of the labor market. The relatively small share of employment in service sectors also implies that the employment responsiveness to GDP growth is low, i.e., society is less adaptive to economic shifts.

In order to enable the development of low-skill service jobs, it may also be necessary to offer lowered/subsidized salaries for certain jobs in these sectors, such as the current *RUT-avdrag* (tax deduction for household services).

RECOMMENDATIONS GOING FORWARD

THERE ARE SEVERAL STRATEGIC priorities that we believe will drive the future well-being of the Swedish population: how to sustain economic growth, secure efficient conversion of wealth to well-being, and ensure social sustainability while staying true to core Swedish values. Many tradeoffs and interdependencies must be considered, which is why we feel that a clear long-term strategy is needed to avoid misalignment and potentially counter-productive initiatives aimed at different parts of the economy and society.

We propose five strategic priorities for Sweden, accompanied by some specific recommended actions with the aim of providing a foundation for implementing constructive change.

National strategy in five brush strokes

We believe that there is a true desire among Swedish decision makers—be they in politics, business, or public institutions—to do the right thing. Many of the right priorities have already been identified by these decision makers and are being actively debated. Our ambition is to help shift the balance of debate toward action, using levers with the greatest relative importance, and to encourage funding in areas that have the most potential for overall impact.

1. Increase focus on productivity development

Productivity growth needs to be a key topic in the political arena when discussing Sweden's future economic and social sustainability. In particular, more focus is needed on productivity development in the tradable sector (rather than local services), which define Sweden's competitiveness on the global market and directly affect income levels for the entire country. More attention and proactive policies are needed to address the key levers of talent attraction and development, innovation, and digitalization.

2. Continue to deploy new approaches to slow the decline in hours worked

Many western countries are facing a demographic crunch, along with rising costs for care and healthcare, which call for a continued push to increase the supply of working hours in the economy. Increasing retirement ages, encouraging earlier workforce entry (e.g., through early graduation bonus), and better leveraging untapped pools of labor (e.g., immigrants and women) are all necessary areas of reform. However, there is a fundamental mismatch in supply and demand and of labor at different skill levels, and while subsidies for lower-skill jobs will help in

the short term, more effort is needed to raise overall skill levels in the economy. Furthermore, the current strong focus on labor supply needs to be balanced with a greater focus on labor demand, e.g., initiatives to stimulate job creation through entrepreneurship and growth of firms.

3. Encourage adaptability in government and for corporations

A world of accelerated change requires continuous adaptation for success. Wherever possible, regulatory and structural barriers to change need to be removed to increase latitude for companies. Policies that discourage relocation of people or jobs and those that make it more difficult to start or re-dimension a business are particularly onerous for a changing economic landscape. The government itself also needs to be adaptive, allowing for more localized experimentation in policy setting, faster piloting and sharing of best practices, and better engagement across departments on key topics. For example, the digitalization of government and the economy has implications for all departments.

4. Shift toward outcomes-guided public sector

Value-driven thinking, based on clearly defined outcomes, needs to be implemented in public services to encourage innovation and dynamism, which will lead to productivity and quality gains. Healthcare and education are the most urgent areas for reform, but several other public services might also benefit from a more rigorous definition of target outcomes and transparency on meeting these expectations. Many elements of the public sector may also become tradable internationally as barriers to trade in services are removed; this will drive a paradigm shift with significant potential benefits for Sweden.

5. Ensure social and environmental sustainability

Social, environmental, and economic sustainability are tightly linked, requiring

trade-offs and compromises but also providing potential synergistic effects. Government needs to actively manage externalities, further encouraging positive effects (e.g., on the job education, employee health) and discouraging negative effects (e.g., carbon emissions, water pollution).

Concrete actions for achieving the national strategy

There are many potential pathways and policies that might be adopted to achieve the strategic aims above. Below, we outline different steps of the suggested path in order for Sweden to maintain its well-being in the future. We have grouped these into actions that aim primarily to increase social well-being, and those that have a more economic nature.

A long-term national strategy is needed for Sweden to maintain well-being

ACTIONS TO SECURE SOCIAL WELL-BEING

The two areas of social welfare most urgently requiring reform are education and healthcare. We address some initial steps for reform below.

Rethinking education. Sweden needs an education system that both promotes social mobility and develops top talent to be able to drive productivity in a more volatile world. The current system has proven successful at neither objective, with Sweden lagging peers on both dimensions.

