OECD Territorial Reviews

SKÅNE, SWEDEN

Contents

Chapter 1. Regional trends and challenges in Skåne
Chapter 2. Boosting innovation in Skåne
Chapter 3. Building a more efficient and cohesive regional labour market in Skåne
Chapter 4. Nurturing a high-quality living environment in Skåne

Please cite this publication as:

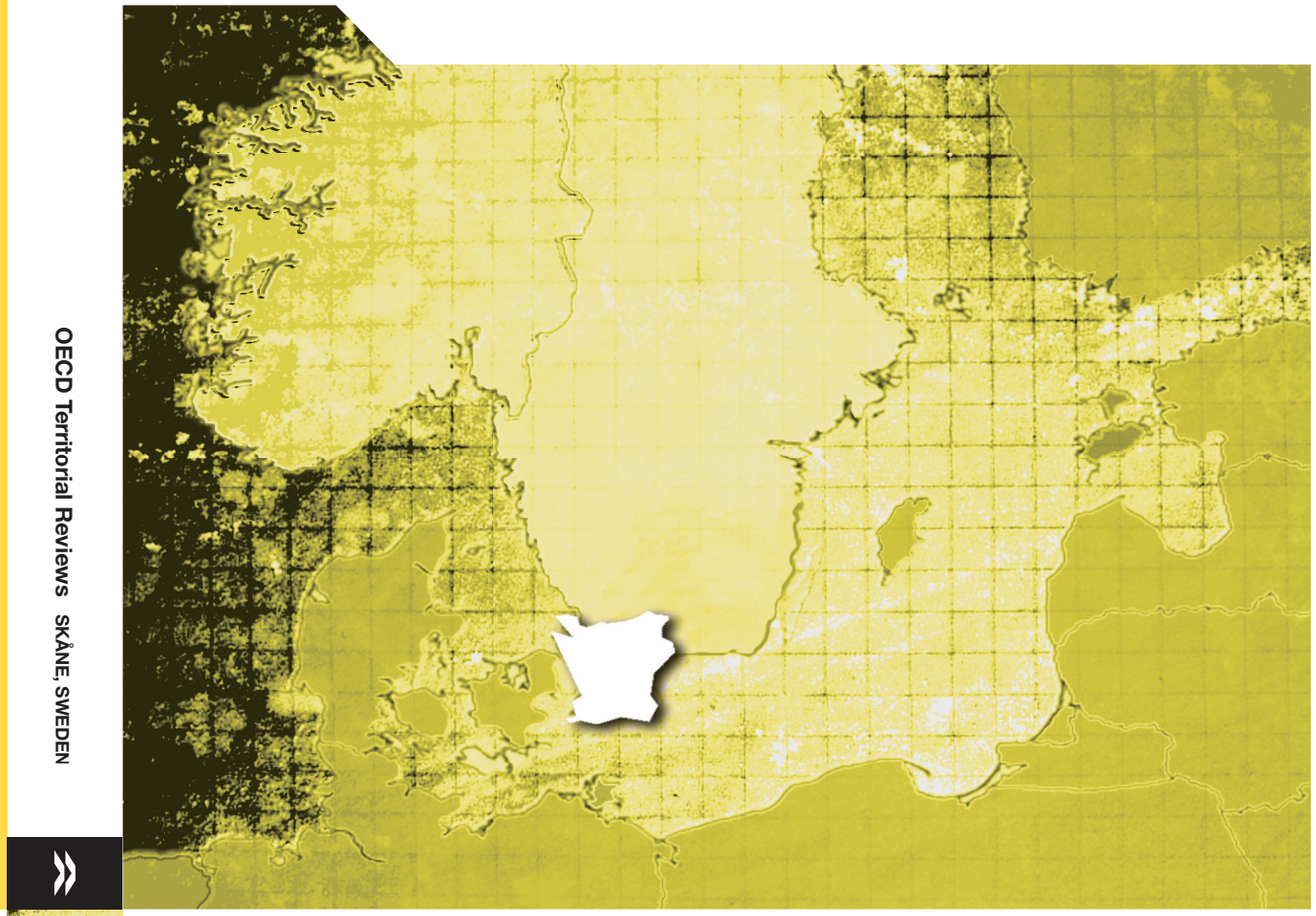
OECD (2012), *OECD Territorial Reviews: Skåne, Sweden 2012*, OECD Publishing.
http://dx.doi.org/10.1787/9789264177741-en

OECDpublishing
www.oecd.org/publishing

With the financial assistance of the European Union

ISBN 978-92-64-17750-5
04 2012 08 1 P

OECD Territorial Reviews SKÅNE, SWEDEN



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OECD (2012), *OECD Territorial Reviews: Skåne, Sweden 2012*, OECD Publishing.
http://dx.doi.org/10.1787/9789264177741-en

ISBN 978-92-64-17750-5 (print)
ISBN 978-92-64-17774-1 (PDF)

Series: OECD Territorial Reviews
ISSN 1990-0767 (print)
ISSN 1990-0759 (online)

European Union
Catalogue number: KN-30-12-628-EN-C (print)
Catalogue number: KN-30-12-628-EN-N (PDF)

ISBN: 978-92-79-25029-3 (print)
ISBN: 978-92-79-25028-6 (PDF)

Corrigenda to OECD publications may be found on line at: *www.oecd.org/publishing/corrigenda*.

Foreword

Regional economies are confronting momentous changes. The globalisation of trade and economic activity is increasingly testing their ability to adapt and maintain their competitive edge. There is a tendency for income and performance gaps to widen between and within regions, and the cost of maintaining social cohesion is increasing. Rapid technological change and greater use of knowledge are offering new opportunities for local and regional development but demand further investment from enterprises, re-organisation of labour and production, more advanced skills, and environmental improvements.

Amid this change and turbulence, regions continue to follow very different paths. Some regions are doing well and are driving growth. Others are less successful at capturing trade and additional economic activities. Many territories with poor links to the sources of prosperity, afflicted by migration and ageing, and lagging behind with respect to infrastructure and private investment, are finding it difficult to keep up with the general trend.

At the same time, central governments are no longer the sole provider of territorial policy. The vertical distribution of power between the different tiers of government needs to be reassessed, as does the decentralisation of fiscal resources, in order to better respond to the expectations of citizens and improve policy efficiency. Public authorities need to weigh up current challenges, evaluate the strategies pursued in recent years, and define new options.

Responding to a need to study and spread innovative territorial development strategies and governance in a more systematic way, the OECD created the Territorial Development Policy Committee (TDPC) in 1999 as a unique forum for international exchange and debate. The TDPC has developed a number of activities, including a series of *Territorial Reviews*. These studies follow a standard methodology and a common conceptual framework, allowing countries to share their experiences and disseminate information on good practices.

Acknowledgements

The OECD Secretariat would like to thank the authorities of Region Skåne. The OECD is particularly grateful to the Skåne local team, particularly Gunne Arnesson Löfgren and Annika Atterwall whose management and co-ordination in gathering background information, organising field missions and facilitating the work of the OECD Secretariat were invaluable in the production of this review. Christian Lindell, Richard Gullstrand, Jan Lindelöf and Anna Bjärenlöv also provided important contributions. The Secretariat would also like to thank the various authorities and actors from the public and private sectors, civil society and academia who participated in the meetings conducted during the study missions in Skåne. The Secretariat is grateful to Mr. Sverker Lindblad, from the Ministry of Enterprise, Energy and Communications of Sweden, for his role on behalf of the national government, to Mr. Somers Fry, for his help in co-ordinating input from the PES, and to the staff of Statistics Sweden for the provision of detailed statistical information.

The OECD would like to thank the two OECD countries that served as peer reviewers through the participation of Linco Nieuwenhuyzen (Strategic Advisor, Brainport Development regional development agency, the Netherlands), and Randy McLean (Acting Director of the Strategic Growth and Sector Development of the Economic Development and Culture Division, City of Toronto, Canada). Lastly, Region Skåne would like to thank the European Regional Development Fund, for their contribution to this review.

This review was co-ordinated by Soo-Jin Kim under the supervision of William Tompson, Head of the Regional Economics and Governance Unit of the OECD Regional Development Policy Division within the Directorate of Public Governance and Territorial Development. The review was drafted by a team composed of Soo-Jin Kim and Emily Farchy of the OECD Secretariat. Claire Nauwelaers provided an external contribution on innovation. Erin Byrne co-ordinated the publication process and Jennifer Allain prepared the review for publication.

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Acronyms

CAB	County administrative board
ESS	European Spallation Source
FIRS	Skåne Research and Innovation Council
GDP	Gross domestic product
HEI	Higher education institution
ICT	Information and communication technology
MVA	Medicon Valley Alliance
NTBF	New technology-based firm
R&D	Research and development
RTD	Research Technology Development
RUP	Regional Development Programme
SBH	Sustainable business hub
SCTI	Sweden Cleantech Incubator
SFIN	Skåne Food Innovation Network
SIS	Sounding Board for Innovation in Skåne
SME	Small and medium enterprise
VINNOVA	Swedish Agency for Innovation Systems

Assessment and recommendations

A successful region, Skåne must nevertheless overcome a number of challenges to realise its potential

Skåne occupies a strategic location at the gateway to northern Europe and has made a solid contribution to Swedish growth. In the years prior to the crisis (2000-2007), Skåne contributed 12% of aggregate Swedish GDP growth, behind Stockholm and Västra Götaland. Immediately prior to the crisis, as growth in the rest of Sweden began to decline, economic growth in Skåne accelerated, rising from just under 4.5% in 2005-2006 to over 7.1% in 2006-2007, though this promising trend was reversed when Swedish growth began to fall in 2008. Skåne was particularly hard hit by the downturn, but made a relatively quick recovery in 2009.

Despite strong performance relative to other OECD regions, Skåne's aggregate growth performance masks a weak performance at the per capita level relative to the rest of Sweden. At 2.46% over the 12 years prior to the crisis, per capita growth in Skåne has not kept pace, neither with growth in Stockholm and Västra Götaland, nor with the nation as a whole, and lags behind not only the national average (which is elevated by strong growth in Stockholm) but also by the average of Swedish regions.

Population inflows mean that the region must run to stand still

Sclerotic per capita growth in Skåne stems largely from the substantial population flows that ensure that – in per capita terms – the region has had to generate stronger aggregate growth than most regions just to keep per capita GDP rising. These inward population flows show up also in employment figures. The region has historically exhibited low employment rates and, in 2010, the employment rate of 74% was the lowest among Swedish regions, even after adjusting for the large number of inhabitants who commute daily to Denmark across the Öresund Bridge. Nevertheless, the proportion of the working-age population in Skåne not currently in work but continuing to seek it was the highest among Swedish regions. This

implies that those out of work are not as quick to exit the labour market as in many OECD regions and suggests that there is considerable room to increase the employment rate.

Skåne's universities make a substantial contribution to the nation's graduate output (15%), which translates to a high proportion of tertiary-educated labour in the region. Yet the region is also characterised by a sizeable number of individuals with only an elementary level education – 16% in Southern Sweden compared to just 13% in Stockholm. These educational disparities have implications not only for equity – they exhibit a strong pattern of passing from generation to generation – but also efficiency, and must remain a focus as the region aims to increase productivity in the service and innovation sectors in which it is becoming increasingly specialised. Less than 7% of newly created enterprises in Skåne originate from those with only a compulsory education – the lowest proportion in Sweden.

Skåne has distinguished itself as one of the most innovative regions in the OECD. It has high educational attainments overall and has, in the past decade, increasingly moved into high-skilled sectors. Yet this success should not be taken for granted. The region is not yet realising its full potential along a number of tangents. Strong performance in innovation is not on par with employment generation and growth. A young and diverse labour force has struggled to find jobs appropriately matched to their skills, and the region risks failing to capitalise fully on large-scale investments, such as the Max IV and ESS facilities for materials research, which are to be among the largest research facilities in Europe. While the region has been very successful in identifying its shortcomings, and strategising about how to address them, there remains room for improvement when it comes to implementation.

Skåne can do more to use its innovation strengths to enhance growth and employment generation

Classed by the OECD as a "knowledge and technology hub", Skåne boasts a highly developed innovation strategy, a significant degree of R&D expenditure (nearly 5% of GDP), a strong academic presence and substantial reserves of highly trained researchers and employees. In terms of innovation inputs, the region is second to none. Efficient implementation of the recently adopted "smart specialisation" strategy, in order to harness tangible innovation outputs and spread their benefits – in the form of enhanced growth and employment generation – must be the region's priority moving forwards.

Better monitoring and evaluation are needed to support evidence-based implementation

Clearly defined and tangible goals are a necessary first step in order to identify the aims of innovation policy. Appropriate data generation and monitoring are necessary in order to fine-tune the policy toolbox on the basis of accrued experience, assessing the impact of policy initiatives based upon their contribution to strategic goals. Precise and comparable data on innovation inputs and outputs, on cluster size, dynamics, and partnerships, on innovative start-ups – their profitability, growth and employment – are not yet available at the regional level. A first step will be a complete picture of ongoing initiatives, but in addition, data generation will need to be at the heart of innovation policy implementation as well.

Measuring the value-added of policy initiatives in order to provide evidence-based justification to continue and scale-up those with good results – and to wind up those that do not pay off – remains a key challenge in Skåne. Clearer measures of success would reduce uncertainty and enable a higher degree of continuity among successful projects. At the same time, evaluations of project impacts would help the actors who constitute the region's intermediary support system to identify bottlenecks in the system and ensure complementarity between the actions of various intermediaries' thereby better aligning the goals of the strategy with the tangible steps to achieve these goals.

Skåne can do more to promote trans-cluster and cross-border innovation

Cross-fertilisation of knowledge and experience represents a fruitful avenue for "entrepreneurial discovery". This cross-fertilisation may take place along two axes. First, trans-cluster cross-fertilisation should focus policy on supporting experimentation and developing expertise at the interface between regional clusters – such as food, life sciences, and mobile media. The Skåne Food Innovation Network provides a good template for potential initiatives along these lines.

In the second place, policies aimed at trans-border cross-fertilisation must focus on international exchange of ideas, technologies and business practices. The cross-border Öresund Region hosts 38% of combined Swedish and Danish R&D expenditures, but larger international flows of researchers, workers and students will be necessary if the region is to attain the diversity in skills and experience required of a top technology region.

Skåne's relatively diverse population may represent an untapped asset for cross-fertilisation of ideas within the wider region. However, the recent increase in tuition fees for overseas students, as well as the slow recognition of qualifications achieved overseas, may impair the regions' capacity to make the most of this asset.

Greater private sector involvement in the innovation system is needed

The main challenge facing the region is to create value from its substantial innovation assets. Putting businesses firmly at the centre of the strategy will contribute to a more intense focus on the potential for profitability resulting from innovation initiatives and will help strengthen the links between innovation and entrepreneurship, without which many of the fruits of Skåne's innovation success are likely to be harvested elsewhere. Increasing the share of private funding of cluster initiatives is a clear way to raise private sector involvement and utilise its investment expertise. The involvement of private sector actors in the development of the regional innovation strategy is a positive step in this direction. And the private sector must remain at the heart of the process, driving not only strategy development but also review, and above all implementation.

Skåne should pursue a dual-track innovation strategy

The innovation strategy should proceed along two tracks. Responsibility for the first, "technology push", track of innovation policy – the continued support to higher education institutions and technology transfer mechanisms – will remain primarily the preserve of national policy instruments. Regional policy should focus on a second track, aimed at enlarging the base and strengthening the impact of regional innovation.

Enlarging the base of innovation will require policies aimed at increasing the number of actors engaged in innovation. This will include escalating the involvement of small and micro enterprises in the innovation process, as well as supporting innovation in the public sector – a crucial priority at a time of population ageing, fiscal tightening and rising costs for key public services – and non-technological innovation. At the same time, regional policy must focus on strengthening the impact of innovation, in terms of both growth and employment generation, by fostering small-firm growth.

Labour-market policies must be seen as a key component of structural growth policy

Skåne has been successful in attracting substantial population inflows – both from the rest of Sweden and from overseas. However, this demographic dynamism has not always translated into economic dynamism, and the region has often underperformed at the per capita level as a result. National policy retains a heavy focus on short-term measures to ameliorate unemployment, such as employment subsidies, which account for 59% of expenditure on active labour market policies, compared to an OECD average of just 31%. There is a strong role for regional policy, therefore, in promoting more dynamic forward-looking policies to encourage firms to hire workers in sustainable positions. Such policies could include training and apprenticeships – both with a strong element of private sector involvement to ensure job-readiness and the appropriateness of skills – as well as targeting those groups that face particular challenges in the labour market – migrants, women and youth.

More can be done to realise migrants' potential contribution to Skåne's prosperity…

National legislation aimed at the integration of migrants is highly developed in Sweden, which is the highest-ranking country on the Migration Integration Policy Index. Nevertheless, substantial disparities in labour market access and performance are still manifest, and annual wages among workers of non-OECD origin remain substantially below those of their native colleagues with an equivalent level of education. This disparity ranges from a native worker premium of EUR 5 600 per annum among secondary educated workers to a premium of EUR 12 346 per annum among postgraduate educated workers. Regional policy must focus on the less tangible barriers to migrant integration, acceptance and insertion into the labour market. Such policies may include promoting social cohesion, enhancing recognition of foreign credentials among private sector employers, and working with local firms in order to best understand how they could tap in to migrant potential.

Population flows to the region, already characterised by an uneven density, are centred on the cities of Malmö and Lund. The region faces a challenge in integrating these new populations, as well as ensuring that they find productive employment and that their skills are utilised and enhanced. On the whole, most of the new arrivals appear to be less productive than

those already settled in the region; this is not by any means a problem, and their presence is still good news in economic terms, as long as they are more productive in Skåne than in their places of origin. However, if Skåne is to avoid the growth of a very large pool of low-productivity labour, it must ensure that the productivity of these new arrivals rises rapidly, so as to bring them closer to the higher productivity levels of the established population. In short, Swedish and foreign migrants to Skåne are destined to become either an asset or a burden over the long run: which they become depends, to a large degree, on public policy.

...and to facilitate school-to-work transitions among youth

Tackling youth unemployment and facilitating school-to-work transitions have become critical questions in Skåne in the wake of the crisis. Youth employment rates are between 20% and 30% lower than total employment rates, and the region contains a large youth population. There is a strong relationship between the length of unemployment and the difficulty in returning to work, such that if youth are not re-integrated into the labour market, the crisis risks doing very long-term damage to both economic performance and social cohesion in Skåne. National measures, such as youth job guarantees, can be complemented at the regional level not only with steps to boost educational attainment but also efforts to better match those skills supplied in the school system to those demanded in the private sector. This will require collaboration between local government, schools and the private sector to ensure that vocational education and training courses generate job-ready graduates. Private sector input can include, but need not be limited to, input into course content, contribution towards specialised equipment and provision of apprenticeships.

In addition to matching skill supply and demand, matching demand with demand is also critical. That is, matching the skills demanded by students – and their aspirations – with those skills that will help them given the opportunities in the labour market. Career guidance and mentoring will be an important element of this, and identifying and developing career ladders and pathways, right across the skill distribution, can engender more far-sighted aspirations at the same time as freeing up entry level jobs for the coming cohorts.

Skåne could benefit from expanded labour markets

To ensure inclusive growth in the context of a growing population, Skåne must work both to widen and to deepen its labour markets. Opportunities to widen the region's labour markets lie both to the west and to the east. To the west, labour market integration across the Öresund could represent an important expansion in labour market opportunities for Skåne's workers – particularly in the context of the substantial investment in infrastructure planned in East Denmark. As the population ages on the Danish side of the border and the gap between those leaving the workforce and those entering it widens, the younger working population on the Skåne side may find a welcoming labour market, particularly as bottlenecks to integration, arising from legal, fiscal, and regulatory disparities are addressed. Opportunities to widen labour market integration may also arise to the east, where value chains are longer, but decisions about further integration must be based on close analysis of functional markets and potential complementarities and synergies.

Opportunities to deepen the region's labour markets are twofold. In the first place, Skåne should aim to capitalise on its strong innovative environment, expanding its entrepreneurial base. Substantial regional investment in the promotion of entrepreneurialism has rendered Skåne one of the most dynamic Swedish regions in terms of the proportion of newly created enterprises in total enterprises, but the region has the smallest proportion of firms created by those holding no more than compulsory education. Policies to promote innovation among a more extensive base of potential entrepreneurs, through training and enhanced access to capital for migrants, women and youth, would help to deepen regional labour markets, providing more employment opportunities for the region's expanding population. A second opportunity to deepen local labour markets lies in the region's ability to attract skilled international workers, providing an attractive environment to encourage them, and their families, to locate in the region.

Promoting Skåne as a smart and healthy place to live, work, and visit

To achieve its aim of becoming a vibrant and innovative regional hub, Skåne must focus on integrating innovation, labour market and business environment policies, attracting high-skilled individuals and retaining and developing innovative start-ups and micro-enterprises. This will require,

inter alia, that the region build on existing strengths in the provision of housing, in the use of sustainable energy and in enhancing connectivity.

Ensuring adequate and inclusive housing provision is a necessary pre-requisite if Skåne wishes to attract and retain international workers across the skill spectrum, to encourage the workers of MAX IV and ESS to raise their families locally (rather than commuting across the Öresund, for example) and to contribute to the dynamism of the economy. In the context of population growth, housing in Skåne has become relatively scarce: in 2009 only one apartment was built for every ten new people to arrive in the region. However, Region Skåne has limited influence over the national policies that underpin this scarcity. Nevertheless, Skåne will need to find ways to overcome the constraints imposed by difficulties in farmland conversion by facilitating brownfield development and will at the same time need to address the increasing segregation of the population; some 46% of Skåne's population live in neighbourhoods with a homogeneous native-born Swedish population and 18% live in neighbourhoods with a high concentration of people born outside the OECD.

Skåne is in a strong position to remain at the forefront of sustainable energy use. It is leading the way in green public transport and has committed to ensuring that city buses are fossil-fuel free by 2015 (regional buses by 2018). However, given the proportion of journeys still made by car in the region expansion of public transport infrastructure should not be lost from the agenda in promoting a greener Skåne. Moreover, while the region currently consumes less energy per capita than the national average, a large share is used in public places and homes – two areas among those with the largest savings potential. There remains considerable scope to improve the region's record still further. The region should use this opportunity to work with the region's clean-tech cluster, using public procurement to support regional innovation encouraging sustainable public procurement in municipalities.

Enhancing transport links and increasing the ease of commuting will be central to the provision of an efficient working environment. Many private firms have pointed to difficulties in attracting workers from outside the immediate vicinity of the workplace and would like to see improved connectivity among the different parts of Skåne, so as to facilitate the formation of larger effective labour markets. To assuage the risks of "leaking by linking", whereby improved connectivity leads to increased exit of firms and workers from a region, infrastructural investments will need to be pursued in conjunction with integrated regional policies focused on raising human capital levels, promoting the business climate and enhancing the cultural life of Skåne's more rural regions. Better connectivity combined

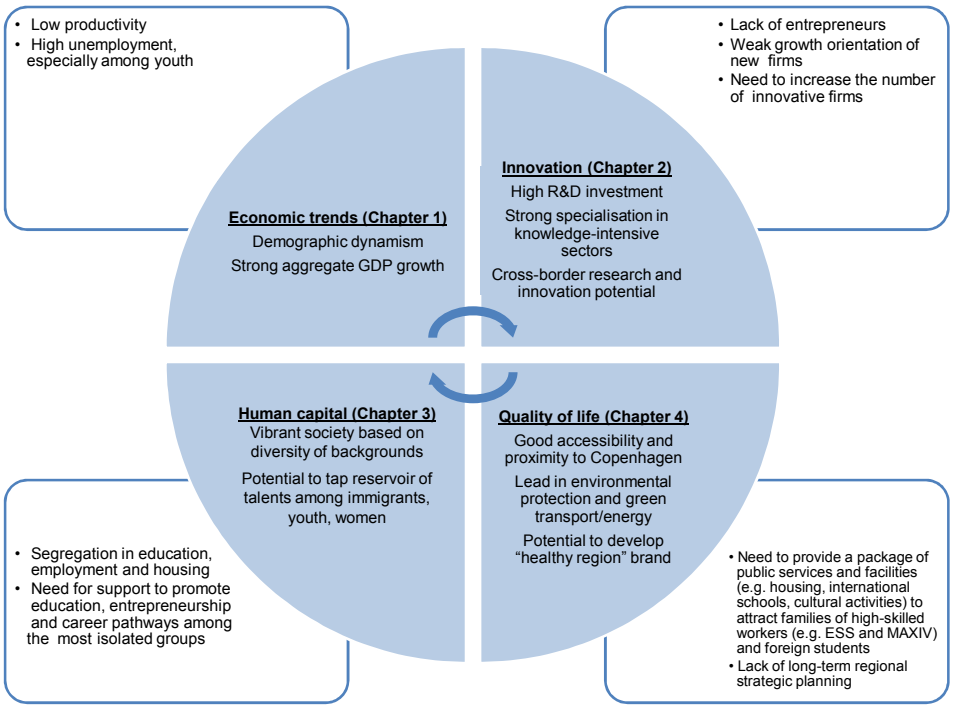
with a better entrepreneurial and living environment can pay substantial dividends.

