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Knowledge driven Growth

An initial report by the Globalisation Council



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To the Government

On 21 December 2006, the Government decided to set up a Globalisation Council at the Government Offices to deepen knowledge of and broaden the public discussion on what Sweden needs to hold its own in a world characterised by continuing rapid globalisation (U2006/9119/IS). The results of the Council's work will be summarised in a final report no later than in 2009.

The accompanying report was drawn up by members of the Globalisation Council in a process involving the entire Council. Its purpose is to submit a number of general assessments in addition to focusing on the forthcoming research bill.

In a separate statement, the five ministers indicated that while we endorse the main tenor of the report we are unable in this context to commit ourselves with regard to specific sums or certain other details which will ultimately be a matter for the Government to decide.

Wanja Lundby Wedin, who is also a member of the Council, has noted in a separate submission that she endorses the report, with the exception of the paragraphs on tax, income distribution policy and job security.

Stockholm, 9 October 2007

Lars Leijonborg

Members of the Globalisation Council

- Lars Leijonborg, Minister for Higher Education and Research, Chair
- Kristina Alsér, County Governor
- Hans Bergström, columnist, Docent in Political Science
- Carl Bildt, Minister for Foreign Affairs
- Urban Bäckström, Director-General, Confederation of Swedish Enterprise
- Lars Calmfors, Professor of International Economics
- Per Carstedt, CEO, SEKAB
- Dilsa Demirbag-Sten, journalist, writer
- Anna Ekström, Chair, Swedish Confederation of Professional Associations (SACO)
- Sven Otto Littorin, Minister for Employment
- Wanja Lundby-Wedin, President, Swedish Trade Union Confederation
- Karin Markkides, President and CEO, Chalmers University of Technology
- Elisabeth Nilsson, President, Jernkontoret – the Swedish Steel Producers' Association
- Aina Nilsson Ström, Head of Design, AB Volvo
- Sture Nordh, Chair, Central Organisation of Salaried Employees (TCO)
- Mats Odell, Minister for Local Government and Financial Markets
- Maud Olofsson, Minister for Enterprise and Energy, Deputy Prime Minister
- Carl-Henric Svanberg, President and CEO, Ericsson
- Lena Treschow Torell, President, Royal Swedish Academy of Engineering Sciences (IVA)
- Harriet Wallberg-Henriksson, President, Karolinska Institutet
- Marcus Wallenberg, Chairman, ICC (International Chamber of Commerce)
- Olle Wästberg, Director-General, Swedish Institute

Principal Secretary: Pontus Braunerhjelm

Knowledge driven Growth – An initial report by the Globalisation Council

Introduction

The Globalisation Council has been in existence for slightly over half a year. In that time, a large number of background studies have been commissioned by researchers and other experts. There have also been various initiatives aimed at enhancing public discussion about ways in which Sweden should be managing its role in the global economy. The full Council has met on five occasions, including a two-day meeting. The first event addressed the question: What is new about present-day globalisation? Two subsequent meetings were devoted to a close examination of the prospects for two Swedish ‘sunrise’ sectors: medicine and information and communication technology. The fourth meeting focused on the current situation of Swedish research and higher education. The first autumn meeting was devoted to an exhaustive examination of Sweden’s prospects and opportunities in the new global economy.

The meetings were also attended by successful entrepreneurs, including founders of the IP telephony company Skype and the stem cell company Cellartis, who spoke about their experiences. A number of prominent foreign researchers have also taken part. One of these was Michael Porter, an expert on the international

competitiveness of countries and the emergence of successful regional clusters.

It is against this background that the Globalisation Council proposes to make a number of general assessments with a special focus on the Government's forthcoming Research Bill.

The Council's position on globalisation

Agreement was reached on a general position on globalisation at the Council's first meeting.

The Council maintains that globalisation is basically beneficial to *the world*. The new wave of global economic integration, made possible among other things by dramatic breakthroughs in communications technology, combined with deregulation in China, India and elsewhere, have led to historic rises in income levels for hundreds of millions of people, particularly in Asia. According to a new World Bank study, the proportion of people living in absolute poverty, with incomes below a dollar a day (in fixed prices), declined from 33 per cent of the population of all developing countries in 1984 to 18 per cent in 2004. In East Asia, including China, the percentage fell at an unprecedented rate, from 39 to 9 per cent. Significant poverty-related problems remain, above all in Africa. However, there can be no doubt that an increasingly open and integrated global economy is contributing to their solution.

Studies clearly show that developing countries with open trade regimes have achieved significantly more progress than countries with closed regimes. The world also needs greater openness on the part of 'rich' nations to exports of agricultural produce and textiles from developing countries. Rising living standards have also contributed to a dramatic decline in birth rates; the world as a whole is now approaching the point where the reproduction rate is no longer contributing to world population growth. The

‘population bomb’ can thus be progressively disarmed, growth can lead to greater per-capita prosperity and environmental degradation can hopefully be contained. The emancipation and empowerment of women is of immense importance in this context.