- **Equity in primary school:** Sweden needs to significantly improve equity in primary and secondary education in order to ensure social mobility and improve integration. Creating transparency in *real* outcomes (i.e., knowledge) and leveraging that transparency could help to individualize student support, evaluate initiatives and individual schools, spread best practices to low-performing schools, and

allocate teaching talent to schools most in need of support. More emphasis on depth of knowledge should be built into preparing teachers, as well as empowering them to adapt teaching styles and curricula, especially for student groups with different preconditions such as immigrants. Administrative procedures, which do not have a direct link to educational outcomes, can become more standardized; for example, by digitalizing national tests and administration tasks. This will increase available time for value-adding activities. Finally, systems should be set in place to increase motivation for teachers by continuing to develop clearer career paths.

- **Improve career guidance:** Better transparency on career options and outcomes (e.g., earnings, working environment, and development potential) is needed, especially in secondary schools. Measures should be taken to ensure that data is available in an easily accessible, digitized format. Improved career guidance and advice is especially important within socioeconomically and ethnically segregated areas, where there is a more acute lack of networks and views of the different professional options that exist.
- **Differentiate higher education:** Swedish tertiary education should become more differentiated. Better-defined goals are needed for each type of institution (e.g., universities focused on being internationally competitive in research within certain specialized areas), with colleges and vocational training centers more focused on providing geographical reach to enable the workforce via bachelor's degrees or professional certifications (e.g., accountants, nurses, welders). Institutions should be evaluated and benchmarked based on their purpose. One could imagine a cluster-design, centered around a "mother" university that gathers all research and masters degrees, and satellite colleges that ensure wider geographical presence and a broader identification and absorption of talents. The government should also create centers of excellence within certain

areas to ensure international competitiveness, e.g. initiatives to put Sweden's best educational departments on top in the global benchmarks.

Reinvigorating healthcare. Rapidly increasing healthcare costs, an aging population, and increased international tradability of healthcare call for a more sustainable healthcare model that ensures quality and improves the "value for money" proposition. Increased conversion of wealth to well-being will be crucial to addressing increasing healthcare costs; alternately, there might be a need for a more privately funded system.

Increased conversion of wealth into well-being is essential

- **Value-based healthcare (VBHC):** The transition to VBHC should be facilitated by continuing to invest in health registries and enhancing the use of outcomes data in healthcare management. An alignment of the healthcare system around improving value for patients would enhance conversion from wealth to wellness for the population and attract innovative international businesses. An important effort will be to develop better reimbursement models, moving away from fee-for-service to responsibility for the full cycle of care for important patient groups. The definition of precise medical metrics and analysis of data should be done by the clinical community, which is held to a set of overall health and wellness outcomes targets.
- **Digitalize healthcare:** Invest in digitalization and create an efficient national IT infrastructure that integrates registries in standardized electronic medical record (EMR) platforms to avoid excessive administrative work for doctors and enable more time with patients.
- **Enable development of national centers of excellence:** Encourage centralization of

a notable share of non-acute clinical procedures that benefit from scale to a few national centers. These should aspire to become international leaders in patient outcomes and clinical R&D. Also, actively seek to limit the barriers to improvement, centralization, and sharing of best practices caused by the fragmented national organization of healthcare in county councils.

Actions to secure economic fitness

Sweden's overall economic fitness depends on innumerable factors, but a few areas—notably international talent, innovation, growth of firms, digitalization, and country factors—are especially important to address, as they are broad enablers.

Attract international talent. In a globalized world, it will be key to attract and retain the world's top talent. This is not only because talent enables innovation, but also because companies increasingly relocate to areas where talent clusters, frequently in dense, dynamic, and globally integrated communities.

- **Attract international free-moving talent:** Sweden should seek to become the most attractive country for young, well-educated people. Actively attract foreign top talents to Sweden and facilitate immigration procedures for highly skilled, free-moving talents regardless if they have a Swedish employer or not. Maintain and create appealing living conditions, including a more liquid housing market, more balanced tax incentives (on property and income), and better access to English-speaking schools. Overall, improve ability to live in Sweden with English as a first language.
- **Attract international students:** In the long term, Sweden will know it has world-class educational institutions when international talent seeks enrollment on the basis of performance. Non-EU/EES student fees are discouraging international students from applying, and a smarter solution for grants is needed to attract high-potential students to Sweden. Improvements in work visa and job location policies will also help.

Ensure continuous innovation. Innovation is essential for Swedish companies to continue to lead in their respective niches. Much is dependent on the actions of these companies and individuals, but there are a few areas where policy can support.