Tourism is a relatively minor sector in Skåne. Nevertheless, there remains scope to increase the employment and tax revenues generated by the sector. To remain sustainable in the long-term without depending on public funds, Skåne's cultural assets will need to attract larger numbers of foreign visitors to the region. One potential avenue would be to brand the region as a healthy destination, building on the region's strength in the food industry. Although tourism is unlikely to become a major growth driver for Skåne, the public and private investments in cultural and landscape amenities associated with a growing tourism sector could bring significant benefits, as they would also make Skåne a more attractive place to live and work.

Tap the endowments of a growing population, a strong innovation architecture, and a healthy environment to enhance growth. The way forward….

Skåne is without doubt well placed to become one of the OECD's most competitive regions. Its strong innovation potential provides a sound base from which to engage with the global economy as emerging markets contribute to increasingly sharp competition in manufactured goods. Nevertheless, the region cannot afford to become complacent in this niche. The knowledge-creation sector is the target of many OECD regions and Skåne will have to build on all its assets, fully realising their potential as well as their complementarities, if it is to maintain its prominent position. Building on the strengths of the region, and projecting this brand abroad will require a co-ordinated approach – co-ordinated across sectors and across the Öresund Region.

Figure 0.1. **Summary of main strengths and challenges addressed in the *OECD Territorial Review of Skåne***



Chapter 1

Regional trends and challenges in Skåne

Substantial population inflows have meant that, in terms of per capita growth and employment creation, the region of Skåne has had to run to stand still. Nevertheless, a strong innovation sector, a relatively young labour force and high stocks of human capital ensure that the region is well placed to capitalise on these inputs over the coming years. This chapter presents an overview of recent demographic, economic, and social trends in the region, setting them in both a Swedish and an international context. It attempts to get behind the drivers of these trends, with a closer look into productivity and human capital as well as innovation and entrepreneurialism in the region. This chapter presents evidence of a series of policy challenges for the region – challenges relating to innovation, social cohesion and the environment – to which key recommendations are outlined in subsequent chapters.

Country profile of Sweden

Area (square kilometres):	410 313
Population:	9.38 million (2010 Census)
Form of state:	Unitary state with a constitutional monarchy and parliamentary democracy
Political system:	Executive branch headed by Chief of State (the King) and Prime Minister (elected by the Parliament); judicial branch with Supreme Court as the highest tribunal; and legislative branch with directly elected unicameral Parliament
Monetary unit:	Swedish krona

Economic trends

GDP (at current prices and current PPPs; USD millions, 2010): 365 969

Real GDP growth (% change, 2009 prices): 5.2% (forecast for 2011: 3.9% and 2010: 3.4%)

GDP per capita (USD current prices at current PPP, 2010): 39 024

Unemployment rate: 8.4% (2010; forecast for 2012: 7.5%)

Trade (as % of GDP): 93.9% (2010)

Trade in services (as % of GDP): 24.5% (2010)

Public finances (2009)

Share of sub-central governments in total public expenditures: 47.5%

Share of sub-central governments in total public revenues: 38.0%

Share of sub-central governments in total public investment: 54.2%

Territorial and institutional framework

Sweden has a two-tier system of sub-national government:

– 20 counties (*län*) at Territorial Level 3 (TL3) are run by directly elected assemblies (county councils) and mostly responsible for health services (80% of budget). They may also promote culture, education and tourism. The responsibility for regional and local public transport is shared between the municipalities and the county councils.

– 290 municipalities (*kommuner*) are responsible for basic and secondary education, kindergarten, elderly care, social services, communications, environmental protection, fire department, public libraries, water and sewage, waste management, civil defence, public housing and physical infrastructure.

Basic statistics for Skåne Region

Land area (square kilometres):	11 035
of which agricultural land	48%
forest	35%
built-up area	10%
Population (2011):	1.2 million
% of national population	13.2%
Population growth:	0.77%
of which net births	39.9%
Net immigration	51.8%
Internal migration	8.9%
Regional GDP (2008 current prices, current PPPs; USD millions):	41 832
GDP per capita (current prices, current PPPs; USD, 2008)	34 878
Tax revenue (USD, thousands, 2010):	164.8
Employment rate (2010):	73.9%
Proportion self-employed	10.4%
Proportion paid employees	89.6%
Unemployment rate (2011)	8.8%
Share of national tertiary degrees conferred each year (2009)	15%
R&D expenditure (% GDP, Southern Sweden)	4.9%
Average commuting distance (2009)	12 kilometres

Introduction

Relative to comparable regions across the OECD, the economy of Skåne is doing well. The region has made a strong contribution to national growth over the past ten years and the economy is already showing signs of recovery following the impact of the financial crisis.

To provide a thorough investigation of these trends and the underlying realities that are driving them, Chapter 1 is organised in the following way. It begins, in Section 1.1, by putting Skåne in context – starting with the national context before turning to the regional context. Section 1.2 outlines the recent economic trends and performance of the region, examining the region's growth experience and the performance of labour markets. This section highlights the economic trajectory of the Skåne Region in relation to other regions within Sweden; it also draws comparisons from across the OECD. Skåne was hit hard by the crisis, but recent regional GDP and labour market figures have suggested a resilience indicative of strong fundamentals. Section 1.3 then delves into the factors behind these trends which among Skåne's many resources are driving growth and defining labour markets: productive and highly skilled workers, and a climate fostering entrepreneurship and innovation. Finally, Section 1.4 points towards some challenges facing the region. Challenges in terms of innovation monitoring, promoting social cohesion, and maintaining an attractive environment, that will be further developed in Chapters 2, 3 and 4.

1.1. Skåne in context

The national context: Sweden

Sweden was well prepared at the onset of the crisis; it was hard hit but has made a quick rebound

Sustained output growth over the past decade coupled with strong productivity performance, low, stable inflation and a strong fiscal position ensured that Sweden went into the current crisis in a relatively strong position. Real GDP growth had outpaced both that of the United States and that of the euro area every year since the early 2000s (Figure 1.2) and Sweden's fiscal position, significantly stronger than those of the United States or the euro area countries, ensured that discretionary fiscal stimulus was available to support automatic stabilizers when the crisis hit.

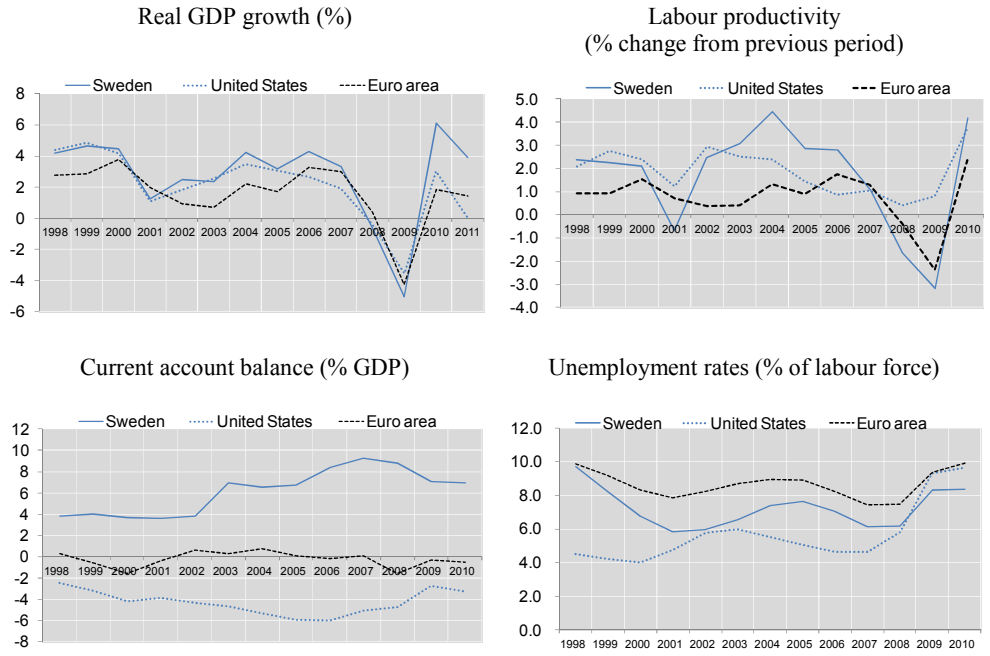
Figure 1.1. **Map of Sweden**

Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Region Skåne.

Nevertheless, the Swedish economy suffered a major contraction and, with a fall in output of around 7.5% from peak to trough, was among the worst hit in the OECD (Box 1.1). Through extensive foreign trade and international financial markets, Sweden is deeply embedded in the international economy and as a result, external demand, as well as worldwide growth expectations, had a substantial impact on Sweden's exports as well as export-dependent business investment. At the same time,

Figure 1.2. **Sweden's economic performance in the face of the crisis**



Notes: Based on national employment surveys and hence subject to differences in definitions across countries and to many breaks in series, though the latter are often of a minor nature.

Source: *OECD Economic Outlook* (database).

unemployment rates began to rise in 2009 as the crisis deepened. However, in part due to structural reforms to labour markets in recent years, the impact of the crisis on employment, unemployment and labour force participation has been significantly less severe than that during the recession of the early 1990s and Sweden has been among the first countries to experience a rebound in employment.

Box 1.1. A repeat of the early 1990s recession?

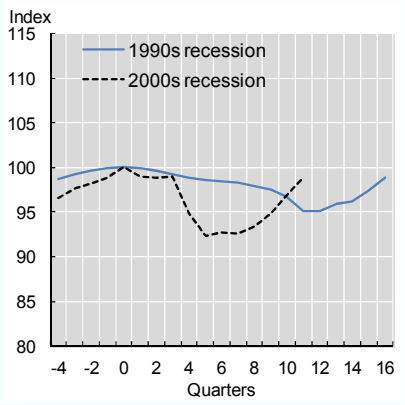
Sweden's recession, with its financial sector problems, was superficially reminiscent of the severe recession in the early 1990s, when banking sector problems were associated with a decline in GDP of 5% from peak to trough (see Figure A below).

However, beyond this the two recessions have been quite different. The early 1990s recession, while influenced by a downturn in foreign activity, was largely driven by domestic developments: a housing and commercial property boom contributed to problems in the banking sector, while reform lowering capital income tax encouraged saving and weakened demand. In contrast, the recent recession has mainly been driven by external factors: the severe downturns in all major OECD economies leading to a sharp fall in Swedish exports (see Figures B and C below). In addition, problems in the Baltic countries and difficulties in international funding markets hurt the Swedish financial system. This led to a deferral of investment as households and businesses waited to see how financial events unfolded.

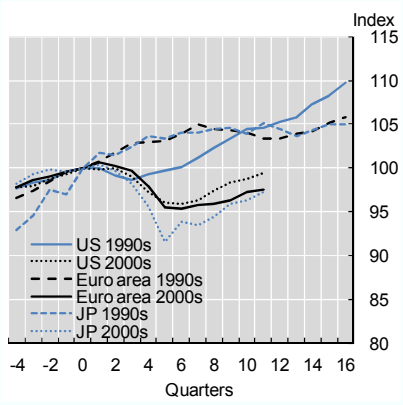
Aside from capital injections and guarantee programmes to support the financial sector, policy responses to the two crises have also been quite different. In the recent recession, the central bank (the *Riksbank*) aggressively lowered repo rates after the Lehman Brothers bankruptcy, helping to revive GDP growth while, during much of the 1990s crisis, monetary policy was constrained by an inflexible exchange-rate regime, which resulted in high interest rates (see Figure D below). In the downturn of the 1990s, the fiscal stance eased substantially more than in the recent downturn yet the export-led recovery only occurred once the krona was devalued in late 1992 and interest rates were eased.

Contrast between Sweden's recession of the early 1990s and that of the late 2000s

A. Real GDP



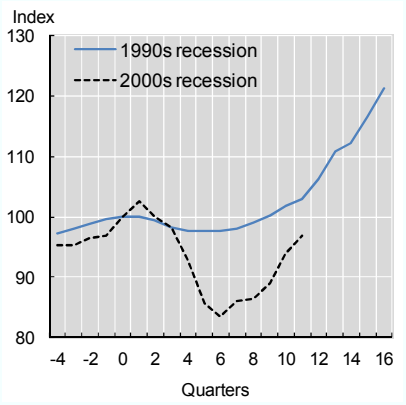
B. Major economies' real GDP



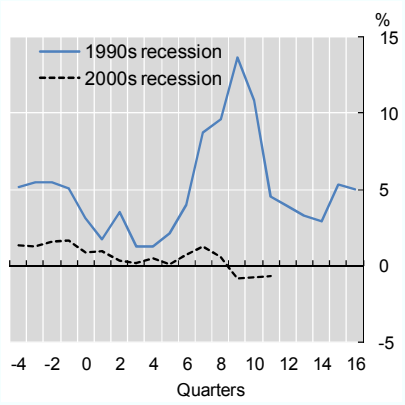
Box 1.1. **A repeat of the early 1990s recession?** (*cont.*)

Contrast between Sweden's recession of the early 1990s and that of the late 2000s (*cont.*)

C. Exports



D. Real short-term interest rate



Source: Modified from OECD (2011), *OECD Economic Surveys: Sweden 2011*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-swe-2011-en*.

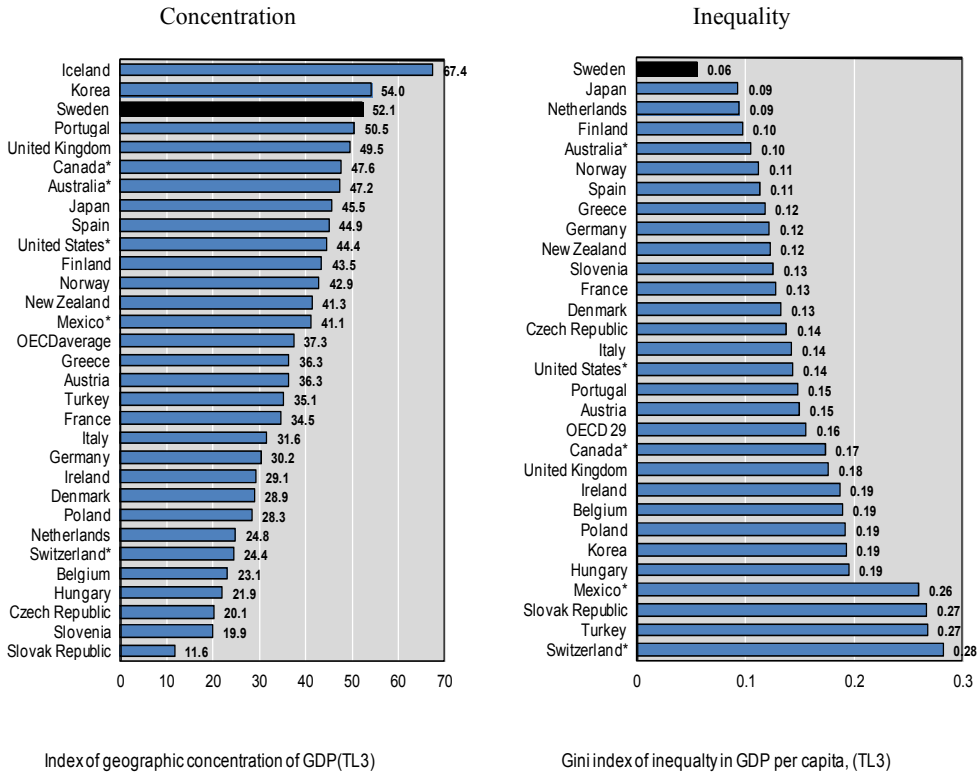
Sweden's quick rebound following the battering of the financial crisis attests to the success of the reforms implemented in response to the crisis of the early 1990s. However, challenges remain if the economy is to take full advantage of growth opportunities. Unemployment rates among youth, the low skilled and immigrants remain high. These groups were the hardest hit by the crisis. If they are not able to rejoin (or in some cases join) the labour market, they risk adding to the structural unemployment of the Swedish economy, creating a long-lasting burden. The concentration of R&D investment and patent applications, both geographically and in a few large firms, represents a second challenge, leaving employment in the R&D sector dependent to a considerable extent on external decisions (see Chapter 2).

Sweden is characterised by an uneven distribution of population and economic activity.

The three largest metropolitan areas of Sweden account for the bulk of both population and economic activity. The capital region, Stockholm, with a population of 1.8 million, and the intermediate regions of Västra Götaland and Skåne, with populations of 1.5 million and 1.2 million respectively,

together account for 51% of the population, 57% of national output and 70% of aggregate growth during the 1995-2007 period. Other Swedish counties contain only between 250 000 and 300 000 inhabitants. Sweden has one of the lowest population densities in the OECD[1] and, despite having one of the highest levels of concentration of economic activity, it also has the lowest level of spatial inequality of GDP per capita (Figure 1.3).

Figure 1.3. **Geographic concentration index and Gini index of regional disparities in GDP per capita in OECD countries (TL3), 2007**



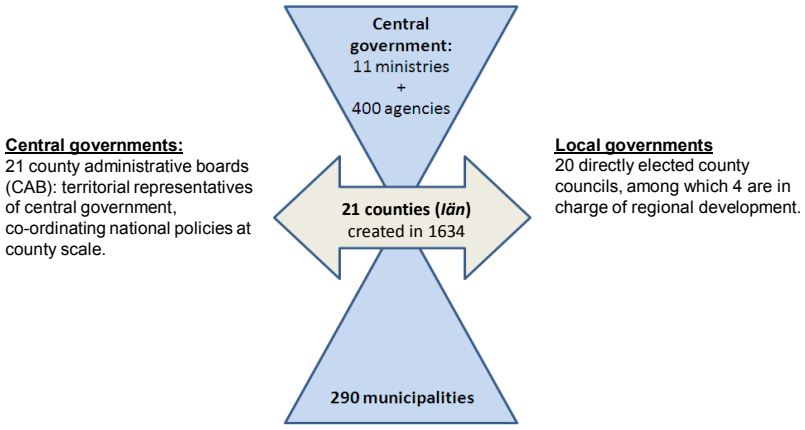
Source: OECD Regional Database (2011).

The bottom-up evolution of local governance is set to become more standardised

The description of Sweden's multi-level governance system as an hourglass stems from the fact that in comparison to the national and municipal level, regional governance remains relatively weak, although this framework has been evolving with recent regionalisation reforms. At the

local level, Sweden's 290 municipalities, each governed by a legislative assembly elected every 4 years alongside the national parliamentary elections, are entitled to levy income tax and, above a basic level, have wide-ranging autonomy over what services they offer. At the regional level, each of the 21 counties has a county administrative board representing the national government, and a separate county council directly elected by the citizens.[2] Region Skåne, a directly elected regional council with control over regional development, is a particular case that illustrates the ongoing regionalisation process (Box 1.2).

Figure 1.4. **Sweden's "hourglass-shaped" multi-level governance system**



Source: Based on OECD (2010), *OECD Territorial Reviews: Sweden 2010*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264081888-en*.

Box 1.2. **Overview of the regionalisation process in Sweden**

Regionalisation in Sweden has thus far been a pragmatic evolution driven primarily by local demand – beginning in 1997/1998 with the creation of four "pilot regions". However, there is a clear intention on the part of the government to standardise the intermediate regional level in Sweden and to improve the efficiency of public service delivery. In 1997/1998, Västra Götaland emerged as a result of the merging of three former counties and the City of Göteborg, and Skåne was formed by the merging of the County Councils of Malmöhus, Kristianstad, and the Health Services Authority in the City of Malmö. In both regions, a directly elected regional political assembly replaced the former county councils, taking over at the same time the competence of regional development from the county administrative boards (CAB). The pilot experiment was made permanent in 2011.[1]

Box 1.2. **Overview of the regionalisation process in Sweden** (*cont.*)

In early 2009, the national government set in motion a process intended to clarify the regional structure and counties are now able to merge and establish regional authorities upon the submission of an economic feasibility study. Accepted proposals will then become operational from January 2015. The government has clearly stated that the initiative for mergers should be bottom-up, reflecting consensus among the counties concerned. However, it has also indicated that requests should follow the Västra Götaland and Skåne arrangement – merging counties and creating a directly elected regional authority.[2]

Following the government's declared intention to reduce the number of Sweden's counties to a total of six to nine enlarged regions, Skåne is now among those counties considering a merger, and has agreed to open talks with the counties of the Småland-Blekinge region. Merging administrative units to cover larger areas can potentially bring benefits by reducing the cost of providing expensive public goods and services through economies of scale. However, in low-density regions, such economies of scale can be offset by increased transport and distribution costs. In addition, in low-density areas, larger territories may reduce the capacity of sub-national government to sufficiently tailor regional development policy to its electorate needs and the comparative advantages of the region. The desire to exploit potential economies of scale and/or improve the efficiency of public service delivery have played a role in countries like Denmark, where former regions were considered too small to manage responsibilities such as public health efficiently. These concerns are, highlighted in the context of the combination of an aging population with tighter public budgets.

Regionalisation in Skåne, in its current form, has had a tangible impact on enhancing cross-sectoral co-operation, long-term strategic planning and increasing the flow of resources directed toward regional development. However, some concern remains regarding the degree to which the dual governance framework – under which the responsibility for regional development lies with the region and the responsibility for rural development lies with the county administrative board – can inhibit the congruence of policies relating to the interdependent regional challenges such as those regarding the labour market, rural development, and higher education.

Notes: 1. In July 1997, a similar pilot was launched in Kalmar County in which an indirectly elected regional council took over the regional development competences from the county administrative board. In this case, the new regional council did not replace the county council, which continued to operate in parallel, dealing mostly with health-related issues. Finally, an indirectly elected council was also established in the municipality of Gotland and converted to a directly elected regional authority in 2010. 2. Alongside this process, an Inquiry Committee (2009-2012) headed by a government-appointed special commissioner has been created to conduct a review of the central government's regional administration. Distinct from the county-based regionalisation process, the inquiry is intended to submit proposals concerning changes to county boundaries when relevant and to conduct a review of national government agencies at the regional level (including the role and territorial organisation of CABs).

Source: Based upon information provided by Region Skåne as well as information drawn from OECD (2012), *OECD Territorial Reviews: Småland-Blekinge, Sweden 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264169517-en*.

Table 1.1. **Tasks by level of governance**

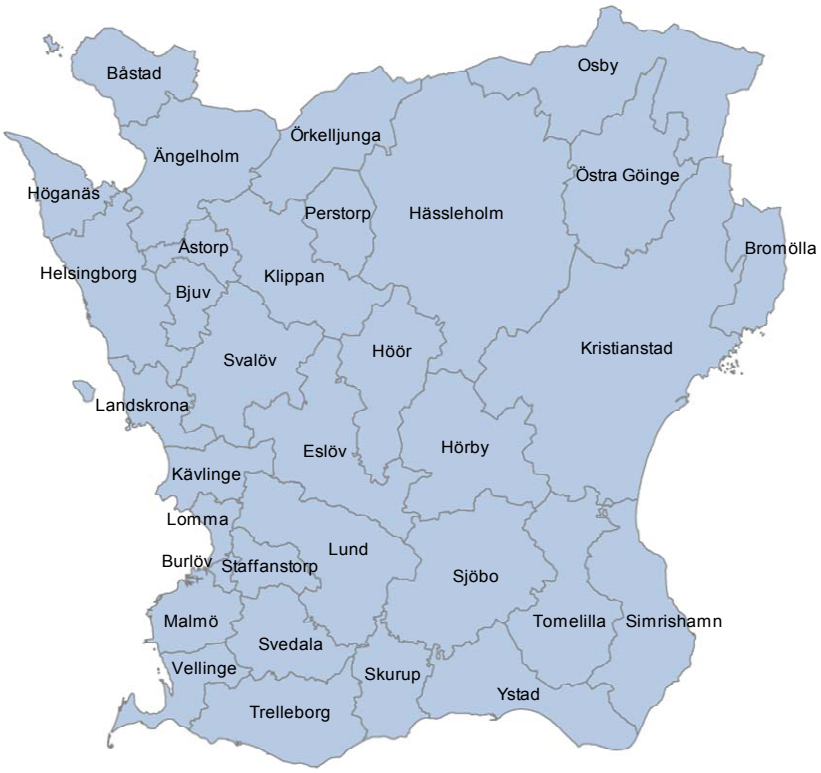
National level	Regional level	Municipal level
– Security, police – Justice – Civil status register – Statistical Office – Electoral register – Higher education – National cultural institutions – Non-urban roads – Rail transport – Ports and airports – Tasks carried out by the county administrative board – Food inspections, animal welfare and general veterinary issues – Regional growth (partly) – Infrastructure planning – Sustainable community planning and housing – Energy and climate – Cultural environment – Protection against disaster and emergency preparedness and civil defense – Nature conservation and environmental and public health – Agricultural and rural areas – Fishing – Equality – Integration	– Health services (including dental) – Hospitals – Upper-secondary education (some) – Regional culture – Public transport – Regional tourism – Regional development – Regional transport and infrastructure planning	– Rescue services – Education – Child care – Family welfare services – Housing – Municipal planning – Water and sewage – Refuse collection and disposal – Environmental protection – Consumer protection – Cultural establishments – Urban roads – Gas, heating, water supply – Electricity – Local tourism

Source: Swedish Associations of Local Authorities and Regions (SALAR).

The regional context: Skåne

Operating in an economy oriented toward foreign trade and strategically located at the gateway to the rest of northern Europe, Skåne's location endows the region with the potential to develop into a dynamic hub of economic activity and a critical driver of growth in Sweden. Located in the south-western tip of Sweden, 500 kilometres from Stockholm, Skåne looks to the west across the Öresund Straight to the capital of Denmark, Copenhagen. To the north-east, Skåne borders on the predominantly rural region of Småland and the similarly rural county of Blekinge. Skåne is classified as an intermediate region under the OECD taxonomy (Box 1.3), one of only two such regions – along with Västra Götaland – in Sweden.