In a report to the Council, the historian and renowned scholar Johan Norberg presented statistical data compiled from reliable sources over a long period of time, supporting the assessment that globalisation has had a profound positive effect on the quality of life for hundreds of millions of people. Literacy has increased dramatically, as well as access to clean water. The average life expectancy, itself a crucial indicator of several dimensions of welfare, has risen at a remarkable rate. The number of deaths from natural disasters has fallen, despite an increase in the number of incidents. This is thanks to technological advances such as improved advance warning systems, more effective rescue and relief services and better medical care.

Like any other age, the era of globalisation has its problems. Climate change, other environmental concerns and the proliferation of nuclear weapons to a growing number of countries are serious problems that can affect the whole of humanity. Moreover, Johan Norberg believes there is statistical evidence of rising rates of mental ill health in many countries. Nevertheless, globalisation gives us better tools to tackle the challenges that arise.

In the West, industrialisation and the democratisation process have gone hand in hand. Freedom of speech and human rights, including the right to organise trade unions, helped ensure that corporate interests were balanced against other needs. Some of the more rapidly growing countries of recent years are dictatorships or nations ruled by highly authoritarian regimes with little or no respect for human rights. Every year, people who challenge the system, such as trade union activists fighting for rights and conditions taken for granted in our own country, are harassed, imprisoned or murdered. Another problem is that open borders,

however desirable they may be in other respects, encourage certain types of crime, including human and drug trafficking and slave trading. Thus, while globalisation means better living conditions for many people, its detrimental aspects should not be ignored or forgotten.

Integration in the global economy must thus be accompanied by international norms and supervision, as well as more effective human rights protection and support for democratic development. At the same time, it should be noted that integration itself can strengthen such endeavours. Human rights violations are becoming increasingly difficult to hide. Global enterprises with operations in many countries have perforce become more aware of their actions and alliances around the world as images of unacceptable practices, like the exploitation of child labour or harassment of trade union members, would damage their brand and undermine consumer confidence. Moreover, in addition to transferring new technologies and modern management methods, Western enterprises that establish operations in developing countries generally provide better working environments and pay higher wages than local companies.

Globalisation is also inherently beneficial for *Sweden*. A small country, Sweden has always depended heavily on foreign trade. A move towards an open global economy is particularly important to a skills-based economy such as that in Sweden which has more difficulty competing against larger countries that protect their own markets by means of internal monopolies and government-directed procurement. The phenomenal economic development of China and India, which together account for more than a third of the world's population, will require massive investment in infrastructure: power stations, roads, distribution networks, heavy-goods vehicles, telephone systems, buildings, environmental technology, etc. As hundreds of millions of people move up into the middle class, they will also demand access to the benefits and amenities we have long been used to in our part of the world –

medicine, education, clean water, etc. Not only do these developments dovetail well with Sweden's traditional economic strengths – steel, forests, energy systems, heavy-goods vehicles, environmental technology, medicines, construction and telephone systems – they also mean that Swedish niche products and technologies, often developed by entrepreneurs and smaller enterprises, can be produced on a larger scale than at present.

For decades, high inflation was a problem for the Swedish economy. Thanks to globalisation, industrial products are now cheaper to import, which has helped keep inflationary pressures down. While this development has affected the entire global economy, it has especially benefited countries which, like Sweden, have had trouble keeping inflation in check. Consumers have also benefited enormously from the downward pressure on prices in the wake of globalisation.

In a world where communication is increasingly simple and inexpensive, and global enterprise has become a familiar phenomenon, smaller companies are growing less apprehensive about venturing out of Sweden and our immediate neighbourhood into markets further afield. Between 1998 and 2006 alone, the value of Swedish exports to China and India rose from SEK 12 billion to SEK 21 billion and from SEK 1.7 billion to SEK 10 billion respectively. In addition, establishment in new markets is often associated with expansion opportunities for high value-added sectors in Sweden, such as design and logistics. Economists refer to 'unbundling' associated with new globalised production systems. This means that different stages of production are carried out in different countries or regions. As a consequence certain types of production that were previously carried out domestically are often offshored. However, research in this area has increasingly emphasised the cost savings involved can also boost production and employment higher up the value chain at home, resulting in new and growing impetus for change in the economy as a whole. It should also be noted that rising standards with regard to product

quality, research and development, service content and levels of sophistication may constitute new grounds for keeping different operations together (the opposite of unbundling). Provided we manage our resources efficiently, this could also help to preserve and expand production domestically.

Tougher, more mobile competition in the global economy poses significant challenges. However, Sweden has already undergone extensive structural rationalisation – perhaps on a wider scale than any other western industrialised nation – with active trade union support. Our long-standing open trade regimes in the textile, steel, shipbuilding and other industries have laid the ground for a new wave of Swedish market successes in the global market, based on entrepreneurship and a stronger focus on unique values in these industries.