- **Focus governmental support:** Leverage Sweden's financially strong position to continue to invest in primary scientific research, combined with growth-enhancing investment in strategically important areas such as environmental technologies and digitalization. Consolidate funding and build innovation ecosystems around successful research centers.
- **Facilitate access and use of data:** Promote innovation in the use of new digital data sources by enacting clear policies that balance individual privacy and data integrity needs with the potentially huge benefits from enabling managed access to mine and analyze big data.
- **Facilitate commercialization:** Balance tax incentives, such as tax credits or social fees reductions, for corporate research and the commercialization of innovation. Promote public-private R&D partnerships and enable businesses to be present at universities through incubators that work with issues surrounding the commercialization of innovation.
- **Leverage public procurement:** Introduce functional tenders, which focus on solving a specific problem. Increase the weight of innovation and quality of suppliers when evaluating public tenders in key areas by specifying levels of performance or functionality that are not achievable with standard solutions.

Enable growth of firms. Sweden has a strong suite of multinational companies that have been and remain the backbone of its prosperity. However, there is a need to promote more growth among the thousands of SMEs in Sweden.

- **Promote entrepreneurship:** Highlight successful entrepreneurial examples. Continue to simplify procedures for

starting and growing new businesses. Catalyze entrepreneurship at universities through incubators that provide guidance, infrastructural support, and access to relevant business networks.

- **Increase willingness to take risk:** Harmonize capital and income taxation to equalize benefits from investment versus working in a company. Introduce more exceptions in the labor laws for small companies to encourage hiring.
- **Increase capital access:** Introduce possibility for venture capital funds to offset profits and losses in portfolio. Reduce tax difference between equity and loan financing in order to simplify financing for knowledge-based businesses that do not have any tangible assets. Consolidate public capital funds and introduce a matching scheme in which public funds are used to match investments in growing SMEs.¹⁰⁴ Investigate options to increase exposure of pension funds to earlier-stage investments.
- **Facilitate SME exports:** Support SMEs to grow outside the Swedish market, via provision of financing, export insurance, subsidized professional support in export regulations, and more actively providing networks and contacts.

Increase digitalization. Digitalization has already had a profound impact on productivity, with greater promise remaining. Sweden remains among the top European countries in digitalization, but risks being overtaken by other countries if proactive investments are not maintained.

- **Enable digitalization in the private sector:** Increase investments in ICT infrastructure and prioritize initiatives that incentivize and facilitate SMEs to pursue digital strategies. Act as a partner to educate and support SMEs with digital ambitions. Introduce computer technologies as a core subject area in primary school, to catalyze the identification and development of highly IT-skilled youth.
- **Implement e-Government in the public sector:** Enable digital solutions for all

interactions within governmental agencies and for the interface among governmental agencies, businesses, and citizens. This will encourage businesses to move toward a higher degree of digitalization, which will further drive productivity.

Sweden must make proactive investments in digitalization

Ensure competitive level of country factors.

To a large extent, Sweden's past success is built on a foundation of strong country-specific advantages. We believe that some of them, such as a stable macro financial situation and quality of public institutions, will still continue to serve Sweden well. However, in the future, most country advantages will become less unique, due to increasing global competition. There are three areas in which Sweden can proactively work to improve underlying competitiveness:

- **Improve liquidity in the housing market:** There is an urgent need for a more liquid and accessible housing market, especially in the major urban areas. Market-driven rents will help open investment into housing construction in high-growth areas.
- **Reliable energy supply:** Formulate long-term energy policies to create a stable energy price situation for companies to help them avoid being at a disadvantage internationally.
- **Uphold infrastructure:** Take on long-term infrastructure improvements to close the infrastructure investment gap. These investments could be partly financed by exploring alternatives such as public-private partnerships and by freeing up pension assets. Additional effects, such as job growth and improved supply of housing, would be another positive outcome of these investments.

LOOKING AHEAD

SWEDEN IS A FANTASTIC country. The relatively small population combined with adaptive companies and a pragmatic approach to solving conflicts all create dynamic conditions for new ideas to grow and new solutions to take shape. The government has a role in creating a beneficial breeding ground by feeding the economy with talent and by removing all critical barriers for development—and, by doing so, unleashing the natural power of human capacity.

What role will Sweden play in the 21st century? Will its society and companies be able to constantly reinvent themselves, to stand against the increasing competition of the global challengers? We see a future in which factors like risk taking, niche creation, and top talent are fundamental in order to stay relevant. Key questions will be: How should Sweden improve its attraction and integration of foreign top talent? Is there a world market for a green and fair premium brand “Made in Sweden?” Will Sweden be a leader or a follower?