Figure 1.5. **The 33 municipalities of Skåne**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Region Skåne, 2010.

With a population of over 1.2 million, Skåne is home to 13.3% of Sweden's population. It is one of Sweden's most densely populated regions (Table 1.2). Whilst population density in Skåne remains significantly lower than in Stockholm and the OECD average, it is far higher than that in Sweden as a whole,[3] as well as Skåne's neighbours in Southern Sweden. With a density of 113 inhabitants per square kilometre, Skåne is a dense region relative to the rest of Sweden. However, the region is significantly less dense that the average OECD TL3 region, and also significantly less dense that the average of OECD intermediate (somewhat urban) regions (see Box 1.3 for the OECD typology).

Box 1.3. **The OECD regional typology**

The OECD has established a regional typology according to which Territorial Level 3 (TL3) regions have been classified as predominantly urban, predominantly rural, and intermediate. Skåne, along with Västra Götaland, lies in the latter of these categories, while Stockholm is classified in the former. The typology is based upon settlement patterns calculated on the percentage of population living in rural communities and is intended to enable meaningful comparisons to be made between OECD regions of comparable development.

The OECD regional typology is based on three criteria. The first identifies **rural communities** according to population density. A community is defined as rural if its population density is below 150 inhabitants per square kilometre (500 inhabitants for Japan to account for the fact that its national population exceeds 300 inhabitants per square kilometre). The second criterion classifies **regions** according to the percentage of population living in rural communities. Thus, a TL3 region is classified as:

- predominantly rural, if more than 50% of its population lives in rural communities;
- predominantly urban, if less than 15% of the population lives in rural communities;
- intermediate, if the share of population living in rural communities is between 15% and 50%.

The third criterion is based on the size of the urban centres. Accordingly, a region that would be classified as rural on the basis of the general rule is classified as intermediate if it has an urban centre of more than 200 000 inhabitants (500 000 for Japan) representing no less than 25% of the regional population. A region that would be classified as intermediate on the basis of the general rule is classified as predominantly urban if it has a urban centre of more than 500 000 inhabitants (1 million for Japan) representing no less than 25% of the regional population.

Table 1.2. **Population, surface area (km²) and population density (population/km²), 2010**

Region	Population	Surface	Density
Skåne	1 243 329	11 035	113
Stockholm	2 054 343	6 519	315
Sweden	9 415 570	410 335	23
OECD TL3	678 913	19 575	313

Note: OECD TL3 refers to 2008.

Source: Based on data from Statistics Sweden and *OECD Regional Database* (2011).

Looking in: Skåne's 33 municipalities

Skåne is comprised of 33 municipalities which can be largely grouped into "four corners". In the south-west, the region centred on Malmö-Lund is experiencing strong growth both in population and economic activity. This south-west quadrant dominates the regional labour market and its large and increasing population are, on the whole, younger, more educated and more ethnically diverse than those of the region as a whole. This south-western quadrant, however, also exhibits the highest unemployment rate. The north-west, the area surrounding Helsingborg and Landskrona, also makes a substantial contribution to the region's economic activity, maintaining a constant share of the labour market despite its proximity to the regional hubs of the south-west. The eastern quadrants make up the more rural part of the region.

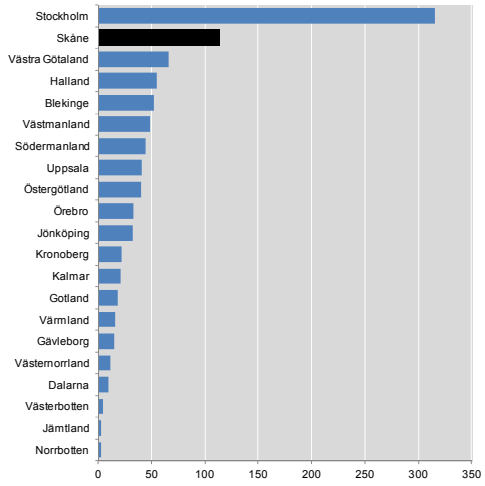
The disparate patterns in population density across Swedish counties are mirrored at the municipal level within Skåne (Figure 1.6) and population concentration in Skåne is high relative to its surrounding regions in Southern Sweden (Figure 1.6A). The south-western municipalities of Malmö, Burlöv and Lund, and to a lesser extent the north-western regions of Helsingborg and Landskrona, which are close to the Öresund and the border with Denmark, see significantly higher population densities than those municipalities in the east. This geographical correlation comes across in the lower concentration trends at the level of Skåne's "four corners".

Disparities in population density across the Skåne Region are not only large, but growing; concentration continues to deepen as the growth in population in the more densely populated municipalities continues to outpace that in the less densely populated municipalities (Table 1.3). Whilst this trend implies opportunities for the denser municipalities to take

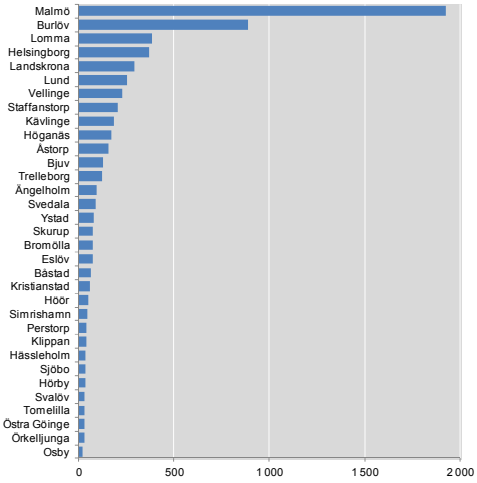
advantage of the externalities of agglomeration (see Box 1.5), the sparsely populated regions – often those with low or negative population growth, such as Östra Göinge, Osby and Simrishamn – risk stagnating.

Figure 1.6. **Population density in Sweden's counties and Skåne's municipalities, 2009**

A. Swedish counties (TL3), inhabitants per km²



B. Skåne municipalities, inhabitants per km²



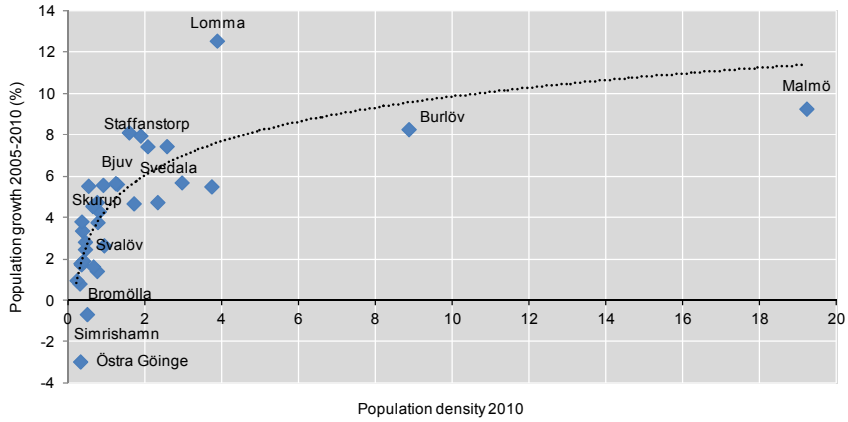
Source: Based on data from Statistics Sweden.

Table 1.3. **Population growth by size of municipalities**

	Inhabitants (thousands)			Number of municipalities	
	1990	2010	Growth	1990	2010
Over 50 000	503	668	28.5%	4	5
20 000 – 50 000	302	314	3.9%	10	10
15 000 – 20 000	100	106	6.1%	6	6
10 000 – 15 000	147	138	-6.0%	11	10
Below 10 000	17	17	-2.9%	2	2

Source: Based on data from Statistics Sweden.

Figure 1.7. **Evolution of population density, 2000-2010**

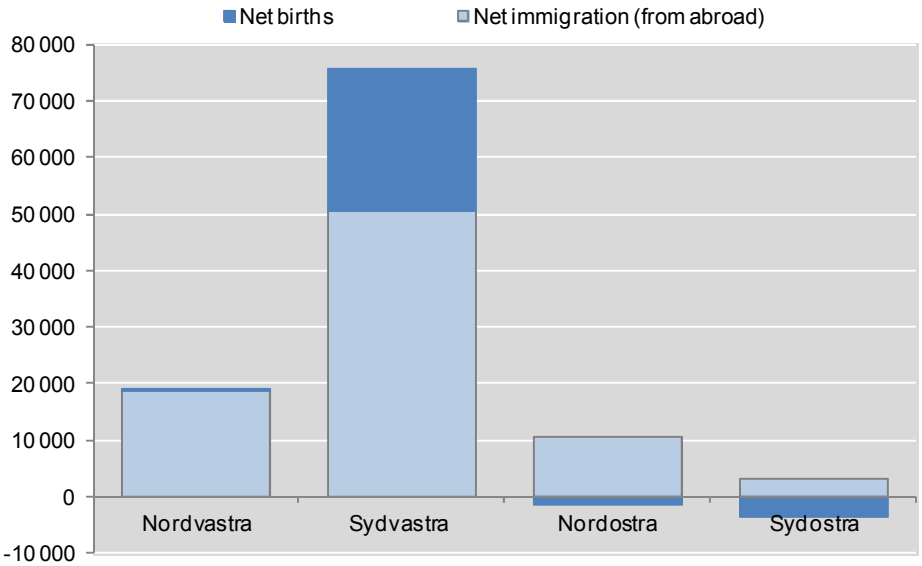


Source: Based on data from Statistics Sweden.

Increasing concentration within Skåne is driven by disparities in both fertility and migration. South-west Skåne (*Sydvästra*), containing the vibrant hubs of Malmö and Lund, is the primary recipient of migration and, with the smallest proportion of the population above the age of 65, *Sydvästra* also experiences the highest net birth rate. Net births in south-east Skåne (*Sydöstra*) were, on the other hand, negative between 1999 and 2011. This is indicative of the ageing population in this more rural part of Skåne (Figure 1.8).

The affluence of the south-west corner of Skåne displays a high degree of variance across municipalities. While *Sydvästra* collects more in tax revenues both in absolute terms and per capita (see Figures 1.9 and 1.10), the tax base in the hub of Malmö is low such that it receives substantial equalisation grants (Figure 1.11B).[4] Malmö's low tax base stems partly from the structure of labour markets which, despite their importance to regional commuters (see Section 1.2), are characterised by high unemployment and many newly arrived migrants and partly from the number of workers commuting to Copenhagen whose taxes accrue, not to the Skåne region, but to Denmark.

Figure 1.8. **Composition of population changes, 1999-2011**



Notes: Internal excess of migration includes both migration internal to Sweden, and internal to Skåne, as such it cannot be aggregated by municipality.

Source: Based on data from Statistics Sweden.

Figure 1.9. **Per capita tax revenues in Skåne's four corners, 2000 and 2010**

SEK thousands

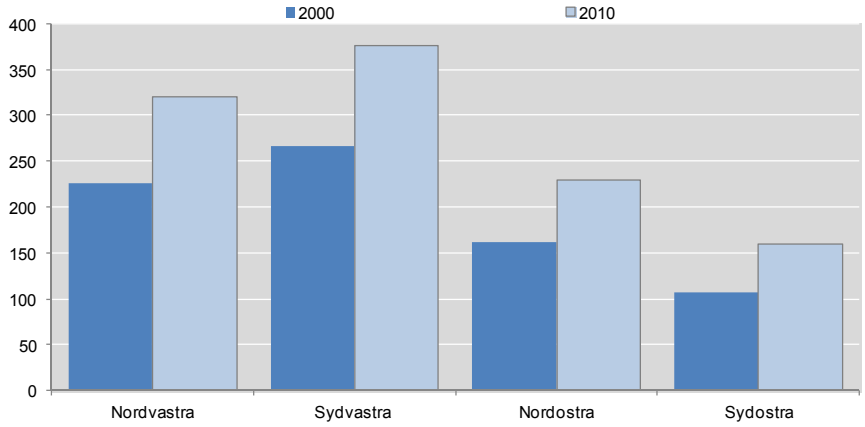
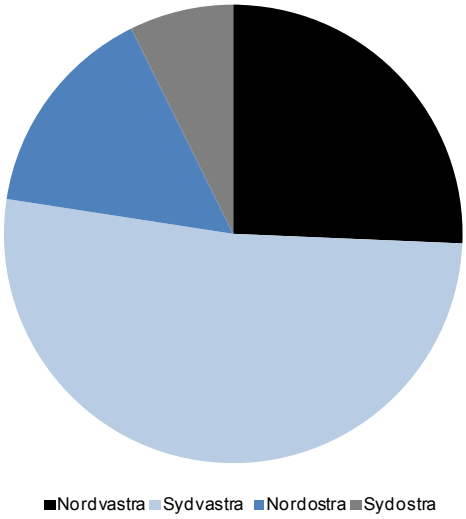


Figure 1.10. **Proportion of tax revenue, by corner, 2010**



Source: Based on data from Statistics Sweden.

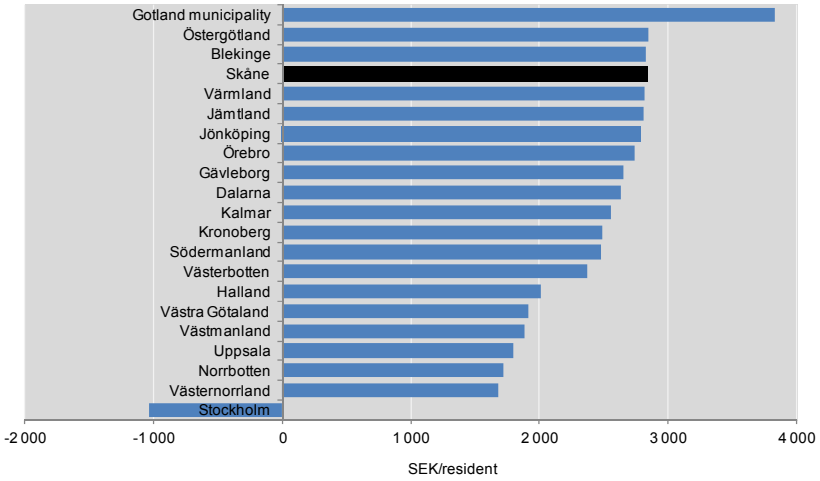
Equalisation takes place by comparing the taxable income of each municipality and county council with the taxable income per inhabitant in the country multiplied by the tax equalisation base – 1.15 for municipalities and 1.10 for county councils. Local authorities that have lower (higher) tax capacity than the tax equalisation base receive a positive (negative) equalisation grant. The main charge-payers are suburban municipalities in Stockholm County; in Skåne the only charge-payers – Vellinge and Lomma – are those wealthier municipalities surrounding Malmö on the south-west coast. Stockholm Municipality is the only one of the three metropolitan municipalities to pay a charge.[5]

Looking out: the Öresund Region and Småland-Blekinge

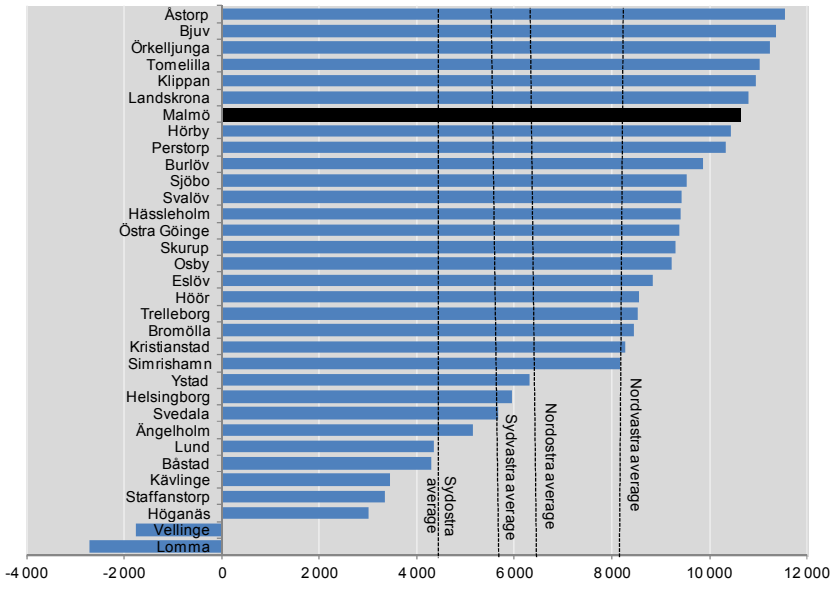
Looking west across the Öresund Sound, Skåne accounts for over 46% of the 21 203 km^2 covered by the Öresund Region, is home to nearly 36% of Öresund inhabitants and accounts for 29% of the GDP of the Öresund Region. Since the construction of the bridge in July 2000, Skåne and Zealand, Lolland, Falster and Bornholm – on the Danish side – have seen increasing integration and in 2009, 20 400 commuters made their way across the straight on a daily basis, a tenfold increase on the commuting flows that existed just a decade ago prior to the construction of the bridge.[6]

Figure 1.11. **Income equalisation, 2011**

A. TL3



B. TL4



Source: Based on data from Statistics Sweden.

Box 1.4. The Öresund Region and the Öresund Bridge

Encompassing parts of eastern Denmark as well as Skåne on the Swedish side, the Öresund Region has the potential to become one of the most dynamic regions in Europe. The region crosses the Öresund Sound and, since 2000, the two sides of the region are connected by a fixed link between Copenhagen and Malmö – the Öresund Bridge – in addition to a ferry route between Helsingborg and Helsingör. Home to the largest concentration of highly educated people in Northern Europe, with high capacity ports and a centrally placed international airport, the Öresund Region is highly accessible to international markets.

Yet despite containing 25% of the combined population of Sweden and Denmark, the cross-border region generates only 24% of the combined GDP (2008). This is in part due to the relatively modest productivity in the Danish capital (in which GDP per employee is among the lowest of the Nordic metropolitan areas) and in part highlights the remaining scope for co-operation between the two halves of the region to take advantage of these strong fundamentals, and achieve the potential synergies.

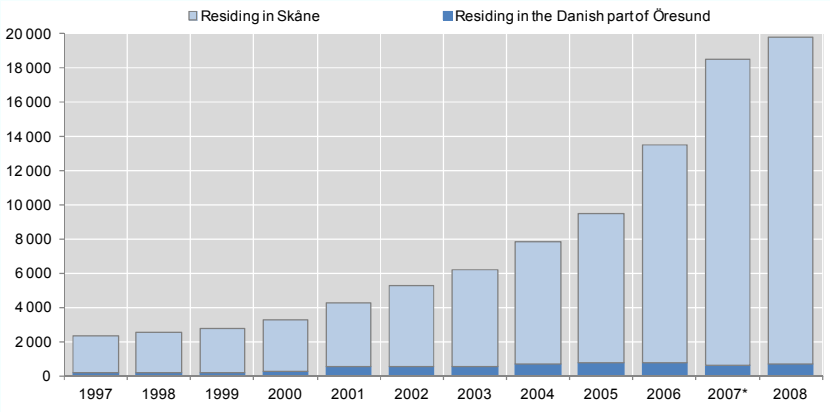
The Öresund Bridge

In the years following the opening of the Öresund Bridge, Danish workers – having moved to Sweden in search of cheaper housing – made up the majority of commuters. However, between 2005 and 2007, as the Danish economy boomed, unsatisfied labour demand on the Danish side coupled with rocketing house prices combined to spur increasing flows of Swedish commuters to satiate the demand of Danish employers. In 1999, before the opening of the bridge, commuting flows were less than 3 000 each day, today this figure has increased nearly tenfold. A breakdown of commuters shows 60% within IT and research, trade, telecommunications and transport and that 80% are between the ages of 25 and 44.

Integration across the Öresund Bridge has not been isolated from the impact of the financial crisis, however, and in 2009 commuter traffic fell for the first time to 19 020. At the same time, heavy goods vehicle traffic across the bridge saw a decline of 13%. Since the financial crisis, emerging exchange rate differentials have added another dimension to the decision calculus of commuters. Whilst the Danish kroner is pegged to the euro, the Swedish krona is freely floating with the result that the falling Swedish krona translated into a substantial real pay increase for those who earn on the Danish side of the Öresund but incur their living expenses on the Swedish side.

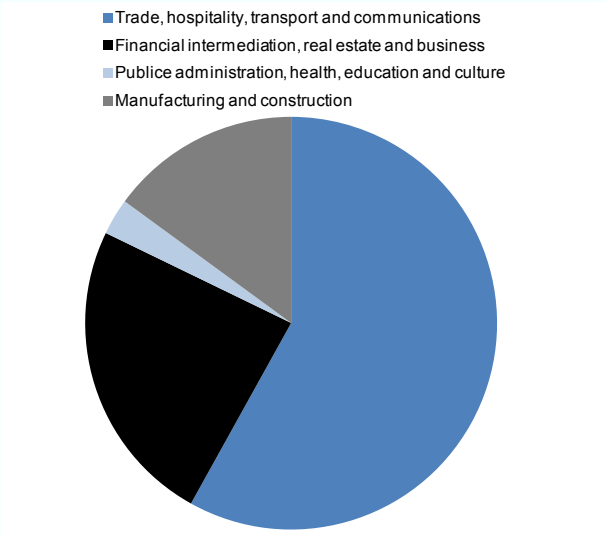
Box 1.4. **The Öresund Region and the Öresund Bridge** (*cont.*)

Commuter flows across the Öresund Bridge, 1997-2008



Source: Öresundsstatistik, Örestat, *https://www.h2.scb.se/orestat*.

Oresund commuters by sector, 2008



Box 1.4. **The Öresund Region and the Öresund Bridge** (*cont.*)

The bridge presents substantial opportunities for the development of the region Skåne. Over the next years, demographic trends and an ageing population in Zealand will lead to an increase in demand for young workers as older workers leave the labour market. Skåne's demographic profile, in which the proportion of working age population is higher than that on the Danish side, will open up significant opportunities to increase labour market integration across the straight for the benefit of both sides.

In addition to these opportunities, the opening of the bridge has also created challenges.

- The disproportionate share of commuters living in Skåne and commuting to Denmark across the Öresund Straight has contributed to a taxable capacity among the inhabitants of Malmö amounting to just 85% of the national average.
- The bridge has prompted increasing population concentration. Prior to the bridge only 38% of cross-border commuters lived in Malmö; today that figure has risen to nearly 60%.

Source: Adapted from Orestat and *www.oresundsregionen.org*.

To the east, Skåne is bordered by the regions of Blekinge and Kronoberg. Kalmar and Jönköping lay just further to the north and east. Taken together, these regions have a population of 900 000, with a density slightly above the national average but below most of central and Southern Sweden.[7] These eastern neighbours remain, on the whole, more specialised in manufacturing than Skåne. They are characterised by higher proportions of low-skilled workers and have moved less towards financial and real estate services. Consequently, while unemployment has previously been below the levels observable in Skåne, they were dealt a heavy blow by the crisis, and have been less able to make a quick recovery. To the north of Skåne lies Halland. With a population approaching 300 000, the economy of Halland is quite different to that of Skåne, it is characterised by a relatively high participation rate and specialises in low-tech industries.

1.2. Trends and performance

The five years since 2007 have been a turbulent period; regional macroeconomic indicators have reacted sharply to the downturn and the global uncertainty that has accompanied it. This section will examine these

macro indicators at the regional level, comparing the experience of Skåne to that of regions across Sweden as well as the OECD more widely. The section will begin with an examination of the region's relative strength in the years preceding the downturn, before going on to analyse the extent of the impact of the crisis, and the early signals of a recovery.

Growth

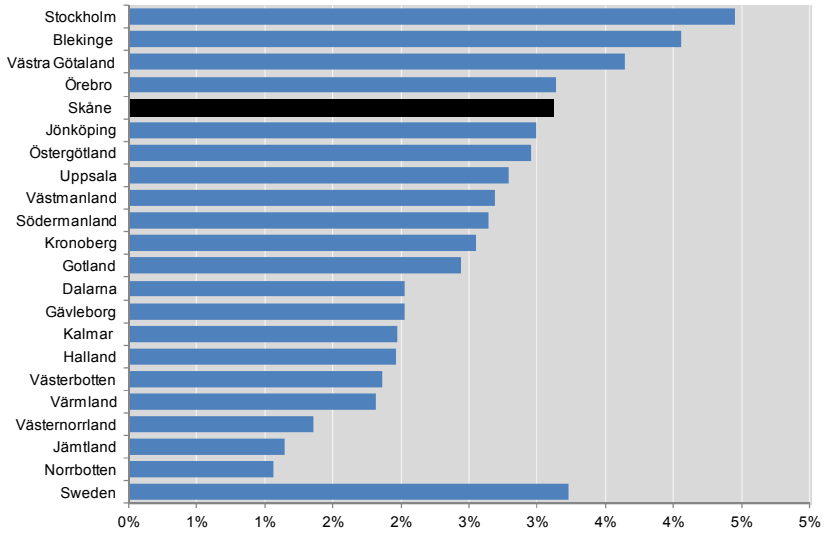
Prior to the crisis, Skåne was among Sweden's faster growing regions

When the crisis hit in 2008, growth in Skåne was growing at a relatively robust rate in relation to the other regions of Sweden. And, with a compound annual growth rate of over 3.1% between 1995 and 2007, Skåne was among Sweden's faster growing regions. However, much of this was driven by fast growth between 2006 and 2007 (Figure 1.12B) and despite this catch up, growth in the region lagged behind not only Stockholm and Västra Götaland – Sweden's other two large agglomerations, but also Blekinge (Skåne's easterly neighbour) and Örebro (Figure 1.12A). Despite this, recent performance in Skåne has been more promising (Figure 1.12B). Immediately prior to the crisis, as the growth in the rest of Sweden began to decline, economic growth in Skåne rose from just under 4.5% in 2005-2006 to over 7.1% in 2006-2007. And while the promising growth trends between 2004 and 2007 were reversed when, even before the financial turmoil in late 2008, GDP in Sweden – and in Skåne particularly – began to fall, recently released regional growth figures for 2009 indicate that the region has made a relatively quick recovery.