The Council accordingly takes the view that globalisation is basically a positive development, both for Sweden and the world. However, economic history teaches us that not all nations gain from global economic growth as a matter of course. All countries can benefit, but only those that grasp the opportunities at hand will do so. In the 1970s and 1980s, Sweden was one of the countries that failed to capitalise fully on the opportunities created by expanding world trade. The task of the Council is to ensure that our country does not repeat that mistake, but instead takes full advantage of the opportunities afforded by globalisation. Open borders must be combined with an active policy aimed at enhancing Sweden's attractiveness.

Globalisation in our own region

The Council would also like to call attention to the extraordinary changes taking place in our own immediate neighbourhood. Even in these new times, proximity factor continues to apply to trade and economic exchange. Geography remains a significant determinant.

With a population of over 100 million and an increasingly integrated economy, the Baltic Sea region has had a significantly higher growth rate in recent years than the rest of Europe. Sweden is well placed to become a strategic node in the region as a regional financial centre, for example. China and India are currently the focus of attention, and justifiably so. However, that fact that Swedish exports to Norway in 2006 totalled SEK 99 billion as against SEK 9.9 billion to India, should give pause for thought. In the same year, we sold SEK 17 billion worth of goods to Estonia, Latvia and Lithuania alone, almost as much as the total value of our exports to China. Exports to Germany totalled SEK 108 billion. Another illustration of the same trend is that Swedish companies employ 23,000 workers in China as against 29,000 in Poland, according to a globalisation study carried out by the Institute of Growth Policy Studies (ITPS). Our newfound interest in East Asia must not be at the expense of Northern Europe and the fast-growing new EU member states in Central Europe. The EU has become a vast internal market with immense export potential for Sweden.

National cohesion our strong point

General agreement in Sweden on what basic position to take on globalisation – a consensus quickly established in the Globalisation Council as well – is a definite point of strength compared with the situation in many other countries. It provides a solid base for Sweden's actions in the international arena. Openness in the global economy cannot be taken for granted, although the ICT revolution is a powerful factor in sustaining it. There is always a risk that progress will be halted and setbacks occur. History has taught us that democracy, openness, internationalism and free trade cannot be sustained without active political effort and the careful development of international institutions. In this respect, the Swedish Government can make an important contribution, e.g. via the EU in world trade talks, by seeking to open up the European market to developing countries and by promoting transatlantic cooperation.

Swedish consensus on globalisation also makes it easier to draw up specific strategic recommendations for how our country is to play its cards in what is, in part at least, a new situation. New factors include greater mobility and greater speed of adjustment and transition. Nowadays, borders are largely open, not only for goods but also for services, currency, capital, people and businesses. Many enterprises of Swedish origin now belong to global groups that are predominantly foreign-owned, often with headquarters in some other country. This means we must take active steps to ensure that businesses consider it worthwhile to locate to Sweden, to produce in Sweden, to develop in Sweden and to base their research in Sweden. A favourable social climate – which includes a good business environment, low crime rates and a good living environment – improves Sweden's chances of being one of the many countries to emerge as winners in the globalisation era.

Where does Sweden stand in comparison with other countries?

The final report of the Globalisation Council will contain a thorough analysis of both strengths and weaknesses for Sweden. But we would like to make certain observations already at this early stage.

On the *plus side*, there are a number of old, established Swedish characteristics that remain an asset and to some extent have been strengthened over time. Among these are a stable political system, a strong climate of cooperation – sustained not least by the social partners – and a social climate with little social tension. Among these are an institutional structure characterised by efficient, uncorrupted public authorities. Among these are large corporations able to exploit long-established global networks. At one of the Council's meetings, Ericsson's CEO, himself a Council member, pointed out that a century ago Ericsson sales abroad accounted for 96 per cent of its turnover. Today, this figure is 97 per cent. The

presence of strong global enterprises has also made it much easier to create clusters in Sweden that include higher education institutions and a wide array of service and entrepreneurial businesses.

Another of Sweden's strengths is a population which is basically open to change, favourably disposed to modernity and new technology, and professionally sophisticated in many areas. As the British economic journalist Martin Wolf noted in his book *Why Globalisation Works*, perhaps the most important source of wealth and poverty is to be found in the customs, values and explicit or tacit knowledge accumulated in a population throughout its history – a country's social and human capital.

Other favourable attributes include Sweden's quest for equality, resulting in relatively low class barriers and an inclusive approach. The pursuit of universal education may be regarded as another part of the same trait. This is evident in a widespread ability to speak reasonably good English, even among those with less education. Adult education and lifelong learning are components of a sound Swedish tradition that will become even more important in the new global environment, where change tends to come rapidly and where people must be constantly prepared to adapt and to upgrade their skills. Gender equality and a widely established preschool system have resulted in a high labour-market participation rate among women, which means that we are making better use of the population's overall stock of skills than many other countries.