This increasing necessity for excellence will put more pressure on society, and, as a result, bring an increasing risk of polarization. The Swedish balance between a strong economy and a stable and fair society is unique; we

cannot take it for granted. In the report, we discuss the importance of equal opportunities for all through a highly equitable school system. This is one of the necessities to maintain that balance; another is the maintenance of a socially inclusive welfare system. Businesses, academia, public servants, and politicians have an important role in explaining this balance to the larger public, and navigating the tradeoffs together. Decision makers are not unaware of what needs to be done, but they may not feel enough of a sense of urgency, and these issues may fall to the bottom of the agenda.

A strategy for Sweden needs to be solidly founded on setting the right priorities on a country level combined with wise decisions on an operational level. We argue that now is the time for long-term measures that drive productivity and enable well-being. Sweden’s future economic and social sustainability is on the table, and we have to act.

APPENDIX

ENDNOTES

1. BCG, *En ram för Svensk Industripolitik* (1978).

2. This report will mostly focus on the economic and social dimensions of development and their interdependencies. Environmental sustainability, including its relation and tradeoffs with the economic and social dimensions, is an important topic that warrants more analysis than the scope of this report. BCG is conducting complementary work on this topic, represented most recently by our published report on the Baltic Sea; from a Swedish perspective, the deteriorating state of the Baltic Sea is the most urgent local environmental matter to solve. Please see the BCG report *Turning adversity into opportunity – A business plan for the Baltic Sea* (2013) for extended reasoning on this topic.

3. Sweden scores highly in measures like health (14th), safety and security (6th), democracy (4th), life expectancy (8th), personal freedom (5th), governance (4th), and education (12th) according to sources such as the UN, the CIA Factbook, WHO, The Economist Democracy index, and Legatum Institute.

4. Rankings on macroeconomic climate and technological expertise from the World Economic Forum's *Global Competitiveness Index* (2001 and 2011).

5. See the newly released BCG report, *Meeting*

the infrastructure challenge with public private partnerships (2013) for more on this topic. Available online at https://www.bcgperspectives.com/content/articles/public_sector_transportation_travel_tourism_meeting_the_infrastructure_challenge_with_public_private_partnerships/.

6. Boverket, *Bostäder, rörlighet och ekonomisk tillväxt, Marknadsrapport* (2013) suggests the gap between required and built dwellings to be 10,000 to 15,000 per year. If the aim is to eliminate the current housing shortage, the gap would amount to 20,000 to 35,000 dwellings per year according to Boverket, *Bostadsbristen ur ett marknadsperspektiv* (2012).

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49. BCG calculation based on figures from SCB databases.
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60. Large companies, i.e., more than 250 employees, account for approximately 40 percent of value add, turnover, and employment in Sweden according to SCB databases.
61. Tillväxtanalys databases.
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The 3:12 rules is one contributing factor to this company structure.

70. See OECD, *Promoting Entrepreneurship and Innovative SMEs in a Global Economy* (2004) for extended reasoning on this topic.

71. Assessment by World Economic Forum, *Global Competitiveness Report* (2012-2013).

72. BCG, *Digital Sweden* (2013). Report and associated commentary available online at <http://www.valueoftheweb.com/>.

73. Ibid.

74. Defined as the difference between the value perceived and price paid of consuming a product or service, according to BCG, *Follow the surplus – European consumers embrace online media* (2013).

75. Top quartile of companies ranked on level of digitalization according to BCG, *Digital Sweden* (2013). Available online at https://www.bcgperspectives.com/content/articles/media_entertainment_digital_economy_follow_surplus_european_consumers_embrace_online_media/?chapter=5.

76. Sweden is constantly ranked among the best in healthcare outcomes without being among the top spenders on healthcare. Furthermore, public institutions are generally trusted although spending on law, order, and safety has been relatively low.

77. E.g., pensions, social benefits, etc.

78. The Australian government funds a network of unemployment organizations that receive funds based on how well they perform in placing people in jobs. This system has yielded one of the lowest unemployment rates in the OECD, according to OECD, *Activating job seekers – How Australia does it* (2012).

79. The Scottish government introduced the Scottish Policing Performance Framework in 2007 with a set of performance indicators for policing activity to improve performance and to improve accountability at local and national levels through increased transparency. It

has succeeded in bringing down the Scottish crime rate to a 37-year low, according to The Scottish Government, *Scottish Policing Framework* (2011).

80. Larsson, Lawyer, Garellick, Lindahl & Lundström, *Use of 13 disease registries in 5 countries demonstrates the potential to use outcome data to improve healthcare's value*, Health Affairs (2012).