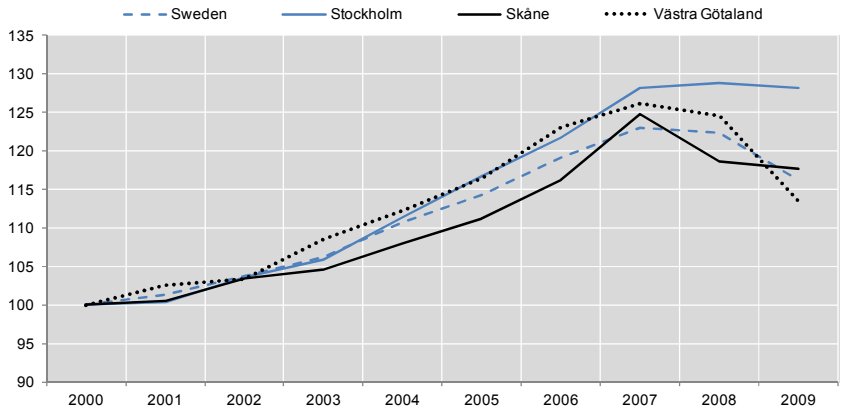
Skåne contributed just over 12% of national GDP growth between 2000 and 2007, behind only Stockholm and Västra Götaland, which accounted for 29% and 17% respectively, well ahead of the next highest regional contributor (Östergötland contributes just under 4%). Figure 1.13 plots the contribution of **intermediate** TL3 regions (according to the OECD classifications). It illustrates that, over this period, Skåne accounted for a proportion of growth a little higher than that which would be expected given the region's share in national GDP at the start of the period. Skåne has been pulling her weight, but little more and has been outperformed by Västra Götaland. Nevertheless, comparisons to intermediate TL3 regions in other OECD countries illustrate that, despite the growing importance of Stockholm, the contributions of both Skåne and Västra Götaland remain relatively very high.

Figure 1.12. **Growth in Swedish regions (TL3), 1995-2007**

A. Compound annual aggregate growth

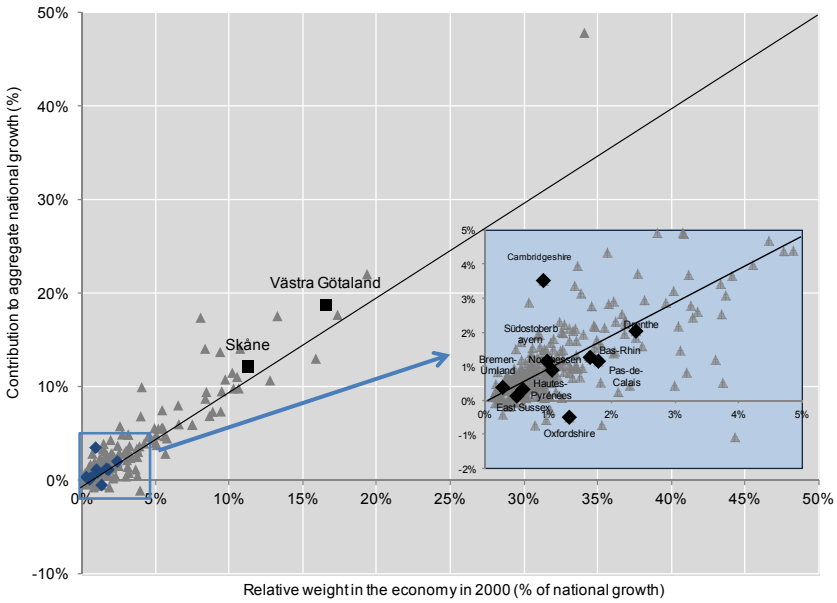


B. Growth index (1995=100)



Source: Based on data from Statistics Sweden.

Figure 1.13. **Contribution to growth: OECD (TL3) intermediate regions, 2000-2007**

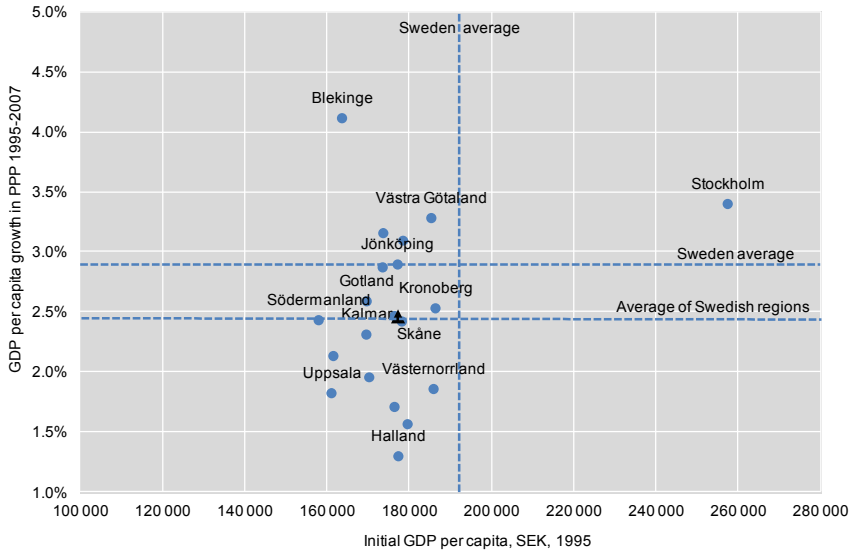


Source: OECD Regional Database.

Relatively strong growth performance masks dilution at the per capita level

Skåne's aggregate growth performance masks some weakening in performance at the per capita level. This dilution has arisen from the increases of population over the past few years. From an initial GDP per capita above the OECD average, Skåne experienced a compound annual growth rate of 2.46% in the 12 years prior to the crisis, putting per capita growth in Skåne behind not only the Swedish average (which is elevated by strong growth in Stockholm) but also by the average of Swedish regions. Per capita growth in Skåne was also outpaced by per capita growth in the region's southern neighbours of Blekinge, Jönköping and Kronoberg. This dilution at the per capita level was particularly pronounced during the period 2006-2009 due to temporary immigration laws in Sweden.

Figure 1.14. **Per capita growth performance before the crisis (TL3 Swedish regions), 1995-2007**



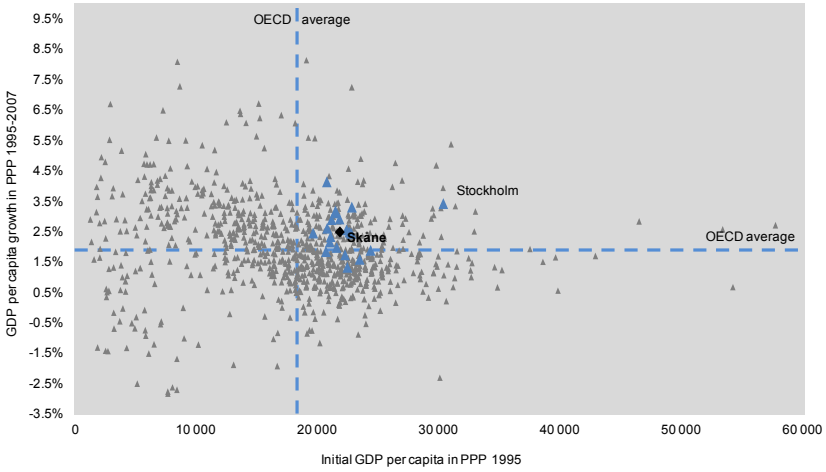
Source: Based on data from Statistics Sweden.

Per capita growth in Skåne is in line with OECD intermediate regions

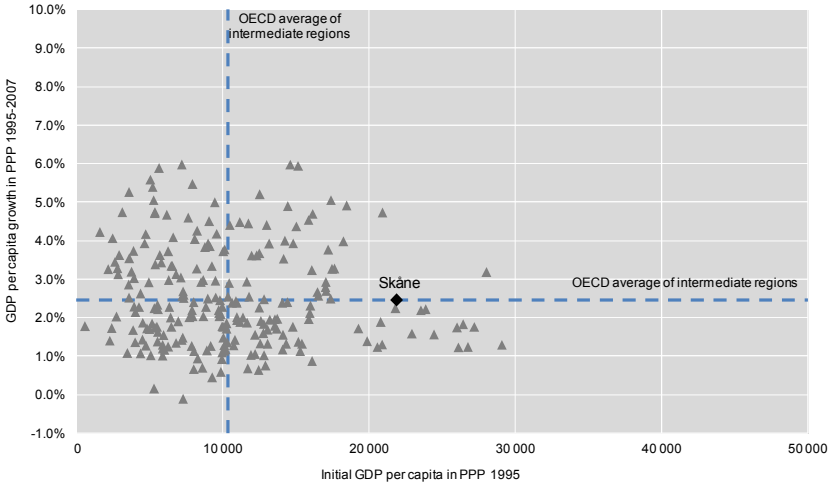
Overseas comparisons show that GDP per capita growth in Skåne remains strong relative to the majority of OECD regions (Figure 1.15A). Along with the majority of Swedish TL3 regions, Skåne has recorded levels of per capita above the average for OECD regions. However, when compared only to OECD TL3 regions with a similar level of urbanisation (intermediate regions according to the OECD regional typology, see Box 1.3) GDP per capita growth in Skåne is very much in line with that of its peers (Figure 1.15B).

Figure 1.15. **Growth performance prior to the crisis, 1995-2007**

A. OECD TL3 regions



B. OECD intermediate TL3 regions



Source: *OECD Regional Database*.

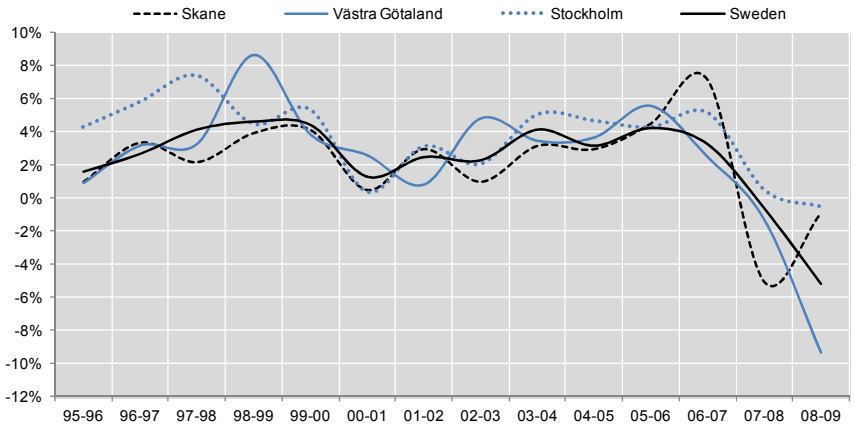
The contrast between Skåne's aggregate and per capita performance presents a challenge. To be sure, strong growth on the back of rising immigration – from elsewhere in Sweden and from abroad – is good news and testifies to Skåne's attactiveness. Moreover, the fact that newcomers may be less productive on average than prior residents is not necessarily a problem. An influx of lower productivity individuals may pull down average

levels of productivity and per capita GDP, which might make Skåne appear worse off in comparison with other regions. However, if the new arrivals are more productive in Skåne than they were in their previous locations, the overall result is good for aggregate growth and welfare. That is the good news. The challenge that arises is to see that the productivity of the new arrivals rises rapidly – that they are integrated and that their skills are enhanced, so as to bring them closer to the higher productivity levels the established population. Otherwise, the presence of a large pool of low-skilled, low-productivity workers may over time become a threat to both economic performance and social cohesion.[8]

Despite a severe initial impact of the financial crisis Skåne appears to be recovering relatively well

Recent figures reveal that, despite suffering more severely upon the initial onset of the crisis, Skåne is recovering relatively better than Västra Götaland. The concentrated nature of Swedish economic activity implies that, in the past, national growth trends have mirrored those trends in Sweden's main agglomerations (Figure 1.16). However, recently released growth figures suggest that in 2009, the contraction in growth in Skåne (at -0.9%) appeared relatively healthy compared to the Swedish average of -5.13%. Skåne's relative success in 2009 can be largely accounted for by the restructuring in the early part of the last decade that rendered the economy relatively dependent on inwardly oriented services as compared to Västra Götaland whose manufacturing sector suffered badly from the reduction in global demand.

Figure 1.16. **Growth trends in Skåne and Sweden's other agglomerations (TL3), 1995-2007**



Source: Based on data from Statistics Sweden.

There remains significant potential for strong growth in Skåne over the coming years

As is clear from the foregoing, high inward population inflows, in terms of per capita GDP, the region must run to stand still.[9] However, if efficiently utilised, these inward population flows have the potential of being the region's strongest asset. A more populous region may have the opportunity to benefit from the productivity gains associated with Marshallian agglomeration externalities. Such external scale economies arise when the proximity of similar firms and specialised workers influences the productivity of local firms. In short, Swedish and foreign migrants to Skåne are destined to become either an asset or a burden over the long run: which they become depends to a great extent on public policy.

Box 1.5. **Economies of agglomeration**

Economic activity is not naturally dispersed; rather it tends to concentrate in certain geographic spaces. This uneven concentration in the context of high land and labour costs in metropolitan areas has a number of explanations including: the presence of natural advantages (i.e. natural resources, location, etc.); distortive policy interventions, (e.g. the decision to create a capital city, or fiscal incentives); or the presence of agglomeration economies that induce firms and labour to co-locate. In addition to the transport cost savings associated with physical proximity, scale economies can be roughly divided into four types:

1. Economies resulting from sharing:

- Co-location facilitates the sharing of local public goods and facilities that serve several individuals or firms, including laboratories and universities.
- Locating alongside firms with demands for similar skills, agglomeration also facilitates the sharing of risk. Firms are more able to adjust to changes in demand if they have access to a thick labour market that allows them to expand or contract their demand for labour (Puga, 2010).

2. Knowledge spillovers can result, leading to productivity advances in one of two ways:

- The greater intensity of communication between proximate agents has been associated with increased innovation and technological advances.
- Working in proximity is also associated with enhanced learning among workers – particularly in more skilled agglomerations (Glaeser and Resseger, 2009).

Box 1.5. **Economies of agglomeration** (*cont.*)

3. Matching mechanisms. Agglomeration economies can arise if:

- Labour markets for specialised workers with industry-specific skills pool in urban areas, allowing firms and workers to match more effectively, thus reducing the distance between the skills of the workers and the requirements of the job (Amiti and Pissarides, 2005). An increase in the number of agents trying to match in the labour market also improves the probability of matching.
- Delays are alleviated. There is a possibility that contractual problems arising from renegotiation among buyers and suppliers will result in one of the parties losing out to the other party in a renegotiation. However, if the agglomeration is extensive enough, agents can find an alternative partner.

4. Specialisation. Finally, economies resulting from intra-industry specialisation allow a finer inter-firm division of labour, increasing the number of forward and backward industrial linkages.

OECD metropolitan regions benefit from agglomeration effects and thus tend to display higher levels of productivity, higher rates of employment and higher levels of GDP per capita than other regions. These benefits, however, are limited by congestion costs, diseconomies of scale and oversupply of labour, among other potential negative elements, and many metro regions have in recent decades tended to underperform national economies.

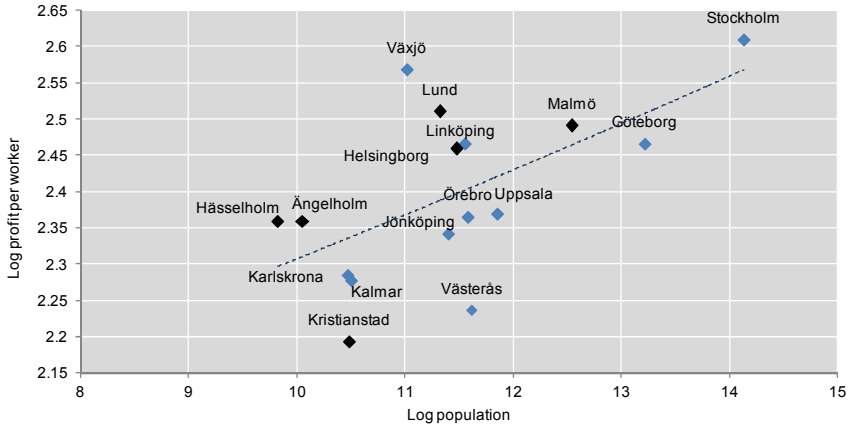
Source: Puga, Diego (2010), "Labour pooling as a source of agglomeration: an empirical investigation", with Henry G. Overman, in *Agglomeration Economics*, Edward L. Glaeser (ed.), University of Chicago Press, Chicago, IL, April, pp. 133-150; Glaeser, E.L. and M.G. Resseger (2009), "The complementarity between cities and skills", *NBER Working Paper*, No. 15 103, June; Amiti, Mary and Christopher A. Pissarides (2005), "Trade and industrial location with heterogeneous labor", *Journal of International Economics*, Vol. 67, No. 2, pp. 392-412, Elsevier, December; Durnaton and Puga (2004), OECD (2009a).

Larger cities within Sweden appear to be associated with more productive workers, this correlation is particularly marked among the cities of Skåne. A plot of population against profit per worker, based upon firm-level micro data (Figure 1.17), gives an approximate idea of the importance of the relation between city size and productivity in Sweden (suggesting the presence of agglomeration externalities). Productivity benefits arising from agglomerations tend to be evidenced particularly in highly skilled agglomerations (Glaeser and Resseger, 2009). And, given the relatively skilled population of Sweden, it is no surprise that a relation between city size and profit per worker appears to exist. Logged profit per worker is higher among larger cities such as Stockholm, Göteborg and Malmö, and lower among smaller cities – for example Hässleholm. In the

region of Skåne, relatively highly skilled even by Swedish standards – this relation appears particularly pronounced.

Given this relation between size and productivity, if Skåne can efficiently integrate population inflows into the labour force, it may be able to enhance the productivity per worker whilst at the same time increasing the number of workers (moving outwards both horizontally and vertically along the axes of Figure 1.17). Agglomeration externalities have been repeatedly uncovered in empirical work (see Moretti [2011], for a review of the literature), but if they are to become more than just a theoretical possibility in Skåne, the region will need to focus on fully utilising the potential of its population. It is also interesting to note that most of the cities of Skåne (with the exception of Kristianstad) are either near or above the regression line in the figure, suggesting that agglomeration costs – such as congestion – are not yet too severe.

Figure 1.17. **Profit per worker by city size (Swedish cities), 2008**



Note: Large standard errors imply that figures should be taken as indicative of patterns only.

Source: OECD calculations based on data from ORBIS and Statistics Sweden.

Skåne has the potential to be in a strong position moving forwards from the crisis. A productive labour force and a growing population endow the region with the opportunity to further increase aggregate growth. However, in order to grasp these opportunities fully, the region will need to ensure that the appropriate conditions are in place such that agglomeration externalities can flourish. This will include: facilitating knowledge spillovers, through clear implementation and evaluation of programmes that make concrete Skåne's far-reaching innovation strategy; investing in human capital to

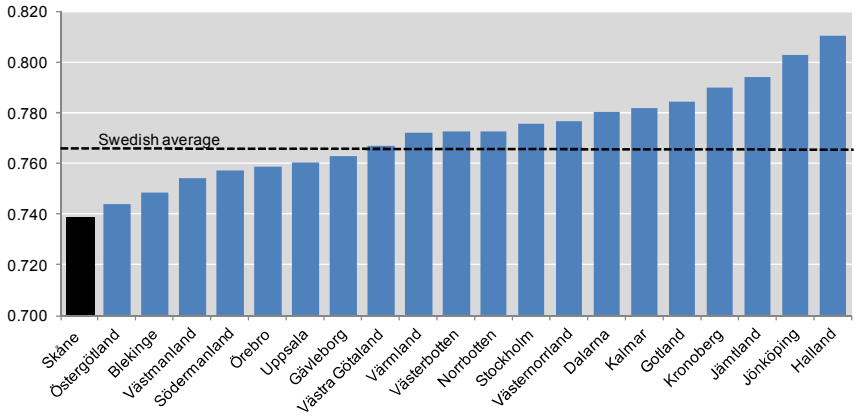
create a thick pool of specialised labour from which local firms can draw; ensuring that immigrants to the region – both internal and from abroad – are integrated into the labour force and endowed with the appropriate skills and education; and finally ensuring an attractive environment to ensure that migrants with qualifications across the skill spectrum are attracted to the region and can productively contribute to its growth. These issues and others will be examined in the following chapters.

Labour markets

Employment rate growth in Skåne was stymied by the crisis

Skåne's employment rate going into the crisis in 2007 was among the lowest of Swedish regions[10] – largely driven by substantial and sustained population inflows. Prior to the crisis the region had been closing the gap with the rest of the country, but since 2007 employment rates have suffered and Skåne remains the worst performing region. Employment rates in Sweden, prior to the crisis, were among the highest in the OECD. Employment rates in Skåne, however, have historically been the lowest nationally. And, though they made some progress towards closing the gap with the Swedish norm in the rapid growth years of 2006-2007, they have since lost some of this ground – partially due to large immigration inflows. Where employment rates in Västra Götaland and Skåne's eastern neighbours of Blekinge, Jönköping and Kronoberg have experienced a similarly pronounced impact from the crisis, their initial position employment rate was more favourable than that of Skåne (Figure 1.19).

Figure 1.18. **Employment rates (OECD TL3), 2010**



Source: Register-based data provided by Region Skåne and Statistics Sweden.

Box 1.6. **Labour market definitions**

The concepts and definitions used in this publication follow the guidelines of the International Labour Organisation (ILO) such that:

- **Employment:** covers persons who during the reference week performed work, even for just one hour, for pay, profit or family gain or were not at work but had a job or business from which they were temporarily absent, for example because of illness, holidays, temporary lay-off, flexible working time arrangements, industrial dispute or education and training. Employment statistics are typically published for the working age population (the age group 15-64). The **employment rate** is calculated by dividing the number of persons aged 15 to 64 in employment by the total population of the same age group.

- **Unemployment** covers persons who:

  – were without work during the reference week;

  – were available to start work within the next two weeks;

  – had been actively seeking work in the past four weeks or already found a job to start within three months.

  Unemployment covers persons aged 15-74 (16-74 in Iceland, Italy, Spain and the United Kingdom). Swedish unemployment figures were harmonised to this European definition in 2005. Prior to 2005, the Swedish unemployment rates were calculated on a denominator of those persons aged 15-64 (the working age population). The **unemployment rate** is the number of people unemployed as a percentage of the labour force (employed and unemployed).

- **Economically inactive population**: are persons who are neither employed nor unemployed.

  – attendance at educational institutions:

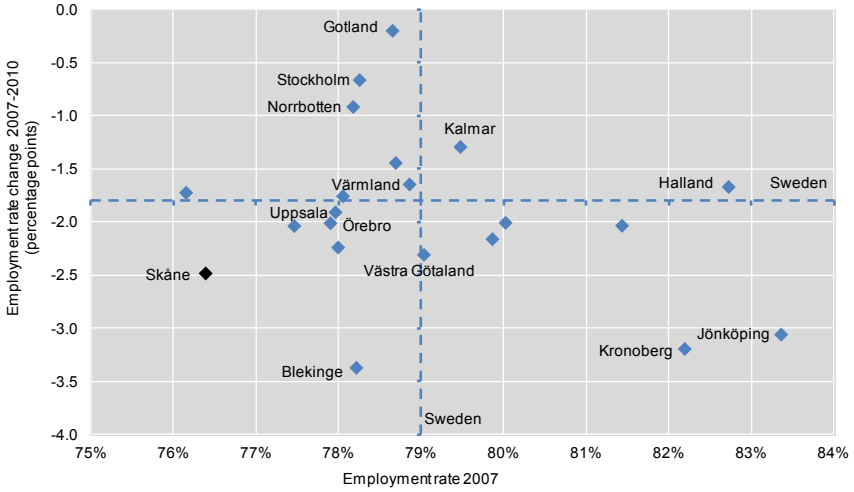
  – engagement in household duties:

  – retirement or old age:

  – other reasons such as infirmity or disablement, which may be specified.

Source: Based on Eurostat, ILO definitions, and data from Statistics Sweden.