Sweden's universal social insurance system – incorporating a reasonable level of sickness benefit and an unemployment benefit scheme that facilitates the transition to other work when people lose their jobs – should also be considered a plus, in the Council's view. Such a system reduces the risk burden on the individual company. Since it is linked to a specific employment position (what is generally referred to in the international debate as 'job lock-in'), it promotes mobility in the labour market. Social insurance also contributes to widespread public acceptance of change and

adjustment, and of a working life where high productivity is at a premium. It provides financial protection when people are unemployed or suffer accidents or become ill. Of course the system must be carefully balanced in terms of conditions, levels and waiting/qualifying periods, and be compatible with an active work-first policy.

Another point in Sweden's favour is the quality of various institutions crucial to enterprise, such as banks, accountants, financial advisers, consultants and staffing agencies – not to mention an efficient and service-minded tax administration. Sweden's emerging venture capital market has further strengthened this 'ecology' of the business world.

A major advantage in a world of increased mobility for highly skilled individuals is the living environment in Sweden, including proximity to nature, the civility of community life itself (including the spirit of cooperation shown by the social partners), and a relatively low crime rate.

When focusing on weaknesses and problems, we should make a point of protecting and preserving our strong sides, to ensure that these are not eroded. A robust system of adult education and lifelong learning must be upheld and further improved. The lack of investment in the transport infrastructure, particularly in Stockholm and Göteborg, is having an adverse effect on people's everyday environments. Worrying tendencies on the crime front require attention, along with the occasional failure of the Swedish health care sector to keep up with the latest developments in the medical technology field.

Among the *causes for concern* we have identified are the following:

- *Fixed investment in the business sector* has been surprisingly low given the rapid output growth in Sweden in recent years. Overall investment in the economy falls short of

savings by as much as 7 per cent of GDP. This means that substantial savings are not being invested at home but are instead leaving the country in the form of capital exports. It remains to be seen whether this year's sharp increase in investment represents a break in the trend.

- The *private service sector* has grown only slightly in comparison with other countries. Due to its demographic makeup – the Swedish population was long the oldest in the world – and to its welfare systems, Sweden has been a pioneer in such areas as care of the elderly. The Swedish service sector should be capable of generating more business targeting the international market, even in such major areas as care and education.
- *Swedish patent applications* are tending to decline in number.
- Parts of Sweden's *infrastructure* have been neglected. As a result Sweden no longer holds the same internationally prominent position it once had. One small, but not unimportant, example is Arlanda Airport – the first place many travellers see on arrival in Sweden – which does not adequately live up to the image of a country that is among the world leaders in terms of modernity, technology, organisational ability, architecture and design.
- *Research* has, on the whole, been neglected, and no Swedish university is now ranked among the best in the world. The Karolinska Institute is the closest. In the medical research field, a classic Swedish area of strength, the level of citation has declined significantly in the past decade. Clinical research is having serious difficulty in finding the space and scientific leadership it needs at university hospitals, where, under county council auspices, the focus has shifted too far in the direction of production of care and saving money.

- *Education* is not yielding sufficiently good results, and is weak in relation to the considerable resources invested in it. Too many are leaving the education system with too few qualifications. The low status of the teaching profession is an important explanation of the low number of applicants to the teachers' training college compared with the number of places available, which in turn means teaching quality will decline over time. The contrast with Finland in this respect is striking. Along with Denmark, Sweden has the oldest university-level students in the world. They are older than in comparable countries both when they enrol and when they complete their studies. Serious attention should be given to this problem. Initiatives must be taken in all parts of the education system.
- Interest in *natural science and technology* is alarmingly low among young people. By way of contrast, our neighbour, Denmark, has managed to boost interest considerably by introducing measures recommended by its own Globalisation Council. When those born in the 1940s retire, Sweden may have difficulty finding good engineers, long one of our country's most important strengths.
- *Crime rates* are no longer as low as they used to be by international standards. The irruption of organised crime is jeopardising important areas of Swedish society, such as security of life and property, faith in the state's ability to protect its citizens, and absence of corruption.
- Sweden's ability to turn the skills of *people with foreign backgrounds* to proper account is unacceptably low, and much worse than during the previous growth period of the 1960s.

- *Small businesses in Sweden* are finding it difficult to grow, and the climate for new enterprise is not particularly favourable. This is reflected in the fact that Sweden is at the bottom among OECD countries in terms of number of people employed in small businesses.
- Competition for attention in the world is also intensifying. Sweden is dependent on *how we are perceived* abroad. Our trade, investment and ability to attract foreign labour all depend on how much the outside world knows about us and what perception others have of Sweden as a country. A number of studies show that Sweden is little known abroad – particularly in Asia – and that the image of Sweden tends to be outdated.

The Globalisation Council intends to analyse some of these problem areas in closer detail.

Some preliminary policy conclusions

Globalisation is forcing a shift in basic policy assumptions in a number of important respects.

- In a changing labour market, job security must reside in *people's ability to adapt to changing conditions* rather than in protecting a particular job in a particular workplace. As Gösta Rehn, a famous Swedish trade union economist, put it, true security is “in our wings”. Calls for increased flexibility must be combined with an approach based explicitly on the work-first principle, sufficient insurance and extensive opportunities for further training. The work-first principle needs to be further developed in Sweden to ensure access to further training, retraining and income security for all during transition periods.