81. According to BCG's *Progress toward value-based health care* (2012), which presents an assessment of countries' maturity in outcomes data collection and use, Sweden comes out on top. Sweden currently has 100 quality registries covering more than 25 percent of health expenditures and the government, together with Sveriges Kommuner & Landsting, recently committed to a long-term investment of SEK 1.54 billion between 2012 and 2016 (according to Budgetpropositionen för 2013: Prop 2012/13:1) into quality registries, declaring it "a national priority." See https://www.bcgperspectives.com/content/articles/health_care_public_sector_progress_toward_value_based_health_care/.

82. See <http://www.ichom.org> for more information.

83. BCG, *Alternative Payer Models Show Improved Healthcare Value* (2012). The report compared different American healthcare reimbursement models within the Medicare system, and revealed that a system in which the provider has more far-reaching responsibility for the patients' overall health compared to the fee-for-service system delivered better outcomes and up to 30 percent lower costs. Available online at https://www.bcgperspectives.com/content/articles/health_care_payers_providers_alternative_payer_models_show_improved_health_care_value/.

84. Please see BCG's *Value Guided Healthcare as a platform for industrial development in Sweden – Feasibility study* (2009) and *Nationell satsning på kvalitetsregister inom vården* (2010) for extended reasoning on the topic of value-based healthcare.

85. Finland is among the top three in the international comparison PISA and spent ap-

proximately 20 percent less per student in primary and secondary education than Sweden, adjusted for PPP.

86. Examples that are already happening in Europe are MRI scans being processed in Asia, travels to Germany for prostatectomy due to lower complication rates, etc.

87. E.g. only 1 percent of healthcare expenditure in Europe is spent outside the home country according to the European Commission, *Q&A: Patients rights in cross-border health care* (2011).

88. Swedish Breast Cancer registry.

89. According to BCG, *Consumers seek hard data on health care outcomes* (2012) based on BCG Consumer Sentiment Barometer, 2012, which interviewed over 16,000 consumers in 15 countries. Available online at https://www.bcgperspectives.com/content/articles/consumer_insight_health_care_payers_providers_consumer_seek_hard_data_health_care_outcomes/.

90. European Commission, *Cross-border health services in the EU* (2007).

91. OECD, *Education indicators in focus* (2011).

92. Sweden is in a good position to do this as the country's clinical outcomes rank highly internationally for many treatments, with the aid of disease registries and outcomes transparency. Examples include cataract surgery, for which the average outcomes are on par with the best eye clinic in the U.S.; hip replacement, for which results have been regarded as the best internationally for many years; acute myocardial infarction; and cancer treatments. Besides exporting care capacity, Sweden has the potential to export training and know-how.

93. Kate Pickett and Richard Wilkinson, *The Spirit Level: Why More Equal Societies Almost Always Do Better* (2009).

94. Such as raised basic allowance levels, reintroduction of wealth, inheritance and property tax, etc.

95. According to an intergenerational

earnings elasticity analysis in Clark, *What is the True Rate of Social Mobility in Sweden? A Surname Analysis* (2012).

96. According to SCB and OECD databases. Latest figures as of this report were 8.7 percent.

97. Natural unemployment is estimated to be 6.8 percent according to *Konjunkturinstitutet, Konjunkturläget Augusti* (2013). The natural rate of unemployment, or NAIRU (non-accelerating inflation rate of unemployment) is the level of unemployment below which inflation would accelerate.

98. SCB databases.

99. OECD databases. Latest figures as of this report were 17.3 percent according to SCB, partly explained by seasonal variations (http://www.scb.se/Pages/Product____23262.aspx).

100. Not in Employment, Education, or Training. Corrects for the fact that Swedish students (about half of all unemployed) do not get funding during the summer, which increases the unemployment figures for this particular group.

101. SCB databases.

102. SCB databases. In 2012, the tenth percentile of wage was approximately 70 percent of the average wage.

103. The past two decades showed strong employment growth in the non-tradable sectors. The number of jobs in tradable sectors increased 5 percent between 2000 and 2012. Unexposed sectors added 39 percent more jobs in that period, according to SCB databases. This development shows that Sweden's prosperity is vulnerable, because the ratio between tradable and non-tradable jobs has increased. Ever-higher numbers of Swedish citizens will depend on fewer and fewer fellow countrymen to generate their income.

104. For example as suggested in IVA, *Innovationsplan Sverige – Underlag till en svensk innovationsstrategi* (2011).

NOTE TO THE READER

This report is also available in Swedish. For a copy, please contact one of the authors.

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