Figure 1.19. **Employment rates and the impact of the crisis (TL3), 2007-2010**



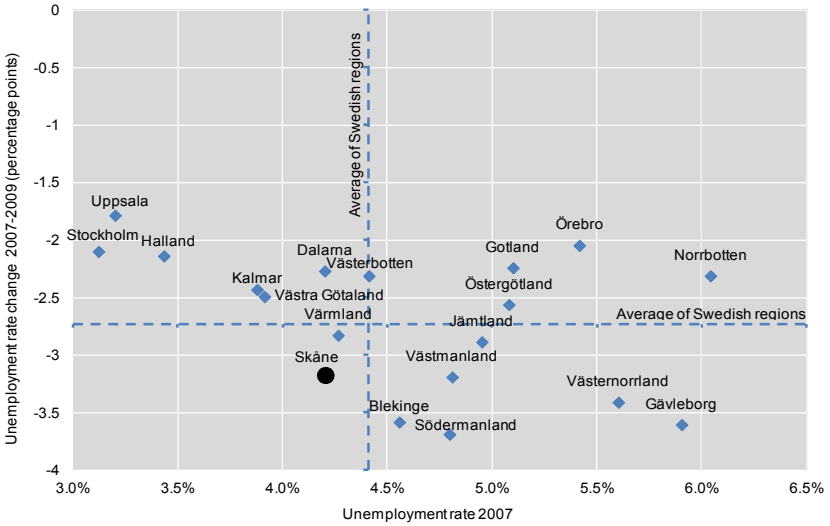
Source: Register-based employment data, provided by Region Skåne (ages 20-64 years), and Statistics Sweden.

Following initial increases, unemployment rates in Skåne have plateaued

The increase in unemployment between 2007 and 2011, of over 3 percentage points, was less marked in Skåne than elsewhere in Sweden (Figure 1.20). However, it is again important to bear in mind that unemployment in Skåne was already high in the region, and continued inward population flows imply the trend will be hard to reverse. Importantly, while unemployment rates in Copenhagen have historically been lower than in Skåne, labour force based unemployment figures show that they have risen marginally more sharply in response to the global uncertainty.[11] This will have implications for those Swedes seeking work across the Öresund Bridge.

Despite apparent resilience in the face of the current downturn, unemployment in Skåne remains stubbornly high. The sustained and substantial growth in the labour force is to a large degree behind this trend and between 2001 and 2010 Skåne experienced relatively few layoffs relative to its share in the national population (Figure 1.21). However, as the crisis continued, layoffs have begun to increase, and with the move of AstraZeneca – one of the region's larger employers – these figures are unlikely to improve in the short term.

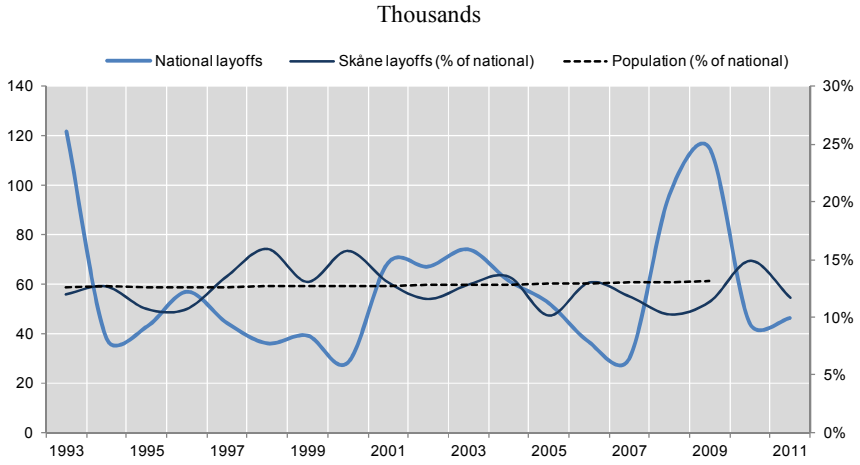
Figure 1.20. **Unemployment rates and the impact of the crisis (TL3), 2007-2011**



Note: Registry-based data, denominator is relevant population and **not** workforce.

Source: Register-based employment data, provided by Region Skåne (ages 20-64 years), Statistics Sweden and Swedish Employment Service.

Figure 1.21. **Employer notification of layoffs in Skåne, 1993-2011**

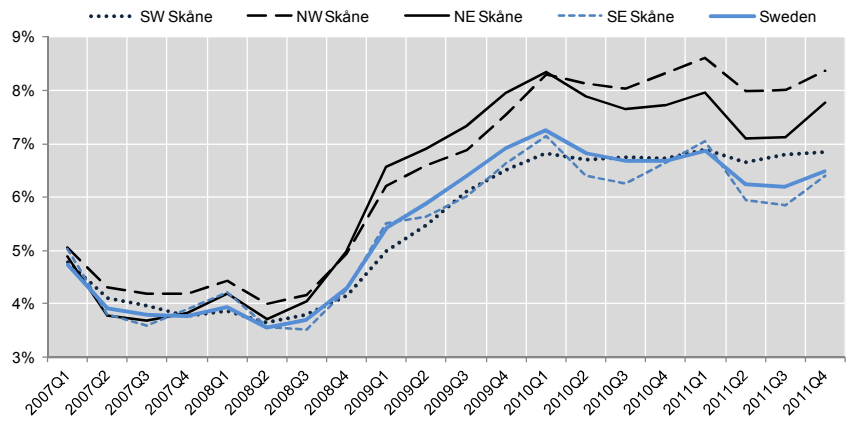


Note: Employers' notifications regarding possible future layoffs reported to the Swedish Public Employment Service (*Arbetsförmedlingen*). Note, this does not always translate into actual layoffs.

Source: Swedish Employment Service.

Trends have differed somewhat across Skåne's four corners – with unemployment initially rising faster in the north. The ability of the populous south-west to keep employment levels under control was a key factor in the region's success in weathering the early impact of the crisis. Sharp increases in this populous part of the region in the early half of 2011 are likely bring to light a less positive assessment in the region's performance.

Figure 1.22. **Unemployment trends in Skåne's four corners, 2007-2011**



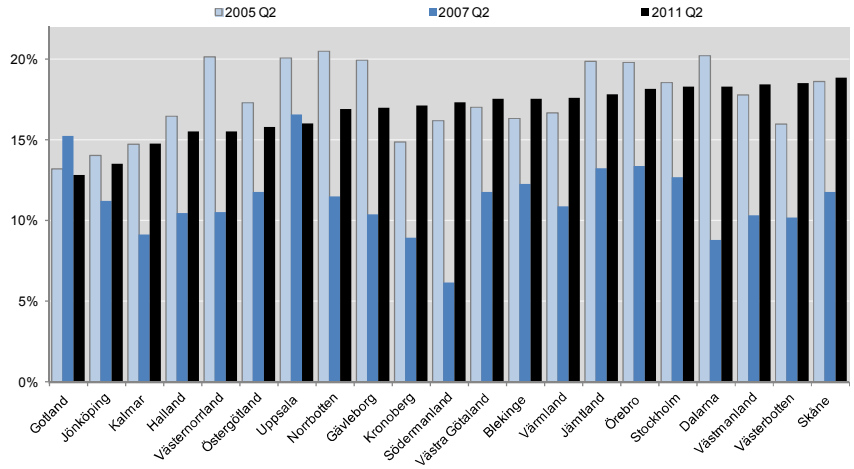
Notes: Unemployment as a percentage of working age population (not labour force).

Source: Based on data from Statistics Sweden.

Participation rates have remained resilient in the face of sustained periods of unemployment

Skåne has, thus far, managed to avoid the increasing inactivity rates that can accompany a long-lasting labour market shock. As the crisis continues and unemployment spells become longer, there is the risk that individuals move out of transient unemployment not into work, but by leaving the labour force and becoming inactive. When this happens, a crisis impact can leave a long-lasting scar on the economy. And the proportion of those workers not currently employed that continue to seek work is high in Skåne (Figure 1.23) indicating that falling employment rates are primarily associated with increased unemployment rather than increasing inactivity.

Figure 1.23. **Percentage of those out of work who are seeking work (the unemployed), 2005, 2007, 2011**



Note: Labour force data has a large margin for error at the regional level and hence should be taken as indicative of trends only.

Source: Swedish Labour Force Data.

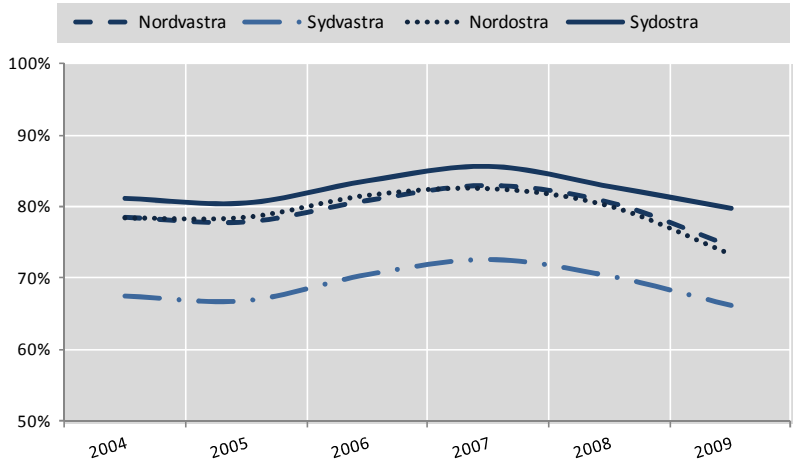
The crisis has highlighted challenges that were facing the region even before its onset. High population inflows require that the region must continually work to match new population inflows with productive employment in order to maintain constant employment rates. The onset of the crisis has made this challenge harder still and employment rates in the region have suffered. However, a relatively large proportion of those that have fallen out of employment as a result of the crisis have remained in the labour force and continue to seek employment. This may enable the region to minimise the long-term impact of the crisis and ensure that unemployment remains transitory. However, it also highlights the urgency of the challenge facing the region, in aiding those still seeking employment before the leave the labour force entirely in favour of inactivity.

Employment rates among youth are substantially lower than among older cohorts

Employment rates among those between the ages of 20 and 29 are substantially lower than among all adults across the Skåne region. Employment among this age group is between 15% and 33% lower than total employment rates.[12] The economic hub of south-west Skåne – which

incorporates Skåne's two largest agglomerations of Malmö and Lund – exhibits the largest disparity between youth and total employment rates, with youth employment fluctuating around 70% of total employment (Figure 1.24), though this is likely to be related to the larger number of students in south-west Skåne. Labour market vulnerability among youth manifests itself not only in high unemployment levels, but also in unemployment spells of longer duration. When in work, young people are often to be found on more precarious contracts. In the years following the onset of the crisis, employment disparities have become ever more stark as – occupying the most vulnerable positions even when in active employment – youth have been the first to suffer from increasing layoffs. This is likely to have substantial long-term consequences for productivity, as the more limited career expectations of young people reduce their incentives to embark upon potentially long and expensive studies.

Figure 1.24. **Youth employment compared to total employment (20-29 year olds), 2004-10**



Source: Based on data from Statistics Sweden.

Youth unemployment is not unique to Skåne – or Sweden. Indeed, in the majority of OECD countries, young people are facing increasing difficulties in entering the labour market compared with older, experienced workers. And, with the exception of Austria, Germany and Switzerland, none of the advanced economies saw a return of unemployment rates for younger people to pre-crisis levels in 2011. As a result, in many OECD countries, vocational training has become a major part of the policy package aimed at reducing youth unemployment.[13] The effectiveness of vocational training, in terms of

insertion into the labour market, is higher than general training (see for example Karasiotou, 2004), but Sweden – where technical and vocational education and training (TVET) is institutionally independent from industry – is a notable exception to this rule. The resultant mismatch between education and training outputs and labour market needs has led to an increased emphasis on VET in Sweden and, from 2011, the new upper-secondary school system will include a new apprenticeship-based pathway.

…and gender disparities are declining too slowly

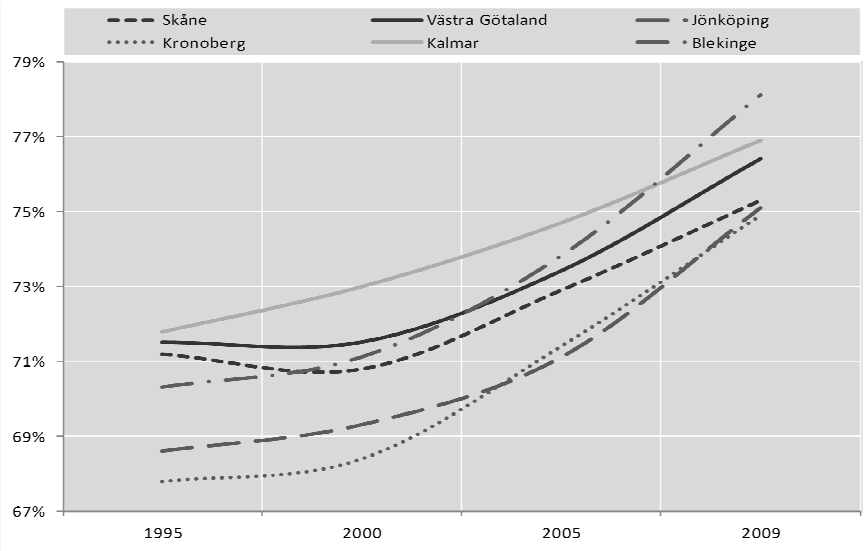
The disparity between the wages of male and female workers has fallen in Skåne since 1995, but this decrease has not kept pace with similar trends in Västra Götaland, or Skåne's north-eastern neighbours. In 1995, Skåne ranked relatively high in terms of gender wage equality, with average women's wages just over 71% those of men. At that time, women's average wages were as low as 68% of their male counterparts' in some neighbouring regions. However, while elsewhere in Sweden gender equality has made large strides in the intervening period, the reduction in the gender wage premium in Skåne has been relatively modest (Figure 1.25). Progress towards increasing the proportion of women in managerial positions also appears to have stalled relative to other regions (Statistics Sweden). At least in part, these figures are likely to represent a reflection of population influxes from cultures in which women have traditionally taken a less active role in the formal labour market. However, taken together, this evidence of a lack of progress suggests that Skåne is not operating at its full potential. If gender, in addition to ability, remains a factor in the appointment of business managers despite gender equality in educational outcomes, the distortion will necessarily impede efficiency.

Functional labour markets within Skåne are widening as employment geographically concentrates

A municipality is considered to constitute a local labour market, according to the criteria of Statistics Sweden, if: *i)* no more than 20% of the employees that reside in a municipality commute to work in other municipalities; and *ii)* the single largest outflow of employees is below 7.5% of resident employees. Where these conditions do not hold, the municipality is considered to form part of a larger local labour market area. According to these criteria, in 2009, Skåne comprised three local labour market regions: West Skåne, Kristianstad and Älmhult (located in Småland).[14] This represents a significant reduction from 1970 when Skåne was made up of 18 local labour markets.

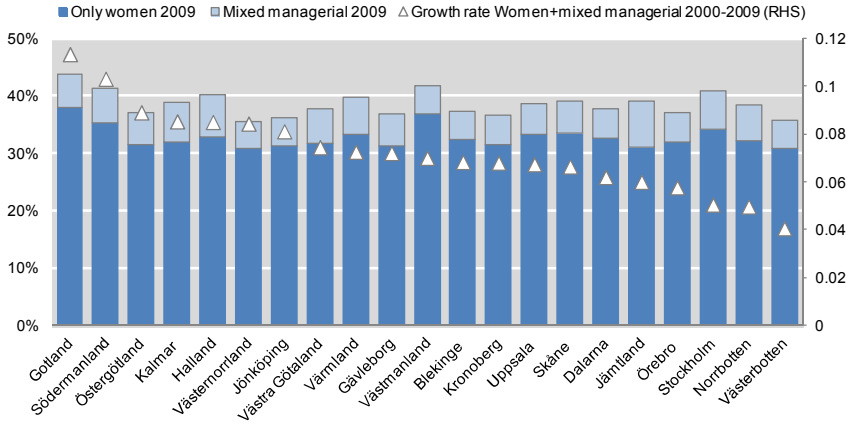
Figure 1.25. **Average wage of female workers (TL3), 1995-2009**

% of male average



Source: Based on data from Statistics Sweden.

Figure 1.26. **Women in managerial positions (TL3), 2000-2009**



Note: Mixed managerial refers to companies managed by both men and women, since the results are survey based, the precise definition was left open to the interpretation of those firms returning the survey.

Source: *Tillväxtanalys database*.

Commuting trends within Skåne are compounding, the municipalities that have always received commuters continue to do so at increasing rates, and those that lose commuters continue to do so in increasingly large quantities (see Figure 1.27). Commuting to Malmö has not increased dramatically over the past 20 years, and while net commuting to Malmö remains at a comparatively high level, it has been relatively cyclical, declining substantially during the early 1990s as Sweden's financial crisis hit Malmö's industrial employment severely. The increase in commuters attracted to Lund, on the other hand, has been stark as the university has attracted companies in the medical, chemical and information management clusters to relocate in the city since the early 1990s. The municipalities surrounding Malmö – Vellinge, Svedala, Burlöv, Staffanstorp, Lomma and Kävlinge – homing a substantial and growing number of commuters, and increasingly dependent on the labour market of the regional capital. Commuting is a relatively less widespread phenomena in the east of the country.

More educated workers and men tend to commute longer distances…

Commuting distance tends to be a positive function of education level (Figure 1.28) and in 2009 those with a higher or university level education commuted on average four kilometers further every day than their counterparts educated to the compulsory level. In addition, of those who commute into Skåne, those coming from Sweden's other large agglomerations have, on average, a higher level of educational attainment – nearly 50% of those coming from Stockholm and Västra Götaland have some higher education compared to an average of under 40% elsewhere This educational profile is likely a reflection of the higher wages necessary to render such long and costly commutes feasible. In terms of destination, the south-western corner of Skåne hosts more of the educated commuters.

And, at all levels of education male workers commute more than female workers. The proportion of female commuters is reducing in distance such that, among those travelling between 3 and 15 kilometres, women make up approximately half of all commuters with an upper-secondary education (approximately 60% and 40% for those with a university or compulsory education, respectively) whereas among those that commute over 35 kilometres on a daily basis, only 35% are women.

Figure 1.27. **Inward and outward commuting centres in Skåne**

A. 1999

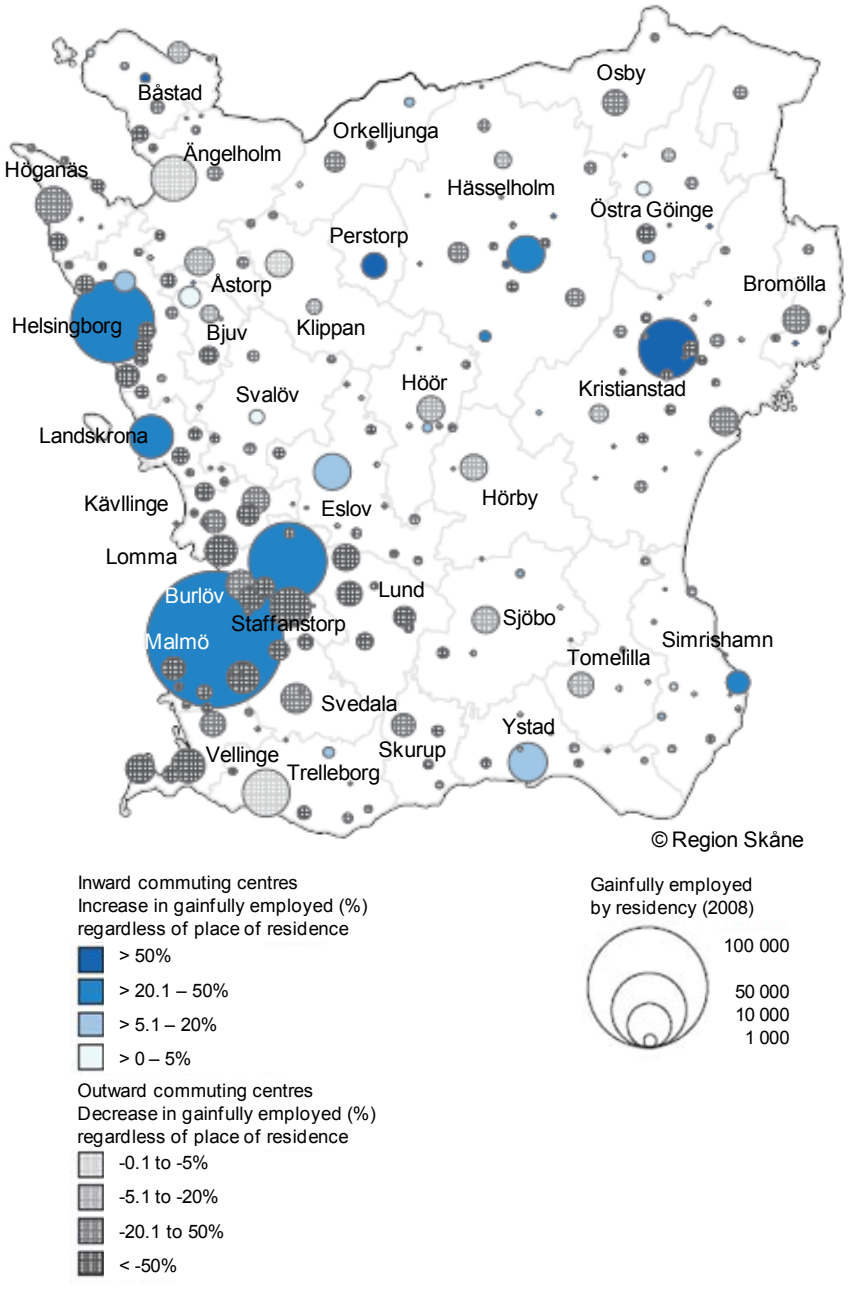
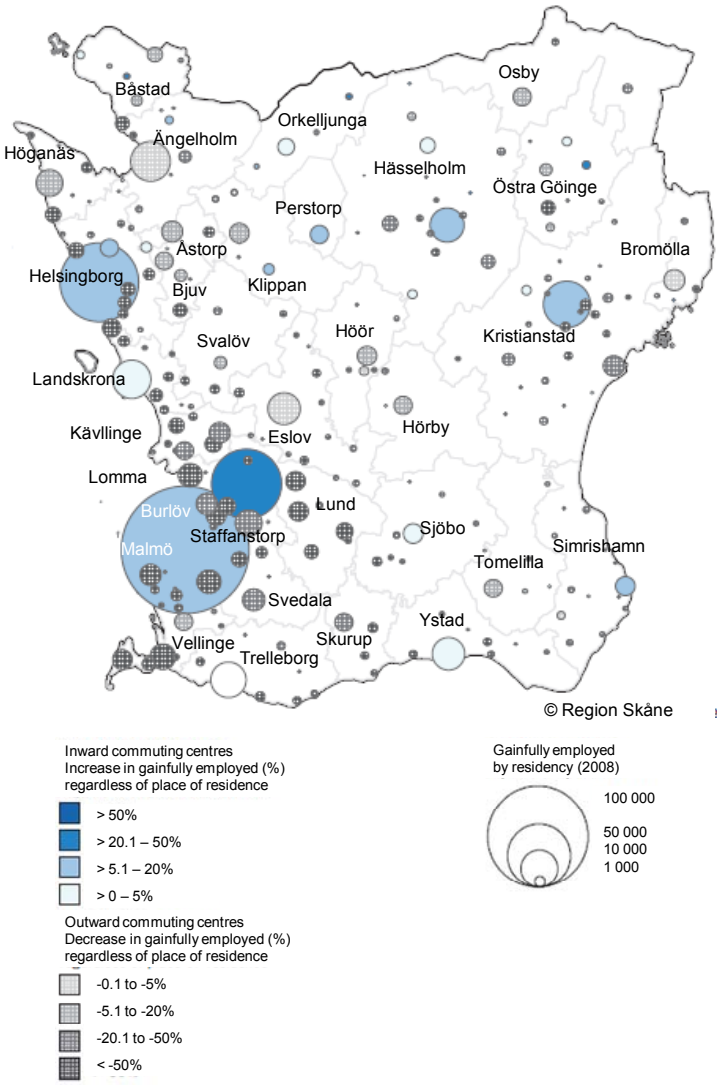


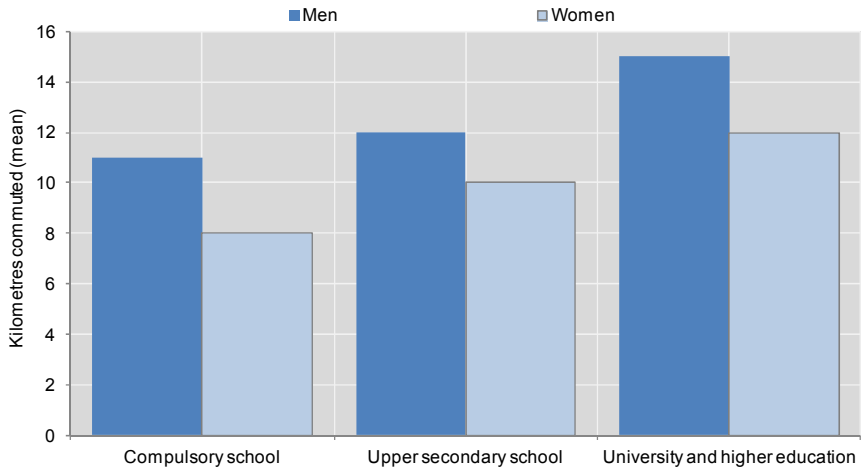
Figure 1.27. **Inward and outward commuting centres in Skåne** (*cont.*)

B. 2008



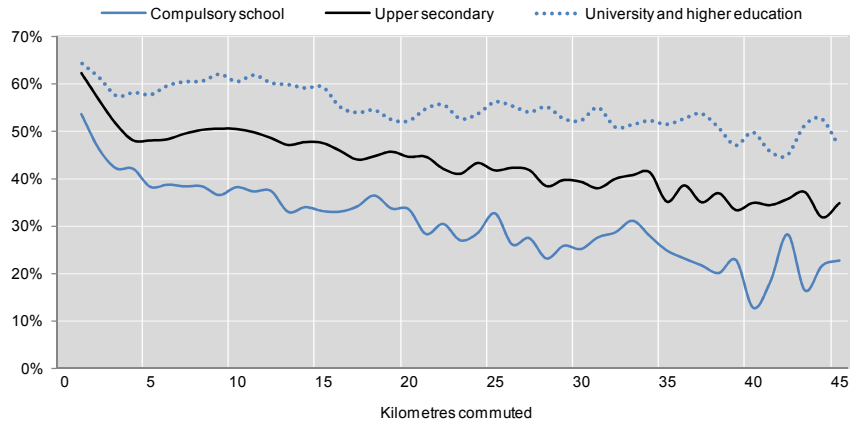
Source: Region Skåne.