- *Entrepreneurship* must be encouraged. Although the major global enterprises will remain important for Sweden, their increasingly tenuous links to the country explain why their role needs to be combined to an ever greater extent with new, dynamic entrepreneurship and conditions that enable smaller businesses to grow. Shorter product cycles and an intensive period of innovation mean old truths about the time needed for a business to grow in the market will not necessarily apply in the future. A major question is how to effectively mobilise Swedish risk capital and Swedish-based owners.
- Fresh attention should be focused on *large Swedish enterprises and on Sweden as a headquarters country*. Given a fruitful environment for dynamic clusters, our large enterprises will continue to play a significant role with regard to research and development (R&D), spin-offs, training in international entrepreneurship, serving as channels to the global economy, and so on. For example, AstraZeneca alone invests 20 times more per year in medical research and development in Sweden than the government allocates to the Swedish Research Council in support of quality approved medical research projects. There has been extensive relocation of Swedish headquarters to other countries, mainly in the wake of business mergers. In the Council's view, where a company is headquartered is important for the country concerned and relocation abroad has gone further than necessary. There is no reason why Sweden should not be a prominent headquarters country, like, for example, the Netherlands and Switzerland, even in the new global environment. Careful consideration should be given to ways of promoting such a development. Sweden could even be of interest as a host country for foreign company headquarters. Governments and agencies must, however, be aware of the reality – that world leading companies,

continually on the lookout for countries and regions with better locations and development prospects, can readily move their base of operations away from Sweden. This is not a case for subsidies, more a matter of providing the right incentives and understanding what large enterprises need in terms of conditions to keep them in Sweden. We are more vulnerable today to decisions, often taken at very short notice, to restructure and relocate operations. The problem requires a more proactive response from all sides, including the government of the country concerned. In the course of the Council's work, examples have arisen of other countries, including EU member states, seeking – with considerably less restraint – to attract important business, a trend our country's government should be actively aware of.

- *To a significant degree, tax decisions must be examined in the light of the question: What impact will this decision have on Sweden's growth and attractiveness?* Although not everything is mobile in the new world, crucial factors are more mobile than in the past. To the latter category belong both capital and highly skilled individuals. Particular attention must be devoted to the tax conditions for entrepreneurial activity. The Government should be cautious about over-taxing the fruits of years of education, training and self-improvement. Unfair taxation disparities between Swedish and foreign ownership should be avoided. There are thus a number of grounds for reviewing the current tax system with a view to ensuring that it provides a sound basis for tomorrow's business sector, is internationally competitive and can finance public services. The earlier comprehensive tax reform in the early 1990s, based on the so-called uniformity principle, has lost much of its impetus. The tax system is in need of a coherent reassessment that will provide a basis for coming reforms.

- *The distribution policy balance must be changed.* There is now less scope for a distribution policy which seeks to redistribute incomes from high- to low-income earners through high marginal taxation and from capital owners to others via high capital taxation. The tax bases are too mobile and the potentially damaging effects on the economy in a wide open world are far too great. Distribution policy should therefore be aimed more at ensuring that all have access to good education and lifelong learning, that life opportunities are provided and renewed and that the road to self-improvement lies open. The proper value of crucial occupations in the care and education sectors must be recognised. Saving and wealth accumulation must not be reserved for the few. Every citizen must be assured access to vital, high quality, efficient welfare services. There must be an adequate social safety net in place to guarantee reasonable compensation to individuals who are unemployed or sick.

- *Sweden should take active steps to attract international skills and expertise.* A tug-of-war for talent is currently unfolding in the new world, with its ageing population. There is fierce competition for leading researchers and business leaders, as well as for many other skilled people: builders, engineers, care professionals and artists. A radical overhaul of our immigration policies is needed in this connection. The ability of a person to contribute much needed skills to the country should be an aid, not a hindrance, to his or her prospects of living and working in Sweden. A new regulatory framework governing labour immigration, adopted with broad political consensus, would be a desirable development. Within the EU, Sweden should actively seek to counter new isolationist tendencies at European level.

World-class Swedish research

The Globalisation Council would like to make a strong statement regarding Swedish *research and development*. This is partly because R&D is a core task for governments and partly because the Government's deliberations ahead of next year's major research bill designed to cover the years 2009–2012 are of crucial importance.

Reliable studies show that public funding for Swedish research has been weakened in the last 10–15 years, particularly relative to other countries. We would call attention to the communication submitted to the Government on 17 August 2007 by the Swedish Research Council, the Swedish Agency for Innovation Systems (Vinnova) and other major research support institutions, calling attention to a decline in financing in recent years. Although it should be noted that the decline was from an initially high level, a weakening has nevertheless occurred, particularly in the medical research field. Furthermore, a substantial increase in the volume of higher education student enrolment has not been fully funded. A justified expansion of higher education has been compelled to draw resources from appropriations intended for research. The decline in real appropriations has also resulted in seriously weakened financing of some of our finest institutions. Research funding will be increased somewhat in 2008, the last year covered by the 2005 Research Bill. Recent years have seen stronger links between research and enterprise – a valuable development.