Figure 1.28. **Commuting, by education, gender and distance, 2009**



Source: Region Skåne.

Figure 1.29. **Proportion of commuters who are women, by distance, 2009**



Source: Region Skåne.

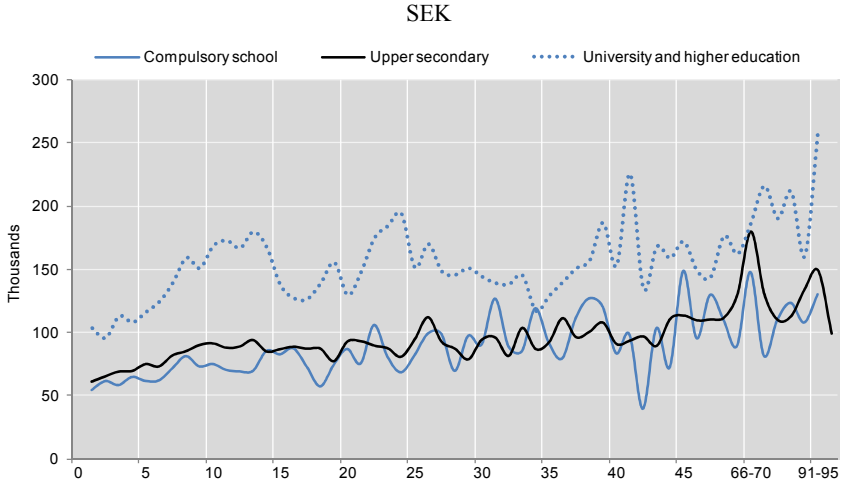
…and do so for a larger wage premium

Men tend to earn a higher wage premium for commuting than do women. This relation holds at all levels of education (Figure 1.30); however, the disparity is increasing in education level, such that where women with a secondary education who commute relatively short distances receive on average over SEK 60 000 (EUR 7 000) per year less than their male counterparts, women who commute over 60 kilometres can earn between SEK 110 000 and SEK 150 000 per year (approximately EUR 12 000-17 000) less than their male counterparts.[15]

In addition to commuters, Skåne attracts a large share of Sweden's international migrants

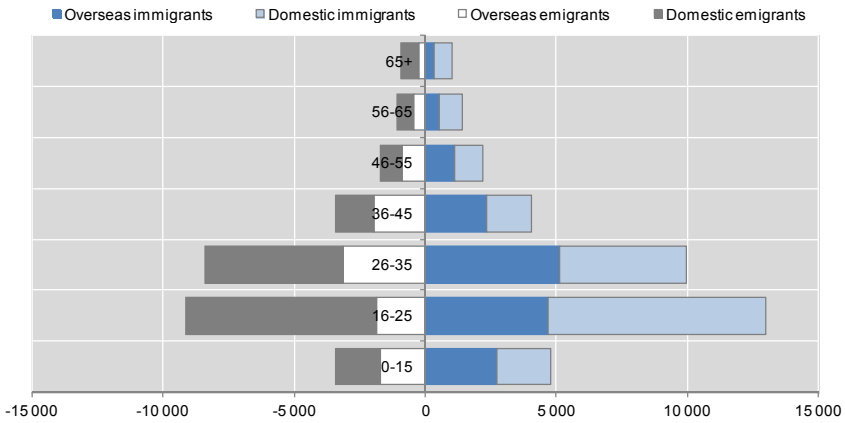
Skåne still attracts large migrant flows – both domestic and international. Net migration in Skåne was 5 829 in 2011 (down from 8 383 in 2010) and is concentrated among those aged 16-25 (Figure 1.31). This age breakdown is consistent with recent work that suggests that social capital, which develops over the course of a life, is one of the major barriers to migration (David et al, 2010), thus those who seek employment outside their city of origin in later life tend favour commuting over migration. This is consistent with the fact that, when broken down by migrant origin, overseas migrants – for whom commuting is not an option – tend to be somewhat older and are predominantly between the ages of 26 and 35.

Figure 1.30. **Commuting wage premium, by distance and education, 2009**



Source: Region Skåne.

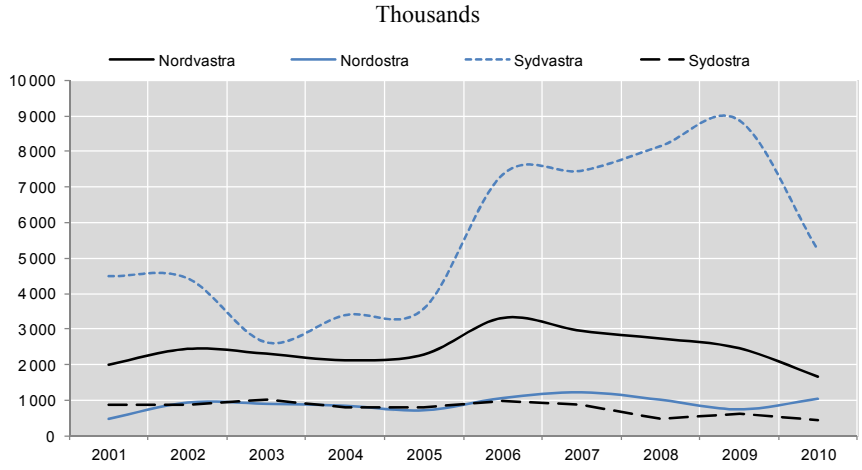
Figure 1.31. **Migrants to Skåne, by origin and age, 2010**



Source: Based on data from Region Skåne and Statistics Sweden.

Net migration over the past ten years has been highest into Skåne's south-western corner. This is most likely because the south-western corner of Skåne benefited from a dynamism driven by its international orientation and strategic geographical position. However, for the same reason, migration to the south-west of Skåne has also exhibited the most cyclical trend (Figure 1.32).

Figure 1.32. **Net migrants into Skåne's four corners**



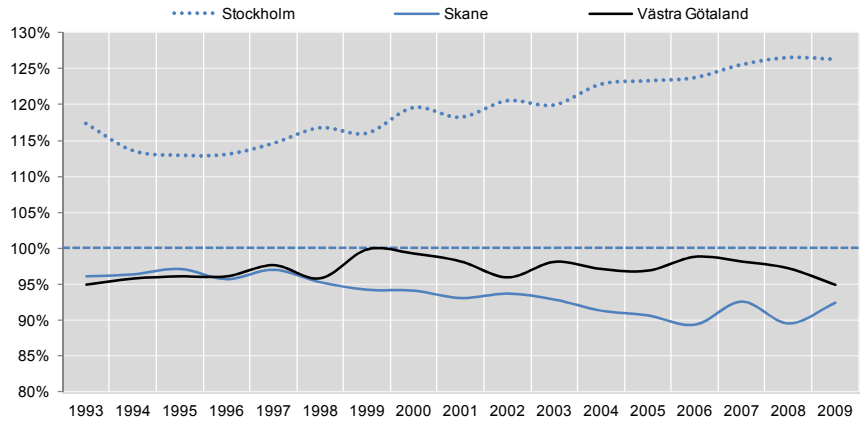
Source: Statistics Sweden.

1.3. Behind the trends

Specialisation and productivity

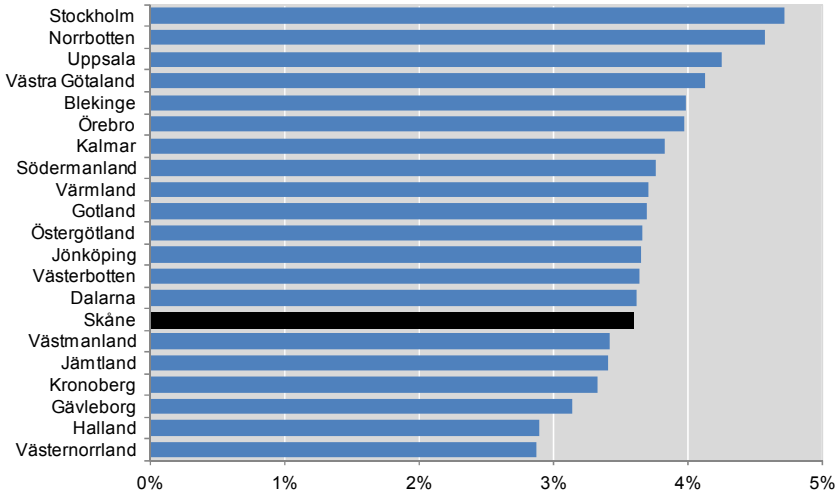
For the past two decades, Skåne and Västra Götaland have been underperforming relative to the rest of Sweden in terms of GDP per worker (Figure 1.33). In terms of GDP per worker, the need to integrate increasing arrivals into the workforce has meant Skåne has consistently underperformed the national average, Stockholm, and Västra Götaland. And until 2006, Skåne had experienced particularly low and declining productivity as the region has moved out of the high value-added manufacturing sector. Declining GDP per worker in response to population growth should not be interpreted as necessarily bad news. As long as the output of newly arrived workers in Skåne is above that which they were producing in their previous location, the aggregate impact will be positive. What is important, however, is that the newly arrived workers fully integrate and raise their productivity with time in the region. Indeed, prior to the crisis, strong growth between 2006 and 2007 started to reverse the negative trend in productivity. And though with the impact of the crisis the region lost much of the ground it had gained, the most recent figures, for 2009, indicate that this may have been just a temporary setback.

Figure 1.33. **GDP per worker relative to national average**



Source: Based on data from Region Skåne and Statistics Sweden.

Figure 1.34. **Annual rate of productivity growth (Swedish TL3 regions), 1995-2006**



Source: OECD Regional Database.

Over the past decade Skåne has moved into high-skill sectors and is increasing productivity

This was probably due in large part to the structural change taking place in the region, as Skåne moved into high human capital services such as financial intermediation, real estate and business and then became more productive in these areas. Regional specialisation is measured as the ratio between an industry's weight in a region and its weight in the country overall. When the index is above 1 a region can be said to be specialised in that industry. Box 1.7 illustrates the temporal pattern of specialisation in Skåne and its relation with productivity. Since sectoral employment in the region enters both indices (in the nominator of the employment specialisation index and in the denominator of productivity – defined as GVA per worker) in the absence of advances in gross value-added, and specialisation changes at the national level, one should expect an inverse relation between the two trends.

Box 1.7. **Definition: regional specialisation**

Regional specialisation in an industry is measured as the ratio of the industry's share of employment in a region to the industry's share in the country (Balassa-Hoover index). A value of the index above 1 shows greater specialisation than in the country as a whole and a value below 1 shows less specialisation. Industries are defined according to the International Standard Industrial Classification (ISIC).

Source: OECD (2009), *OECD Regions at a Glance 2009*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/reg_glance-2009-en*.

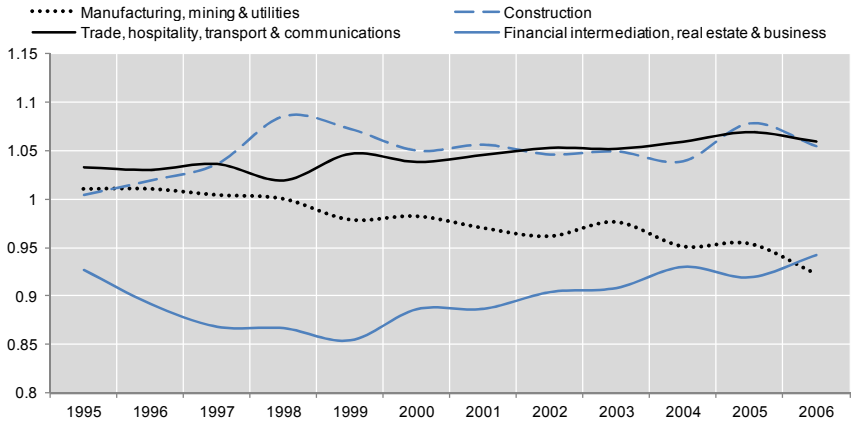
Employment specialisation in high-skill services (financial intermediation, real estate and business services) has been increasing since the turn of the century. And, given that this sector is characterised by high productivity, this change in specialisation has resulted in a compositional boost to aggregate productivity in Skåne. However, productivity growth in the sector has been less marked (Figure 1.36). At the same time, Skåne has been moving out of the manufacturing sector (Figure 1.35), a sector characterised by high productivity growth rates. The challenge facing the region going forward will therefore be to sustain productivity growth when compositional boosts have been exhausted.

At the same time, specialisation in construction and trade, hospitality, transport and communications has remained high and roughly constant in Skåne. These sectors remain relatively unproductive (Figure 1.36), yet are an important source of employment among the lower skilled workers in the region (Figure 1.35). Moving to those sectors with higher productivity and productivity growth, while at the same time maintaining employment, will require a focus on human capital and an increased emphasis on labour force skills upgrading across the labour force, rather than just those at the higher end of the skills spectrum.

Diversification in Skåne has been aided by high levels of human capital

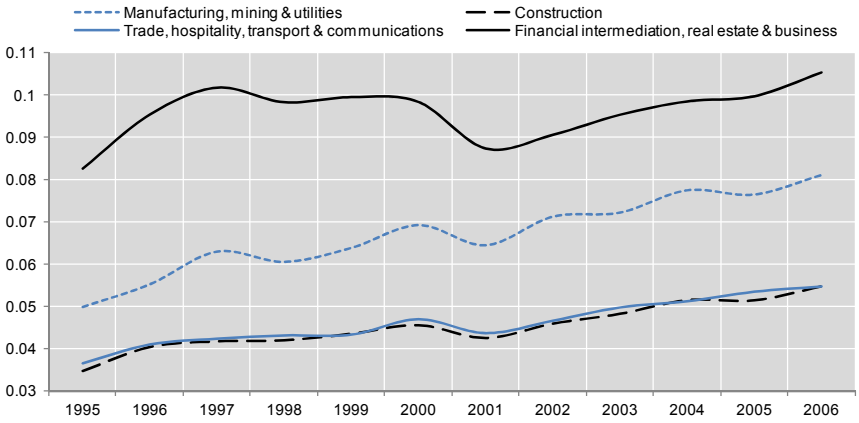
Skåne's success in moving from a heavy dependence on manufacturing to an increasing specialisation in financial intermediation, real estate and business services is characteristic of an agglomeration rich in human capital.

Figure 1.35. **Employment specialisation, Skåne, 1995-2006**



Source: OECD Regional Database.

Figure 1.36. **Productivity by industry, Skåne, 1995-2006**

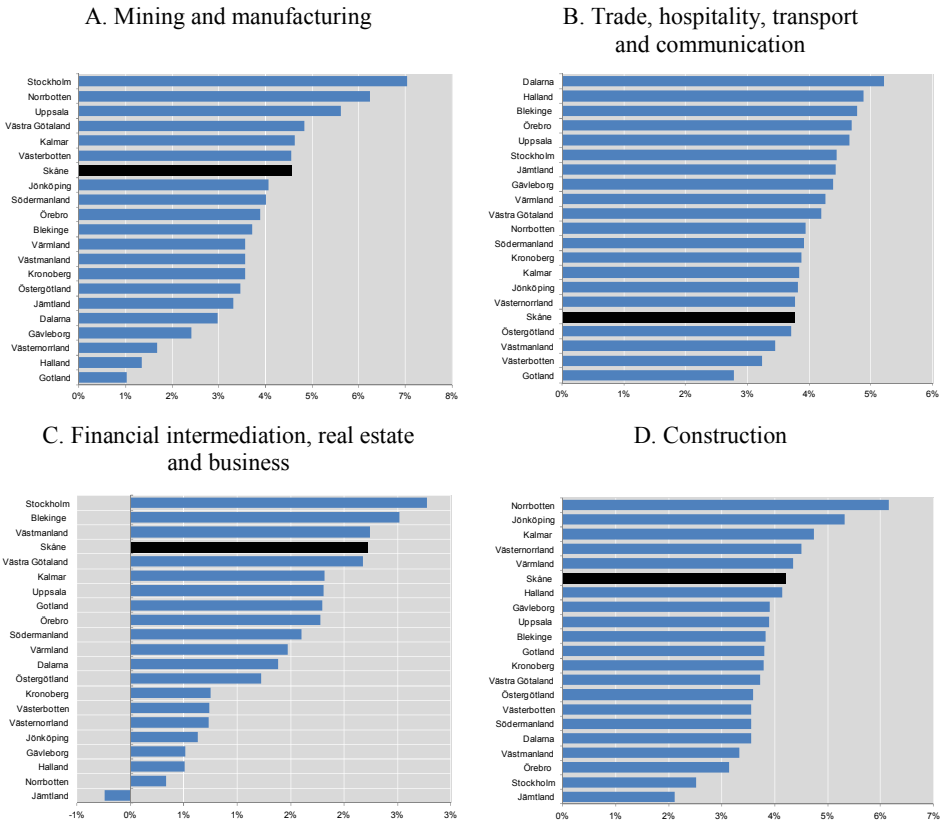


Note: Productivity measured as the ratio of sectoral gross value added (GVA) to sectoral employment.

Source: *OECD Regional Database*.

Research on agglomeration externalities and the role of skills in urban growth (Glaeser and Saiz, 2003) has found that metropolitan areas with high levels of education and significant manufacturing switched from manufacturing to other industries faster than high-manufacturing areas with less human capital. These results suggest that, in addition to their impact on productivity, skills are valuable because they help cities adapt and change their activities in response to negative economic shocks.

Figure 1.37. **Sectoral productivity growth rates across Sweden's regions, 1995-2008**

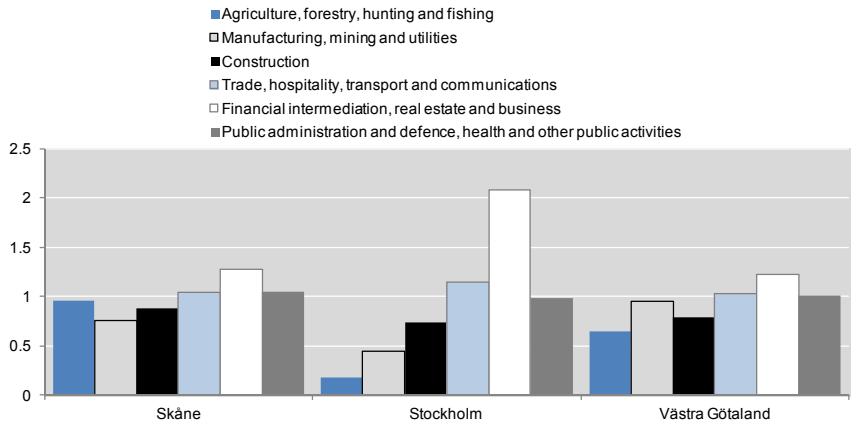


Note: Productivity measured as the ratio of sectoral gross value added (GVA) to sectoral employment.

Source: *OECD Regional Database*.

By the time the financial crisis hit in 2007, Skåne's labour market was fairly well diversified (Figure 1.38). The region was dealt a strong blow by the recent financial crisis, but the structural changes that were unfolding in Skåne prior to the crisis ensured that the impact of the drop in global demand, which mainly affected output in the manufacturing sector, was short lived.

Figure 1.38. **Relative specialisation in Sweden's agglomerations, 2007**



Source: OECD Regional Database.

The challenge over the coming years will be to maintain productivity growth in the high-skilled service sector as the region becomes more specialised in this area. This will require a focus on training, education and human capital formation such that the Skåne's labour force is able to supply the skills that this growing sector demands, and at the same to remain flexible in order to respond rapidly to changing patterns in global demand.

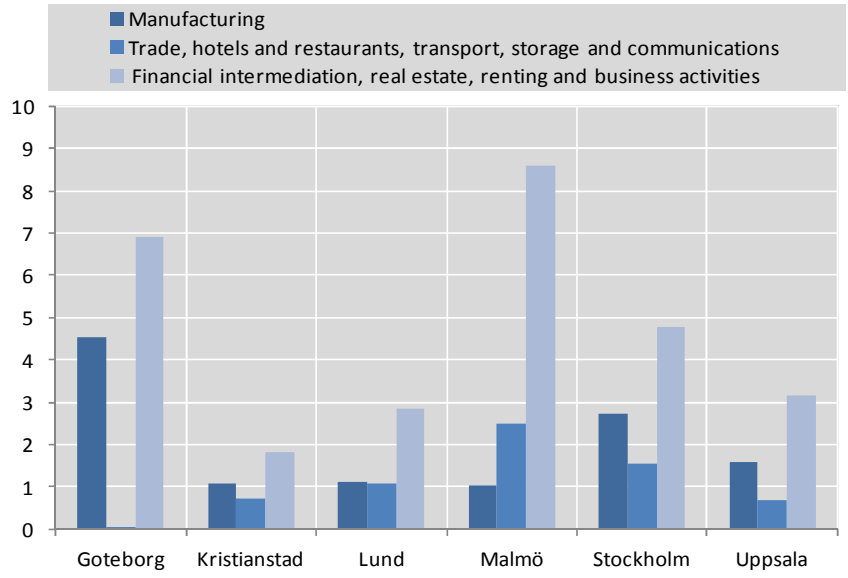
Human capital

The region of Skåne is rich in human capital

The region of Skåne produces a large proportion of Sweden's graduates and has maintained this proportion as the number of university graduates has increased over the past 15 years (Figure 1.40). The universities located in Skåne – Lund, Malmö and Kristianstad – account for 15% of Sweden's total graduates.[16] While the contribution of the University of Lund has been decreasing somewhat, this has been offset by increases in the numbers of graduates coming out of the universities of Malmö and Kristianstad.

Figure 1.39. **Profit per worker by sector, 2009**

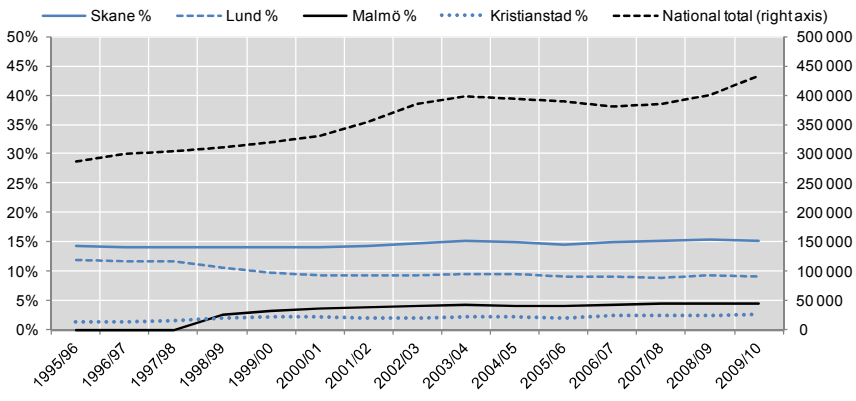
EUR thousands



Note: This database is characterised by small sample sizes and a high variance in profit levels. It should therefore be taken as indicative only.

Source: ORBIS firm level micro data.

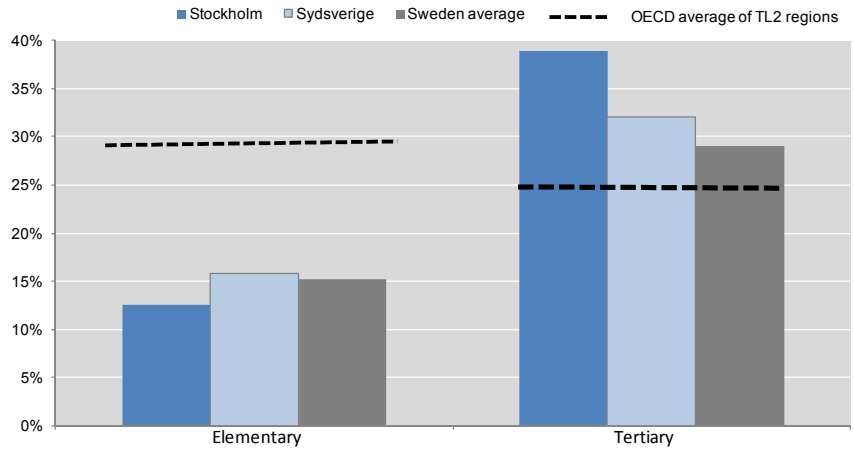
Figure 1.40. **Skåne's university graduates, 1995-2010**



Source: University registries, provided by Region Skåne.

High regional graduate output translates into a high proportion of tertiary educated labour. In 2008, in the TL2[17] region of Southern Sweden – which contains Skåne and Blekinge – over 32% of the labour force had a tertiary education. This is a significantly higher proportion than the average of TL2 regions in the OECD, and in Sweden, it is second only to Stockholm (Figure 1.41).

Figure 1.41. **Labour force education levels (TL2), 2008**



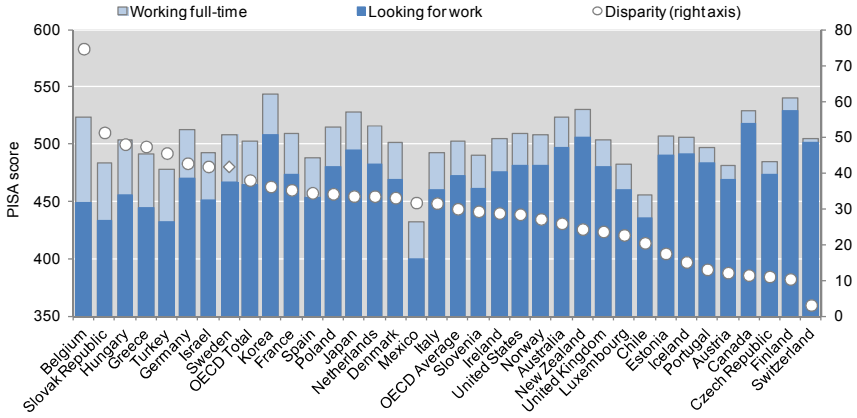
Source: OECD Regional Database.

Educational attainment in the region exhibits a high variance and passes from generation to generation

However, the TL2 region of Southern Sweden is also characterised by a sizeable number of individuals with only an elementary education (ISCED 0-2). Whilst lower than the proportion of elementary educated workers in the average OECD TL2 region, this proportion not only remains higher than in Stockholm, but also in the average TL2 region in Sweden, implying a higher than average diversity in the education levels of the region's workforce. Sweden's universal voucher scheme should, in theory, enable parents to choose the school in which their children are educated without cost calculations entering their decision calculus. However, the necessary commuting costs, combined with a high variance in house prices across municipalities, ensures that equality impact of this policy remains moot (Box 3.4, Chapter 3).

This picture of **relatively** diverse educational outcomes is rendered more worrying by the extent that it passes across generations. While Swedish students perform well on standardised PISA reading tests relative to other OECD countries, the disparity between those whose father is in work and those whose father is unemployed, is relatively large (Figure 1.42, the disparity between the PISA score of those whose father is in work or looking for work is represented by the white dot on the right axis). The picture of educational attainment disparities with respect to immigrant status is similarly stark; in 2009 Sweden had the third largest difference in the attainment scores of the native population and its immigrants among OECD countries. These disparate attainment levels persist among second-generation immigrants, indicating that they cannot be put down to immigrants arriving with poorer reading skills. These figures present national level data and as such do not give a picture of Skåne's performance relative to the rest of Sweden. Yet, Skåne has both a high unemployment rate and a high proportion of immigrants relative to the rest of the country, and as such, these concerns are likely to be relevant to the region.

Figure 1.42. **Impact of father's employment status on reading ability, national data 2009**



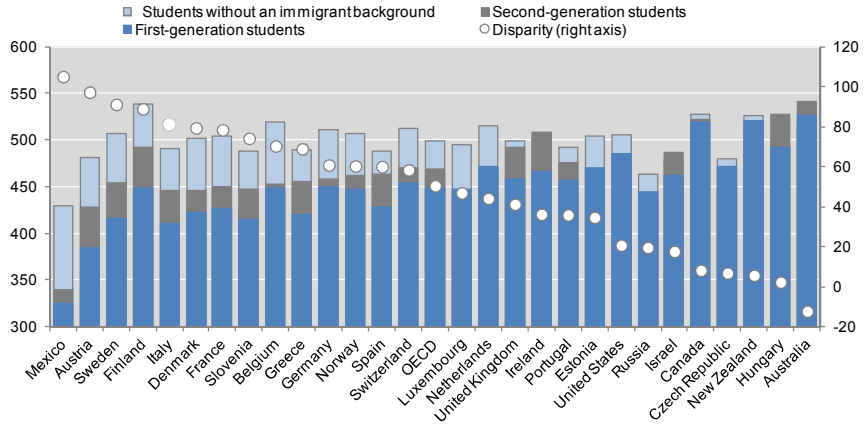
Note: The data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD PISA 2009 Database, *http://dx.doi.org/10.1787/888932343342*.

…and limits integration of migrants

Educational disparities between Swedes and migrants remain significant among second-generation migrants. PISA data is not available at the regional level in Sweden; however, at the national level Sweden performs very poorly in integrating migrants through the education system. The disparity among the educational performance of the children of Swedish nationals and the children of immigrant parents is among the largest in the OECD (Figure 1.43 – the white dot, on the right axis, represents the difference in PISA score between those without an immigrant background, and those who are first-generation immigrants).

Figure 1.43. **Impact of immigration status on educational outcomes (national), 2009**



Source: OECD PISA 2009 Database, *http://dx.doi.org/10.1787/888932343342*.

Innovation

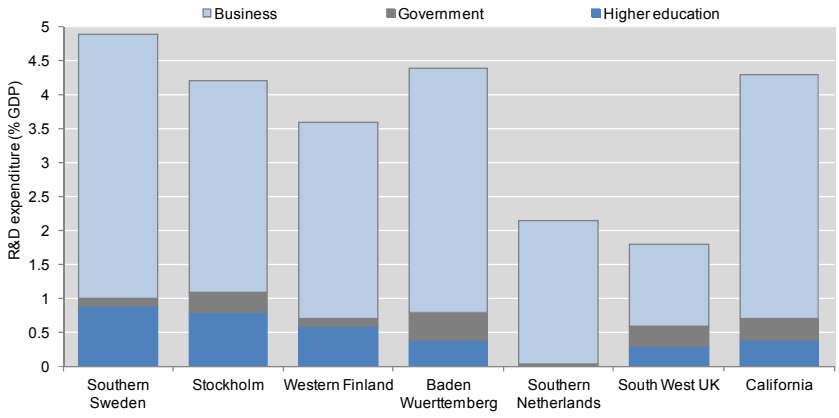
In terms of R&D investment and patents, Skåne is among the most advanced in the OECD

Skåne belongs to the most advanced category of EU regions from an innovation point of view: the "knowledge and technology hubs".[18] Even within this strong peer group, Southern Sweden generally performs better than the average for most variables.[19] With R&D expenditure of 4.9% of GDP, Southern Sweden ranks among the highest R&D investors – investing more than Stockholm and most of the region's peers under the "knowledge and technology hub" classification. More encouraging still, much of this investment originates from business (Figure 1.44).

High levels of R&D investment are accompanied by high levels of employment in R&D. Employment in R&D in Southern Sweden is above that of many of its peers in the "knowledge and technology hubs" category, resulting from the high levels of R&D personnel employed within the business and higher education sectors. However, 2.7% of total employment in R&D makes up a lower proportion than in the capital regions of Stockholm and Copenhagen. Highly skilled employment is more concentrated in services than in manufacturing: if knowledge-intensive services (KIS) employment is particularly high, the same is not true for high-tech manufacturing (HTM) as a share of total manufacturing employment, where Southern Sweden performs better than Western Finland and Southern Netherlands only. The region also shows high participation to lifelong learning activities, even if not at the level of Denmark Capital Region.

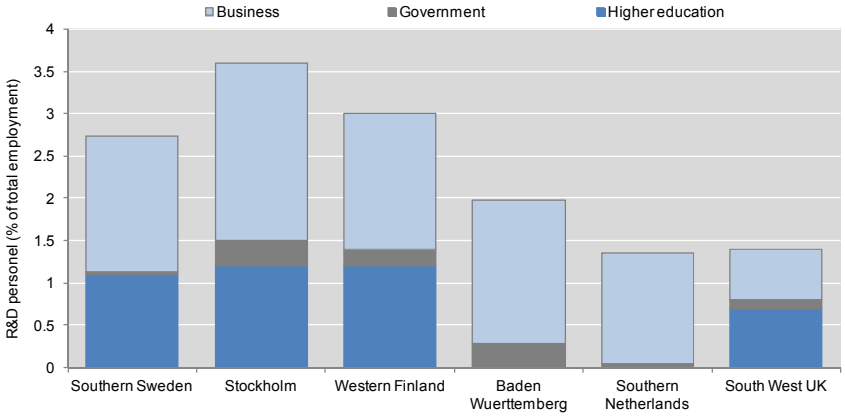
In terms of patents, Southern Sweden performs relatively well compared to its peer regions. However, the dominance of large firms and the sector specialisation in Skåne may lead to an overly favourable picture, as both large firms and the pharmaceutical sector tend to patent a larger proportion of their innovations (Arundel and Kabla, 1998). A more complete picture of innovation performance – that highlights the weak links in the innovation process – looks at the entire value chain. Specialising in the knowledge-intensive services, and in R&D, the value chain in Skåne is relatively short; production is often carried out elsewhere.

Figure 1.44. **R&D expenditure in knowledge hubs, 2008**



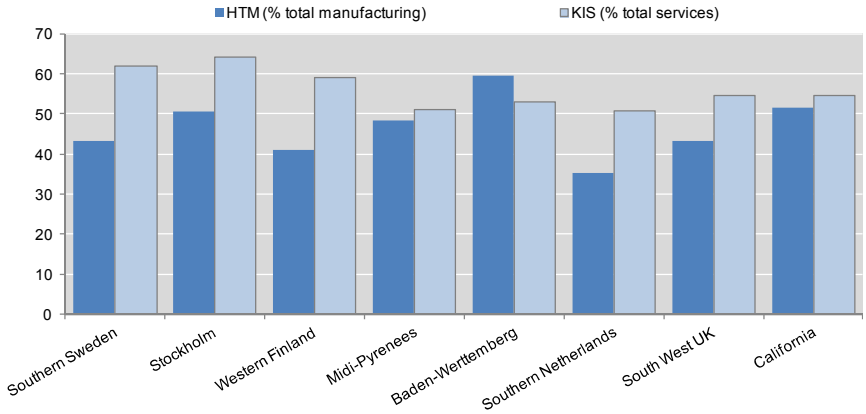
Source: OECD Regional Database, selection of peer regions in knowledge and technology hubs category.

Figure 1.45. **R&D employment in Southern Sweden and other knowledge and technology hubs, 2008**



Source: *RDP Regional Database*, selection of peer regions in knowledge and technology hubs category.

Figure 1.46. **Proportion of high-skilled, knowledge-intensive employment, 2008**



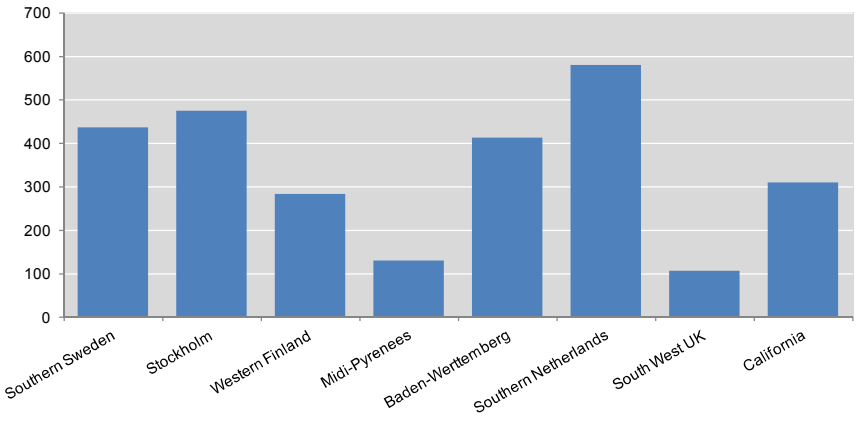
Source: OECD Regional Database, selection of peer regions in knowledge and technology hubs category.

Entrepreneurial dynamism and new firm creation

Skåne shows dynamism in new firm creation but weakness in new firms' growth

Newly created enterprises are heavily concentrated in the agglomerations in Sweden, with Skåne accounting for 15% of all start-ups nationwide. This is less than the proportion originating in Västra Götaland or Stockholm; the latter accounts for over 31%. However, Skåne is relatively dependent on its newly created enterprises and their proportion in total regional enterprises is the highest outside the capital region (Figure 1.48).

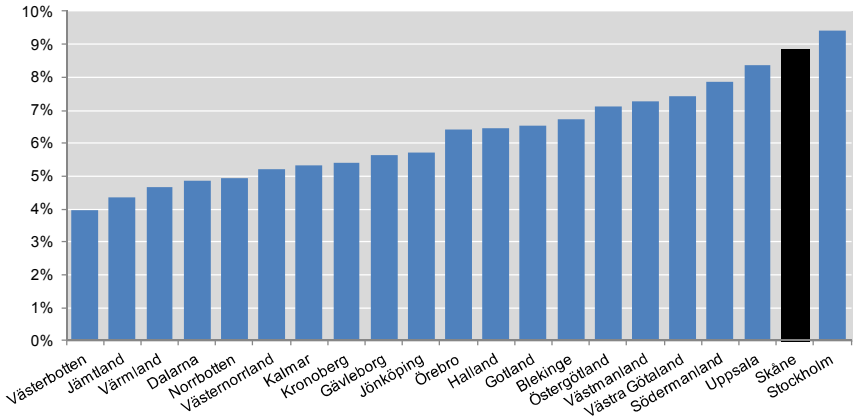
Figure 1.47. **PCT per capita patent application in knowledge and technology hubs (average 2005-2007)**



Source: OECD Regional Database, selection of peer regions in knoweldge and technology hubs category.

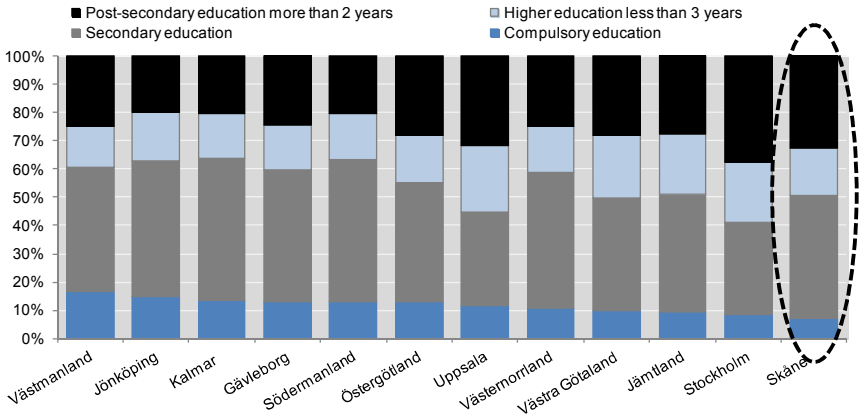
A large proportion of new enterprises are created by those with higher levels of education. Among those regions with data available across the education spectrum, Skåne has the smallest proportion of new enterprises created by those educated to compulsory levels only (Figure 1.49). Furthermore, the proportion of new enterprises created by those with a post-secondary education, at 32%, is second only to the proportion in Stockholm.

Figure 1.48. **Newly created enterprises as a proportion of total regional enterprises (TL3), 2009**



Source: Tillvaxtanalys database.

Figure 1.49. **Number of newly created enterprises by education level (TL3), 2009**



Note: Includes only those counties where there is available data on all education levels. Counties where numbers are too small or unavailable (Kronoberg, Halland, Gotland Västerbotten, Värmland, Blekinge, Örebro, Norrbotten, and Dalarnas) are not included.

Source: Tillvaxtanalys database.

This is encouraging in terms of innovation potential for those companies; however, it also points to under-utilised entrepreneurial potential among those with lower levels of education. In the context of the limited employment capacity of Skåne's newly created micro enterprises, it is important to ensure that the climate of entrepreneurship and the support for potential entrepreneurs is spread throughout the labour force to ensure that the population as a whole is able to contribute to the productivity of the region.

1.4. Policy challenges in Skåne – moving forward

Innovation and firm growth

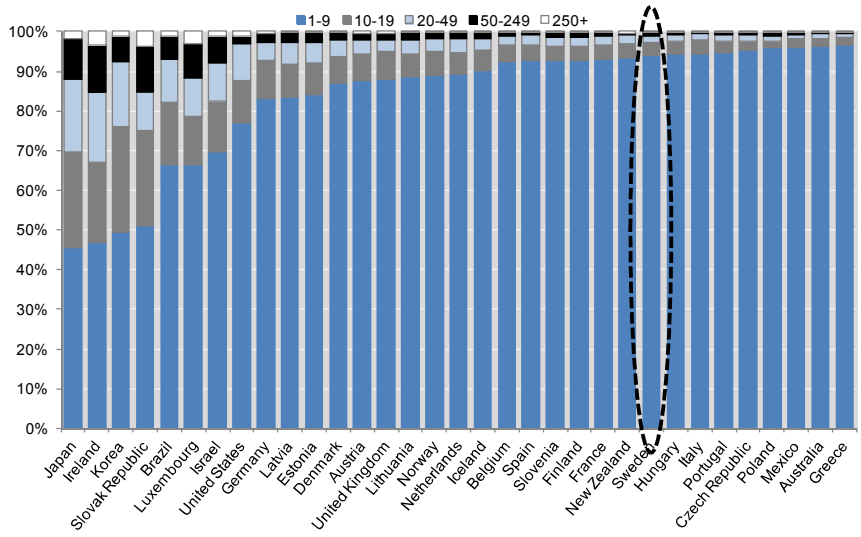
There is a lack of evidence-based evaluation of the dynamics of the regional innovation system

A large part of the challenge faced for innovation in Skåne does not come across in the numbers. The lack of numbers regarding the translation of ideas into practice and results, is, in itself, a large part of the challenge. The region currently collects little evidence to facilitate the move from vision to action plan. Measuring the value-added of policy initiatives in order to provide evidence based justification to continue and scale-up those with tangible results remains a key challenge in Skåne. Data on innovation inputs and outputs, on science-industry interactions, on cluster size and dynamics, on innovation partnerships, on international orientation of innovation practice, on innovative start-ups, etc. are not available at the regional level. Such data are needed to define the goals for innovation policy and fine-tune the policy toolbox accordingly.

Early stage growth among emergent companies remains limited

The economic impact of Skåne's dynamism in new business creation is constrained by the limited size of new businesses. The numbers of workers employed by those firms operating in Malmö and Lund, particularly in the financial sector – a sector in which Skåne is becoming increasingly specialised – are particularly small. The size of firms in Skåne's cities appear to be smaller than those in Stockholm and whilst they remain marginally larger than those in Goteburg (OECD, 2011a) in making this comparison, it should be noted that the proportion of enterprises employing fewer than ten people in Sweden is among the highest in the OECD (Figure 1.50).

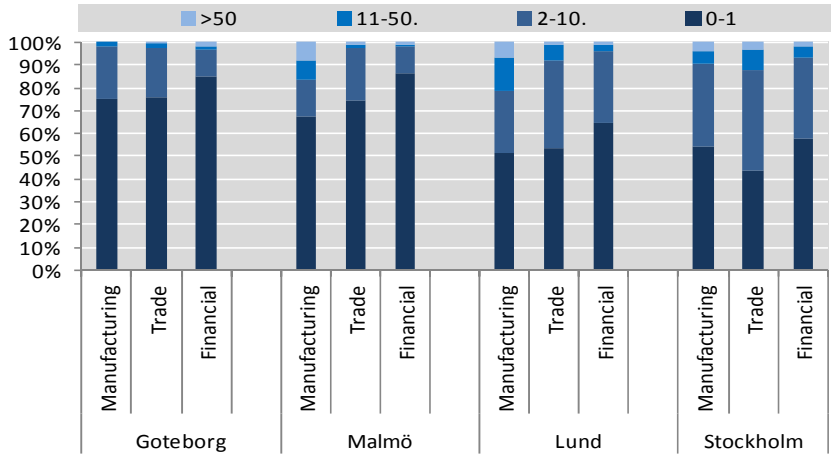
Figure 1.50. **Enterprises by size in OECD countries, 2007**



Note: The data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2011), *OECD Entrepreneurship at a Glance 2011*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264097711-en*.

Figure 1.51. **Class size of firms operating in Swedish agglomerations by sector, 2009**



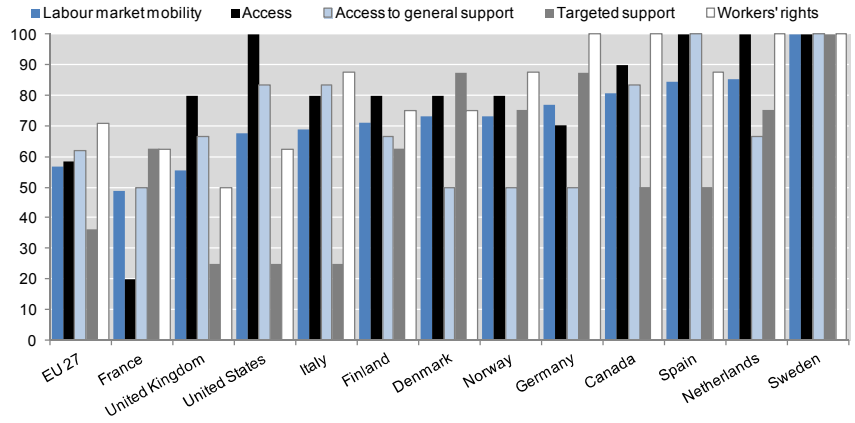
Source: ORBIS firm level micro data.

Social cohesion and utilising Skåne's foreign-born population

While legislation aimed at the integration of migrants is highly developed…

Sweden is the highest scoring country among the 33 countries covered by the Migration Integration Policy Index; an index compiled by the Migration Policy Group and the British Council which incorporates various dimensions of integration policy to facilitate cross-country comparison of the multiple factors that influence the integration of migrants (Figure 1.52). This index includes factors such as access to public, private, and self-employment comparing migrants to nationals, access to general support services such as public employment services, education and vocational training, and recognition of qualifications obtained outside the European Union, as well as access to further targeted support.

Figure 1.52. **Migration integration policy index, 2010**



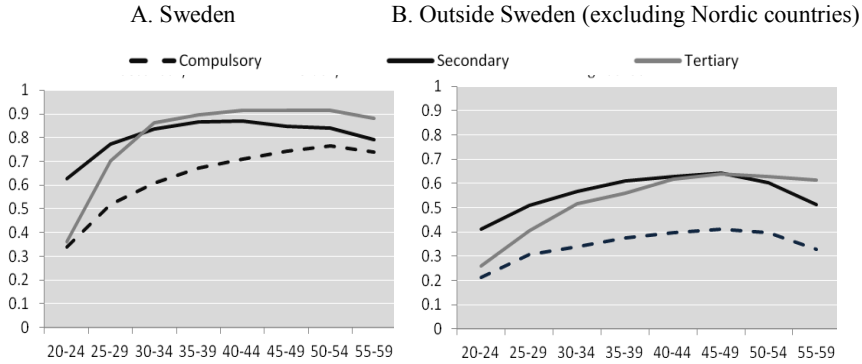
Source: Index compiled by the Migration Integration Group and the British Council (*www.mipex.eu*).

…employment rates and wages among Skåne's migrants, are substantially below those of Swedes

Employment rates among Skåne's migrants are not only lower than among native Swedes, but reach their peak at a later age (Figure 1.53). Whereas nearly 80% of Swedish-born workers with a tertiary education are employed by the time they reach 30-34 years old, the comparable figure among those born outside Nordic countries is only 50%. Migrant employment rates do not peak until migrants are between 40 and 45,

suggesting that even of those migrants that do succeed in finding a position in the Swedish labour market take many years to do so. This may result from language barriers or inefficiencies in qualification harmonisation, but less tangible factors may also play a role.

Figure 1.53. **Employment rate by age, education and origin country, 2009**

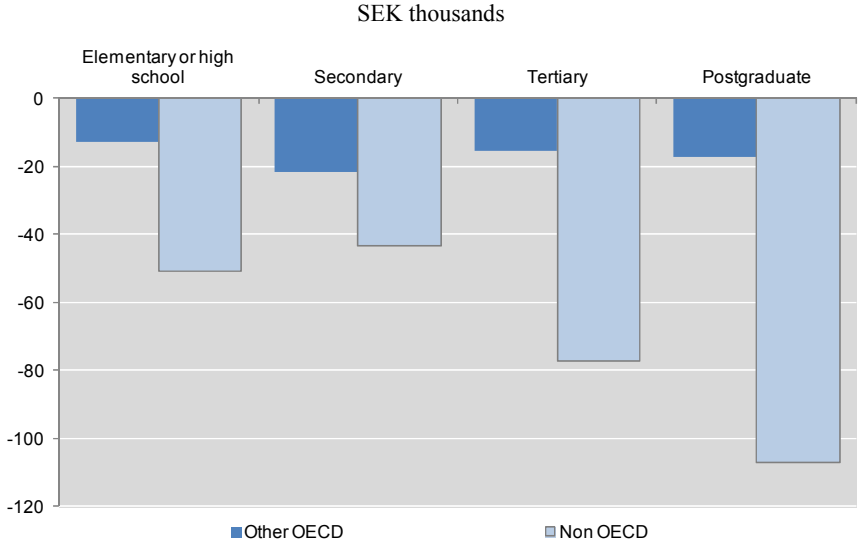


Source: Based on data from Statistics Sweden.

The disparities in wages between Swedish workers and migrants are severe; a migrant worker from a non-OECD country with an elementary or high school education can, on average, expect to earn nearly SEK 40 000 (EUR 4 500) less per annum than their Swedish counterparts (Figure 1.54). While a degree of this wage differential can be attributed to the variable quality of education systems in origin countries, this explanation goes little way to explaining the still substantial wage differential between OECD migrants with a low level of education and similarly qualified Swedes. The wage penalty incurred by virtue of migrant status is increasing with the level of education of the migrant, indicating a lack of adequate qualification harmonisation – whether formal or informal.