In the Council's view, it is essential that the government appropriation for civil research and development be raised to at least 1 per cent of GDP. This level has already been surpassed by Finland and Denmark is officially committed to reaching it. Although total Swedish R&D expenditure as a percentage of GDP is still high by international standards, the bulk of funding is accounted for by a handful of major companies. We cannot assume that this will compensate for inadequate public funding in the long term. More importantly, there is a close interplay here: Sweden must maintain world-class research environments at universities and

institutions if it is to be sufficiently attractive for global enterprises to locate a large part of their R&D here. The gap between basic research and enterprise has narrowed in recent years, partly due to the acceleration of knowledge and skills development in areas such as medicine and information technology, and partly because intense international competition is fuelling the chase for unique values, and is always one step ahead.

In today's world, growth is driven increasingly by knowledge. The prominent US economist William Boumol maintains that studies show that as much as 90 per cent of growth in modern times is attributable to new technology and organisation.

There was heartening verbal accord among all the parties represented in the Riksdag¹ on the need to increase government R&D appropriations to 1 per cent of GDP. However, agreement on how this percentage should be defined was less unanimous, both among the parties and in the public debate. There are those who maintain that defence research should be included in the figure. Others count funds allocated to research by local government authorities. Some feel that funding from public foundations and Sweden's share of the EU Research Programme should be included. While all the above standpoints are defensible, what is not needed at present are arguments that serve effectively as excuses for not investing. For the sake of Sweden's future, there must be a clear signal from both Government and the Riksdag of a determination to change direction and a firm commitment to strengthen Swedish research. Such a signal would greatly invigorate the Swedish research community and enhance Sweden's attractiveness to private R&D investment.

It is estimated that government funding for civil R&D, including funding by research foundations, will reach approximately SEK 24 billion in 2008, almost SEK 8 billion below the 1 per cent of GDP

¹ The Swedish parliament.

level. According to the figures in the most recent Budget Bill, which are based on National Institute of Economic Research assessments, GDP is projected to grow by over SEK 500 billion in 2009–2012, the period covered by next year's Research Bill. If the 1-per-cent target is to be achieved and maintained, research appropriations – as defined above – must increase by an additional SEK 5 billion until 2012. This implies a total increase of over SEK 13 billion in current prices.

A tenable strategy for achieving this objective would be to raise the government research appropriation in a series of stages of *15 per cent per year* over the next few years until the target is reached. The same rate of increase was recently decided on by the Irish government. It was also adopted by the US Congress for medical research for the period 1998–2003. At this rate, and subject to variation in GDP growth, Sweden would achieve the 1-per-cent research appropriation target – as defined above – by 2011.

If the strategy is adopted, government R&D allocations will need to be raised by SEK 3.5 billion in 2009, by a further SEK 5 billion in 2010, by yet a further SEK five billion in 2011, and, in order to maintain the level, by another SEK 2 billion in 2012, altogether an enormous boost for Swedish research, at a relatively small cost to the country. An investment of this order would not be unique by international standards. On the contrary, many countries around the world are currently investing heavily in research.

Increased public funding for R&D will not, however, suffice to turn Sweden into a competitive, leading knowledge economy. Universities and institutes of higher education should be given more opportunities to augment government allocated funding by obtaining matching funding from the business sector and private individuals. Universities should also be given a more independent, autonomous standing, partly so they can play a larger role in attracting future funding. This will probably entail a change of legal status.

Tax relief for donations to seats of learning by private individuals and for collaborative projects involving universities and the business community have been shown to work well in many countries. Such encouragement to the research community can attract private resources to higher education institutions and induce research companies, including those based abroad, to locate their research centres in Sweden.

Research appropriations should be increased on all fronts: directly to universities for basic and applied research, via the Swedish Research Council for peer reviewing and via Vinnova for technology- and needs-driven research in close collaboration with forces for innovation in the Swedish business sector. Sweden must maintain a number of world-class research centres with the necessary critical mass. Absolute, not merely relative, size is also important. This explains why an ambitious nation with a comparatively small economy may need to allocate a larger percentage of its GDP to research than bigger countries.

If research is to yield marketable products, it is vital that we strengthen our research institutes. Ergo we must also be able to increase basic financing for this sector. Additional funds are also needed to strengthen the research infrastructure, for example by ensuring access to advanced laboratories. The facilities needed in certain research areas are so expensive that the world can maintain only a few such establishments. Our ability to attract foreign researchers would be substantially enhanced if a new establishment of this kind were to be located in Sweden. It is therefore interesting that the Government is working to secure international support for Sweden's bid to host what will be the world's biggest and most powerful neutron scattering facility, the European Spallation Source.

Alongside the recommended increases in research appropriations, the forthcoming research bill must embody a pronounced

individual-based perspective. It is vital, for example, that sufficient postdoctoral research posts are available. Another consideration is the need to ensure that exceptionally talented young researchers can be more easily appointed to professorships early on, run laboratories in their own names and enjoy considerable freedom of movement. The present qualification system often acts as a brake, with ambitious young researchers either leaving Sweden altogether or becoming professors only at the end of their careers.

It is vital that increased research funding is allocated in such a way that long-term investment is possible. At present, far too much research funding is in the form of short-term project grants, making it difficult to take the kind of risks that long-term research into fundamental questions requires. It is also advisable to concentrate leading-edge research to groups capable of building the critical mass needed to achieve scientific excellence. Sweden should actively promote EU measures to open up national research funding schemes to competition between researchers in all EU member countries.

As regards higher education, there are strong grounds for strengthening incentives for students to complete their studies at an earlier age than at present. The social return to higher education is directly proportional to the number of years worked. Although individuals may have compelling reasons for waiting before entering higher education, progressive tax rates could mean that the private financial return on an investment in a university degree in preparation for working life will be less than the macro-economic return. This could have a distorting effect on the individual's choice. One way of dealing with this would be to reward early completion of higher education via the student aid system. This could take the form of a degree-related bonus awarded if studies are completed on time or more generous study loan repayment terms directly linked to the student's age when taking his/her degree. Regulatory changes of this should be explored, bearing in mind, of course, that courses of study vary in duration. In view of the

current difficulty in persuading applicants to pursue technical and scientific studies, consideration should be given to the possibility of building incentives for these studies into the student aid system. To cite one example, young people admitted to certain universities in South Korea are exempted from two-year military service, a measure which has dramatically boosted interest in such studies.

Level of research and research excellence are aspects of vital relevance to discussions central to our economic policy. In the period prior to 1980, policy was largely determined by a Keynesian emphasis on countering cyclical disturbances in the economy by means of demand policies. Normative thinking has subsequently played a central role: the government's chief task is to maintain a balanced budget and help keep inflation down. Earlier experience of stagflation – high unemployment combined with inflation – lay behind these changes.

The challenges posed by globalisation now call for a stronger emphasis on measures aimed at unleashing the forces of innovation and enhancing our attractiveness. The better we are at stabilising the business cycle and the more successfully public finances and inflation are kept under control, the more effectively the government can focus on promoting dynamic growth in the Swedish economy. Measures to build world-class research and innovation environments are thus a central – not a peripheral – part of the government's task. The working methods applied by the Government and the Government Offices should be overhauled so that organisational structures and processes are consonant with our primary task. A stronger organisation is needed in the Government Offices to monitor international scientific and economic developments. Ways must be devised to break down institutional boundaries between ministries when dealing with strategic issues vital to our future and affecting more than one policy sphere.

The role of central government in relation to the business sector and economic growth

A related issue of fundamental importance is what role central government is to play in relation to the country's business sector and in promoting economic growth. This was thoroughly discussed by the Council members at their first meeting. They unanimously rejected the notion that governments are qualified to 'pick the winners', i.e. to predict which products, which technology and perhaps even which business investments are likely to be successful. The government subsidies to Swedish shipyards and the abortive plans for a giant steelworks in the 1970s taught us a valuable lesson in this respect. The discussion prompted the Council to take a closer look at the issue and to make some useful distinctions. These may be expressed as follows:

1. Central government is primarily responsible for ensuring *good general growth conditions* in the economy. In part, this involves pursuing sensible stabilisation policies. Another key component is a growth-promoting structure incorporating fiscal institutions, labour market policies and the like.
2. Central government can also help strengthen *innovative capacity*. A research programme of the type proposed here is important in this respect, as are more direct efforts to boost seed financing, export subsidies, tax relief for new research-intensive enterprises and so on. The criteria should be partly that this area is not satisfactorily dealt with by the market itself, and partly that central government can help strengthen capacity without creating a situation in which adverse side-effects nullify the gains.
3. Central government must perform its basic tasks to the full. These include striving for a *higher level of education* and ensuring that people have recurring access to training and education throughout their working lives. How well the workforce is trained is a crucial aspect of a country's

attractiveness as a location for business operations. Sweden's prospects reside in its ability to boost the knowledge content of the goods and services it produces. We must therefore aim to improve the quality of our education and to give more people access to university training. Advanced vocational training also needs to be improved and given more prominence. Steps should be taken to ensure that young people both start and complete their university studies at an earlier age. It may also be advisable to try to channel more students into courses and programmes centring on natural science and technology.

4. Any country wishing to be successful must ask itself: *What are we especially good at?* What are our strong points? What strong clusters do we have with growth potential? One reason why this question is so important is that creating something out of nothing is both difficult and time-consuming. Usually, the seeds of growth are already to be found in the environment. In leading the country, therefore, a far-sighted government must be able to determine our strengths, our capabilities and our potential. This means understanding what special conditions various industries operate under – not with a view to guiding or controlling these industries but in order to acquire an accurate picture of what can be done to exploit opportunities and realise potential. One example discussed at the Council's meetings concerned the medical sector. It emerged that the country's university hospitals were not giving adequate attention to the clinical research which is so important both to patients and to the Swedish pharmaceutical industry, and that Sweden's tissue banks and drugs register, which constitute a valuable resource, were not being properly exploited. It would make a difference if central government in both its inquiries and its actions were to bear in mind the business aspects and development potential involved. Another example discussed by the Council concerned the environmental

technology sector. Sweden has gained a good reputation in the international arena as a result of its environment policies and strong commitment to addressing climate change. When combined with the considerable experience and expertise available in this sector, we should be able to raise our profile in the export market.

5. Since it is impossible to predict the future, central government must – besides showing understanding and providing incentives to existing industries and clusters – also create the best possible conditions for the previously unknown, in the form of *innovators and entrepreneurs*. In this connection, a question that arose during the talk by Niklas Zennström, co-founder of Skype, concerned the Swedish tax rules governing personal options. Hi-tech entrepreneurial enterprises with considerable potential but limited cash flow and wage payment capacity must be able to provide key employees with personal options on reasonable tax terms – employees accept low wages now, in exchange for higher wages later if their efforts subsequently help the venture to be a success.
6. Central government has joint responsibility for the existence and growth of *strong regions*. It is clear that the Stockholm region is important for the whole country, but other regions have also become significant engines of growth. It is interesting to note that the strong demand for Swedish products brought about by globalisation has generated new faith in the future in large areas of northern Sweden. There is every reason to exploit this development potential to the full.

Conclusion

Globalisation does not preclude or render meaningless politics at the nation state level, any more than it does away with geography. Far from it! National policies – and thus the actions of

governments – continue, and will continue, to be extremely important. To some extent, however, the conditions governing sound policy-making as well as its aims are changing. The country is in a situation somewhat akin to that in which municipal and county council leaders have long been accustomed to working: though their power to influence events and developments in the outside world is limited, when it comes to ensuring that their own region can turn its inherent advantages to account, there is considerable scope for action. Certain issues – research, education, skills development and further professional training, the government's own competence and probity, a growth-promoting tax system – are more important than ever since they have a direct impact on a country's comparative attractiveness.

In the Globalisation Council's view, Sweden's prospects at this point in time are highly exciting and promising. Viewed in a wider historical perspective, the world is undergoing its third major phase of trade expansion in modern times.

- The first phase lasted from about 1870 to 1914.
- The second began after the second world war.
- The third phase is taking place right now. It is marked by China's and India's entry onto the world economic stage, the liberation of Eastern and Central Europe and the communications revolution, which is breaking down national borders and facilitating direct investment.

The period between 1914 and 1945 was dominated, with disastrous consequences, by narrow nationalism, fascism, bolshevism and protectionism.

Sweden emerged a winner from the first and second phases of liberalisation and trade expansion. We successfully combined favourable world conditions with our own entrepreneurial spirit and a policy that took full advantage of the opportunities before us. It happened at the end of the 1880s thanks to a judicious combination of liberalisation and active government measures to promote

railway investment, legislation on limited liability company, the banking system, school expansion, etc. under the leadership of the liberal minister for finance J. A. Gripenstedt. It happened after the second world war through a combination of measures: affirmation of free trade, extensive structural change with active trade union support, and Tage Erlander's strong belief in research and education.

We are firmly convinced that Sweden is now in a similar situation. The world is opening and tremendous new opportunities are emerging. Northern Europe no longer lies on the periphery but has become a large, dynamic region. If we are able to see and, by means of sound, judicious policies, seize these opportunities at least as well and preferably better than others, our country has an excellent chance of benefiting once more from a powerfully accelerating process of international integration. Success is not a given, but depends very largely on how much insight and foresight government policies can bring to bear.

Why is it important? A conventional answer is that success will lead to more well-paid jobs, greater prosperity and the ability to afford better public services. This is true, but there are also other answers that go deeper. If we succeed, our country will be more enjoyable to live in, more dynamic, more exciting, more open and positive both in spirit and outlook – including in our relations to 'foreigners' and those who are different from us. A country in a state of strong, healthy growth is a country where people can feel pride and confidence in themselves, in their ability to rise to challenges and grasp opportunities, and in their society. They can look forward to the years ahead with hope and expectation rather than apprehension and unease. These are facets of society that cannot be expressed in figures. They can only be felt in the pulse of life.

Statements of opinion

The following statement was issued by the Government members of the Globalisation Council on adoption of the present report: We fully endorse the substance of the present report, but are unable in this context, to commit ourselves to specific budget allocations or certain other details that will ultimately be a matter for the Government to decide.

Wanja Lundby Wedin has noted in a separate submission that she endorses the report, with the exception of the paragraphs on tax, distribution policy and job security.