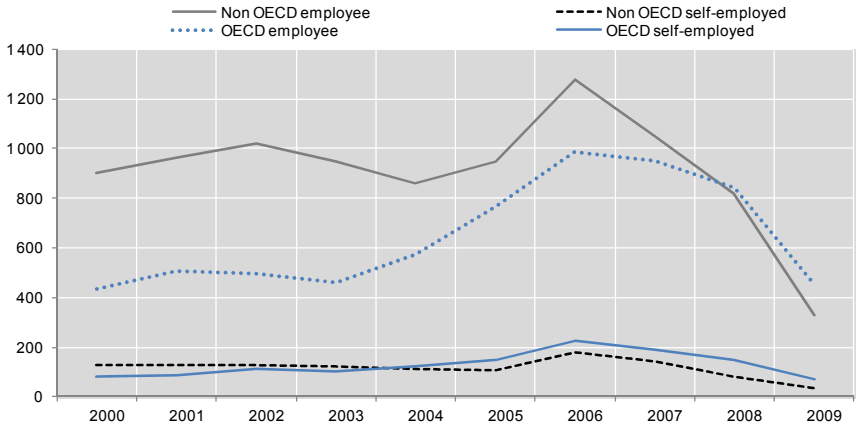
Among migrants originating from OECD countries, self-employment accounts for a large proportion of total employment (Figure 1.56). There are two potential explanations for this finding. The first is that the cross-fertilisation of knowledge from other countries foments innovation and entrepreneurship. The second, less positive explanation, is that migrants may be finding it difficult to get access to the formal labour markets and as such, are left to self-employment as the only available alternative.

Figure 1.54. **Wage disparities (compared to workers of Swedish origin), Skåne, 2009**



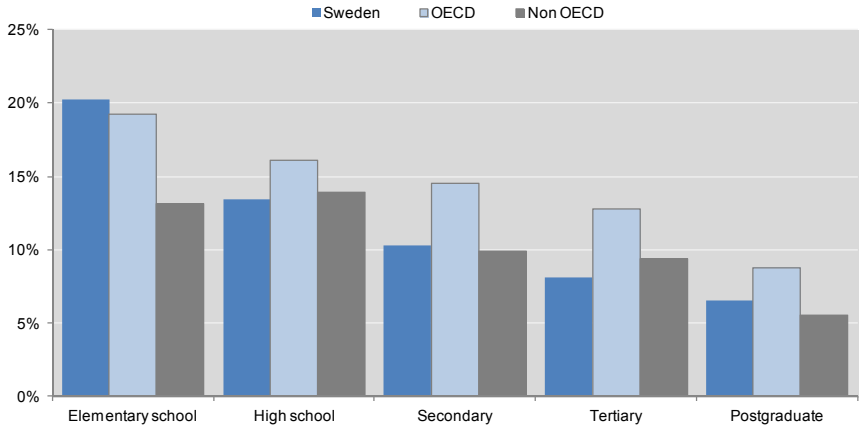
Source: Based on data from Statistics Sweden, population register and the register-based labour market statistics (RAMS).

Figure 1.55. **Employment by type of population by country of origin, Skåne, 2009**



Source: Based on data from Statistics Sweden, population register and the register-based labour market statistics (RAMS).

Figure 1.56. **Share of self-employment in total employment, native and foreign born, Skåne, 2009**



Notes: Defining entrepreneurs is not straightforward. The above uses self-employed which corresponds to the Eurostat definition covering "individuals who work in their own business, professional practice or farm for the purpose of earning profit" (Eurostat, 2003). However, additional entrepreneurs may not classified as self-employed, thus this should be regarded as a lower bound.

Source: Based on data from Statistics Sweden, population register and the register-based labour market statistics (RAMS).

Creating an attractive environment

Skåne benefits from strong infrastructural networks and a strategic location

Infrastructure is an important factor not only in productivity of inputs but also in ensuring that the region is attractive to international migrants and tourists. Investments in infrastructure can reduce transport and transaction costs, rendering the region a more attractive choice in business location decisions. This can, in turn, lead to increased employment and regional growth. Skåne benefits from strong infrastructural networks, not only within the country but across international borders. The strategic position of the region, close to Denmark and the rest of Northern Europe, combine with the thick labour market to endow the region with a strong opportunity to attract business investment. Access to the large international airport of Kastrup, via the Öresund Bridge, and two of Sweden's three largest ports (tonnage) –

Trelleborg and Malmö – and the country's second largest container port – Helsingborg.

Skåne is well endowed relative to the rest of Sweden, when it comes to infrastructure but faces relatively heavy usage. In terms of kilometres of road per square kilometer, Skåne has a strong road network relative to the Swedish average and has substantially more paved road than Sweden's other intermediate agglomeration of Västra Götaland. However, in terms of kilometres per capita Skåne falls below the average for Sweden, and the high number of journeys made per inhabitant, combined with the average length of these journeys, paint a picture of relatively heavy use of Skåne's road infrastructure – second only to Stockholm. Rail infrastructure in the region is also heavily used, a burden that increases as Skåne's population expands (see Chapter 4). Communications infrastructure is similarly strong in the region, and in 2009 an estimated 97% of Skåne's population had access to broadband Internet while 27% had access to fibre-optic broadband directly to their homes.

Yet infrastructure improvements present a double-edged sword, and, if unaccompanied by other regional development efforts, can lead to dangers of "leaking by linking". This occurs when improved infrastructure enables firms and highly skilled, highly paid individuals to leave the region, benefitting from lower transport costs to supply goods, services, and labour to the local population from elsewhere (OECD, 2010c). With Copenhagen just 35 minutes away by train, such leaking presents a real concern in Skåne.

Fostering a entrepreneurial environment: Skåne's potential to become an attractive and dynamic hub

Many of the pieces are in place in Skåne to create a high-tech, high-skill and entrepreneurial environment. The region is well located with good infrastructural links, incubators are successfully working with local entrepreneurs, and the opening of Max IV will provide employment for high-skilled labour. In order to retain high-skilled labour and capitalise and expand on the entrepreneurial base, Skåne will need to ensure an attractive, vibrant and inclusive environment.

Tackling these challenges is not a straightforward task and these issues – alongside others – will be taken up further in Chapters 2, 3, and 4, which address innovation, labour markets and the environment, respectively, and take a closer look at the existing policies in place in Skåne providing some policy advice based upon examples from elsewhere in the OECD.

Conclusion

Skåne is without a doubt well placed to become one of the OECD's most competitive regions. Its strong innovation potential and young labour force provide a sound base from which to engage with the global economy as emerging markets contribute to increasingly sharp competition among manufactured goods. Nevertheless the region faces challenges, challenges in spreading the dynamism across the economy and providing opportunities across the labour force – among the high and low skilled, the young and old, and the native and foreign born. The success of the region in fulfilling its potential and achieving inclusive growth will largely depend on its ability to overcome these challenges.

Notes

1. Sweden has approximately 20 people per square kilometre; in Finland the comparable figure stands at 16, in New Zealand 15, Norway 14 and just 3 in Australia, Canada and Iceland.
2. There are 21 counties but only 20 county councils as the county council of Gotland was merged into Gotland municipality in 1971.
3. The low density of Sweden as a whole disguises significant regional discrepancies and is heavily influenced by the large and sparsely populated regions to the north. As a result, it is informative to also consider the population concentration index. The concentration index quantifies the distribution of the population – the higher the index, the more the population is concentrated. At an index of 0, the population would be evenly distributed all across a nation, region, municipality, or city. An index value of 100 would have all population concentrated within one subdivision of the larger entity.
4. This is true for 31 of 33 municipalities (except Lomma and Vellinge).
5. Most (approximately 80%) of the equalisation grants, however, originate from the state budget.
6. Total daily journeys reached 71 400 in 2009.
7. The national average is heavily influenced by the very sparsely populated far north of the country.
8. There may also be an Öresund element to this population growth: there are 21 644 (Örestat, 2009) Danish residents residing in Skåne of whom only 16 646 are registered as working. The effect on GDP of the remaining 5 000 Danes may be more limited, as their primary economic contribution will be to the GDP of Copenhagen.
9. It should be noted that internal migration flows also includes people of foreign origin. And those flows from abroad also include returnees – Swedish-born people who move back after having worked or studied abroad for a few years.
10. Above only Östergötland.

11. Figure 1.20 shows register-based unemployment data for which there is no comparable data for Copenhagen. The text refers to labour force based unemployment data (*OECD Regional Database*).

12. The definition of unemployment rate used by Statistics Sweden (as a percentage of the working age population rather than labour force) does not permit the exclusion of those who remain in full-time education. Thus youth have been taken as those aged above 20 (rather than the more usual 15) to minimise this bias.

13. Recent research into the effectiveness of German ALMPs found that while nearly all measures aimed at labor market integration of young people showed positive long-term employment effects, public sector job creation was found to be harmful for the medium-term employment prospects and ineffective in the long-run (Caliendo et al., 2010).

14. Only one Skåne municipality (Osby) is located in Älmhult.

15. It should be noted that due to fewer observations (fewer individuals making these long commutes) the variance at these levels is higher.

16. Skåne's fourth university, Alnarp, is focused on agriculture and has a more limited student body.

17. The majority of this review focuses at the TL3 level (Region Skåne). However, some data are available only at the TL2 level (Southern Sweden – which contains Blekinge in addition to Skåne). Where this is necessary, trends at the TL2 level should be viewed as an approximation for regional figures.

18. According to the typology developed in OECD (2011c). See Chapter 2 for a detailed analysis.

19. These data are only available at the TL2 level, thus Skåne – along with Blekinge – is included in "Southern Sweden".

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Chapter 2

Boosting innovation in Skåne

Skåne is a top research and technology hub. But globalisation of value chains, deficient entrepreneurship and weak SME innovation explain why these strong assets are not sufficient to significantly contribute to growth and full employment in the region. This chapter investigates the strengths and weaknesses of Skåne's innovation strategy. Recent policy developments are found to be well in line with the new paradigm for innovation policy but the chapter argues that, in addition, there is the need to pursue a double track regional innovation policy: supporting the role of higher education in innovation while at the same time enlarging the innovation base. The chapter continues with a look at four areas for improvement necessary for the efficient implementation of the recently adopted "smart specialization" strategy: outcome-driven policy, effective cluster policies, reinforcing international dimensions of innovation and putting business at the centre of the strategy. In this manner, the chapter concludes, Skåne can move from a top "science and technology hub" towards a wealthy and inclusive "innovative region".

Introduction

From an OECD comparative perspective, Skåne performs very well according to technology-driven measures of innovation. It also appears as a frontrunner in terms of building a regional innovation policy that complies with most advanced policy thinking. Skåne appears thus as a model to be followed by others, more than as an object of review with the aim of pointing weaknesses and paths towards improvement. Despite this success, Skåne's regional innovation system faces challenges and there are concerns about regional growth and employment performance. Skåne's authorities aim to correct regional innovation system deficiencies and ensure that innovation policy acts as an engine for growth and employment.

Enhancing the contribution of regional innovation policy to overall regional development is an issue in Skåne. To tackle this issue, this chapter unfolds in the following way. Section 2.1 discusses the key achievements of Skåne's innovation policy. It first sets the scene for innovation in Skåne, highlighting potential opportunities and threats, providing the rationale for policy intervention. It then discusses the policy approach taken by Skåne, in the context of Swedish national innovation policy. Cluster policies are the subject of specific attention, since these policies form the stronghold of the action deployed by the regional authorities to support innovation. A number of key dimensions of the policy deployed in Skåne to boost its innovative economy are analysed: the role of higher education institutions, the effectiveness of the innovation support system, the promotion of innovative entrepreneurship, the international dimension of the policy, the promotion of public sector innovation and, most importantly, the strategic intelligence used by policy makers for designing and implementing the policy. Section 2.2 presents the policy recommendations with the aim of reinforcing innovation policy in Skåne. These recommendations include: the development of enhanced monitoring and evaluation practices; the deepening of cross-clusters fertilisation; the further development of the cross-border and international dimension of the policy and the increased involvement of the private sector in the strategy.

2.1. Key achievements of regional innovation policy in Skåne

The discussion of Skåne's regional innovation policy takes as a starting point the state of the regional innovation system. Table 2.1 provides a snapshot on the main strengths and weaknesses of Skåne's regional innovation system, as a basis for the policy discussion. The next section explains these strengths and weaknesses, and from this, argues on the rationale for, and key direction to be taken by, the regional innovation

policy. The subsequent section provides a critical assessment of policy achievements so far.

Table 2.1. **Strengths and weaknesses of Skåne's regional innovation system**

Strengths	Weaknesses
Strong academic research	Lack of government research institutes
High R&D investments, large pool of researchers	Small number of R&D-intensive firms
Good general qualification of population/lifelong learning	Too large a share of low-educated people
Strong specialisation in knowledge-intensive services	Innovation in the services sector under-exploited
Matching specialisation in public research and industry, in medical science, natural and environmental technology, ICT	Lack of entrepreneurs and entrepreneurship
Presence of leading large companies	New firms remain small
Cross-border openness: centrality in periphery	Short value chains, little production in the region
	Intra-regional imbalances in innovation
	Limited inflow of foreign students and researchers

The rationale for policy intervention in Skåne

Skåne displays a very strong position with respect to innovation from an OECD perspective

Skåne[1] belongs to the most advanced category of OECD regions from an innovation point of view: the "knowledge hubs" macro category and, within it, the peer group "knowledge and technology hubs". This group contains the most innovation-intensive regions within the OECD, categorised according to available data. This category of regions emerged from an OECD analysis, which grouped together regions with similar characteristics according to their productive structure and innovation-related indicators (Box 2.1 and Figure 2.1). These regions are highly populated, top knowledge and technology regions, with high R&D investments and patenting and employment in knowledge-intensive manufacturing and services. The data presented in Chapter 1 illustrated this favourable situation.

Box 2.1. **Categorisation of OECD regions using innovation-related variables**

To advance the OECD quantitative research on regions and innovation, a categorisation of regions was developed using socio-demographic, economic, and innovation-related variables, in order to highlight the diversity of regional profiles across OECD regions. A cluster analysis methodology was chosen to develop this analysis. Cluster analysis is a statistical method that uses a group of variables to obtain groups (or clusters) of regions that are most similar based on their likeness on variables. Such an analysis thus facilitates the development of peer groups and benchmarks among regions with the greatest degree of commonality.

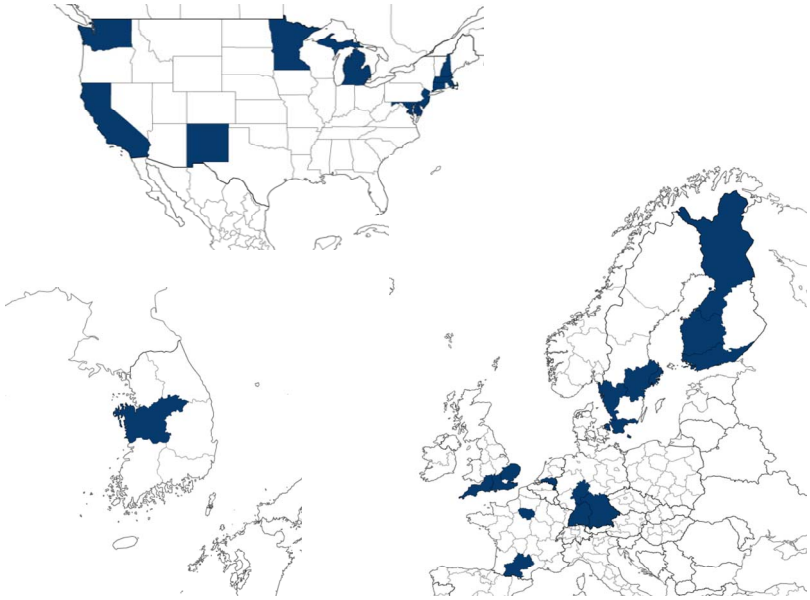
The analysis is based on 12 variables for 23 OECD countries covering 240 regions, which together account for 78% of total OECD GDP and 71% of OECD population. The list of variables used is the following: GDP per capita, population density, unemployment rate, percentage of the labour force with tertiary education, R&D expenditure as a share of GDP, business R&D expenditure as a share of total R&D expenditure, PCT patent applications per million inhabitants, share of employment in the primary sector, share of employment in the public sector, share of employment in manufacturing, high and medium-high technology manufacturing as a percent of total manufacturing, and knowledge-intensive services as a percent of total services. Using the aforementioned variables and methodology, eight regional groupings were obtained, further aggregated into three macro-categories:

- The **knowledge hubs** account for around 30% of the total sample GDP and 25% of population and contain the following two groups: **knowledge-intensive city/capital districts** and **knowledge and technology hubs.**
- The **industrial production zones** cover 60% of sample GDP and population and contains four groups: **US states with average S&T performance, service and natural resource regions in knowledge-intensive countries, medium-tech manufacturing and service providers,** and **traditional manufacturing regions**.
- The **non-S&T-driven regions** account for 14% of sample population, but only 8% of sample GDP and contains two groups: the **structural inertia or de-industrialising regions** and the **primary-sector-intensive regions**.

Source: Ajmone Marsan, G. and K. Maguire (2011), "Categorisation of OECD regions using innovation-related variables", *OECD Regional Development Working Papers*, No. 2011/03, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8bf42qv7k*-en; and OECD (2011), *Regions and Innovation Policy*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264097803-en*.

Figure 2.1. **OECD peer regions for innovation-related characteristics**

Knowledge and technology hubs



Note: List of regions: Germany: Baden-Wuerttemberg, Bavaria, Hessen; Denmark: Capital Region; Finland: Southern Finland, Western Finland, Northern Finland; France: Ile-de-France, Midi-Pyrénées; Korea: Chungcheong Region; Netherlands: Southern Netherlands; Sweden: East Middle Sweden, Southern Sweden, West Sweden; United Kingdom: Eastern, South East, South West; United States: California, Connecticut, Delaware, Maryland, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New Mexico, Washington.

This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.

Source: Ajmone Marsan, G. and K. Maguire (2011), "Categorisation of OECD regions using innovation-related variables", *OECD Regional Development Working Papers*, No. 2011/03, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8bf42qv7k-en*.

Not only does Skåne belong to the top category of innovative regions in an OECD perspective, but the region is also well-positioned within this category. The region performs generally better than its peer group for innovation-related variables (Table 2.2), except for the share of high-tech manufacturing employment in total manufacturing. Compared to peer regions from this group, Skåne: is more specialised in knowledge-intensive services, has a large share of the workforce consisting of researchers in the private sector as well as high total and private expenditures on R&D and a

large number of patents with inventors registered in the region. The population, with a high-level of tertiary education, is heavily involved in lifelong learning activities. It is worth underlining that the indicators used for this analysis mostly relate to inputs in the innovation process, but do not tell much about the innovation performance of the region.

Table 2.2. **Peer group: innovation-related variables**

	R&D expenditure (% GDP)	Business R&D expenditure (% R&D total)	Tertiary education of labour force	HTM % of manufaturing	KIS % total services	PCT per million
South Sweden	4.91	79.72	31.62	43.24	61.79	437.46
Knowledge and tech hubs average	4.14	74.00	30.98	49.05	55.98	291.79

Notes: Latest available year used (generally 2007, but in some cases 2004, 2005 or 2006 depending on data availability).

List of variables used for cluster analysis: employment in high and medium-high technology manufacturing (HTM) as a percent of total manufacturing, employment in knowledge-intensive services (KIS) as a percent of total services, per capita GDP (USD millions current PPP), population density, business R&D expenditure as a share of total R&D expenditure, total R&D expenditure as percent of GDP, unemployment rate, PCT patent applications per million inhabitants, tertiary education of the labour force (ISCE 56, %), share of employment in the primary sector: agriculture, hunting and fishing, share of employment in the public sector: public administration and defence, compulsory social security, education, health, and social work; other community, social and personal service activities, private households with employed persons, share of employment in manufacturing: mining and quarrying, manufacturing, electricity, gas and water supply.

Source: Ajmone Marsan, G. and K. Maguire (2011), "Categorisation of OECD regions using innovation-related variables", *OECD Regional Development Working Papers*, No. 2011/03, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8bf42qv7k-en*.

Skåne has an extended public research and higher education infrastructure. It hosts four higher education institutions (HEI), with complementary roles and clear specialisation. The large majority of dissertations in HEI in the region are in medicine, technical science and natural science. Skåne hosts the largest Nordic university, the University of Lund, with 40 000 students and 5 500 employees, with a high profile in medicine and pharmacology and globally sustainable development. The region hosts one faculty of the Swedish University of Agricultural Sciences, with around 900 students. The younger Malmö University is an institute of technology, with around 23 000 students, including a faculty of teacher training; culture and society; health and society and dentistry. Kristianstad University College hosts 10 000 students and specialises in teacher and nursing training. This large endowment in research and higher education

represents an important asset for knowledge-based development in Skåne. However, Skåne lacks industrial research institutes, which in many countries are more natural partners for technology development in business.

In addition to this good HEI endowment, Skåne will be home to large research infrastructures of international importance in materials science. The MAX IV Lab and the European Spallation Source (ESS) are planned to be in operation respectively in 2015 and 2019. The Max Lab is a national Swedish laboratory studying synchrotron radiation and it has been decided that the fourth generation of the facility will be built in Lund: this research infrastructure will be the most powerful synchrotron radiation facility in the world. The ESS, a much larger investment, is a top international research facility where neutrons are used to screen a wide range of materials from proteins and plastics to medicines and molecules at the atomic level (Box 2.2). These two major infrastructures of international importance will attract a large number of international researchers to conduct advanced materials research, with applications in a broad range of fields: biomedicine, medicine, material technology, nanotechnology, energy research, geology and environmental science. The TITA project aims at developing a strategy and preparing stakeholders to foster the benefits from these large infrastructures on regional development as a whole (Box 2.4).

Skåne's assets for innovation also include those of the R&D-intensive neighbouring Danish Capital Region. The transborder Öresund Region hosts 38% of combined Swedish and Danish total R&D expenditures, 37% of the total number of researchers, and 30% of patents (Region Skåne, 2011a). The two regions are quite advanced in their integration process, even if many obstacles remain (these are discussed in detail in Chapter 3). As mentioned in Chapter 1, this integration presents an opportunity but can also be a threat if it leads to a leakage of qualified labour force and companies outside Skåne. The question of research synergies across the Öresund is therefore an important issue for innovation in Skåne.

Internationalisation of research and innovation is growing but more is needed. Beyond the Öresund, international flows of researchers and students needs to take pace, to fuel Skåne with the quantity and quality of human resources and the diversity in skills required for a top technology region. In this perspective, the increase in tuition fees for foreign students is likely to have a negative impact on Skåne's attractiveness for knowledge workers. The opening of MAX-IV and ESS will constitute a test of the capacity of the region to accommodate a large number of knowledge workers and satisfy their needs. The TITA project emphasises the need for a comprehensive approach to ensure a maximum of benefits from the investments for the region (Box 2.4).

Box 2.2. **The MAX IV and European Spallation Source (ESS): enhancing the contribution of a world-leading European centre for materials science to regional development**

MAX-lab is a national laboratory operated jointly by the Swedish Research Council and Lund University. The fourth generation of this infrastructure will be operating in Lund (the city already hosts MAX I, II and III). MAX-lab supports three distinct research areas: accelerator physics research based on the use of synchrotron radiation and nuclear physics using energetic electrons. Time at the facility is shared between groups working within these three fields. The laboratory is an international forum: nearly half of the scientists working at the laboratory are from foreign countries. The MAX IV project was agreed in 2009 and the construction started at the site in 2010. Its budget amounts to EUR 330 million, and it will host around 2 000 researchers.

The European Spallation Source (ESS) is a partnership of 17 European countries committed to the goal of collectively building and operating the world's leading facility for research using neutrons. ESS will produce neutrons that will be used in parallel experiments that will foster major advances from ageing and health, materials technology for sustainable and renewable energy, to experiments in quantum physics, biomaterials and nano-science. The ESS will be located in Lund, Sweden, co-hosted by both Sweden and Denmark and will be funded and operated by the 17 partner European countries. More than 300 researchers from 11 countries have taken part in the planning, which lasted about 15 years. The ESS and partners are currently engaged in a technical design review that will act as the blueprint for the construction of ESS to start in 2013 and to become operational in 2019. Its budget is EUR 1.5 billion and it is designed to host 4 000 researchers.

Source: www.ess-scandinavia.eu; *www.maxlab.lu.se*.

Box 2.3. **Harnessing the impact of MAX IV and ESS**

The region has pinned high hopes on the economic impact of the establishment of the research facilities for the European Spatial Source (ESS) and MAX IV – through their impact on both regional labour markets and industry. Recognising that this impact on growth "will not come automatically", the region has put much effort into understanding how to maximise the potential impact on regional development through an initial project "ESS in Lund" and, more recently, a follow up project called TITA (see Box 2.4),[1] which has been running since January 2010. The project is due to end in December 2012, and there is strong view among those involved that, in order to maintain momentum, there is a need for a permanent function, at national or regional level, to co-ordinate the response of the regional business community on an ongoing basis. There is a strong feeling in the region that only through co-ordination and planning will Skåne be able to reap the full potential – in terms of both labour and industry – of these substantial investments.

Box 2.3. **Harnessing the impact of MAX IV and ESS** (*cont.*)

Labour markets. ESS will directly employ 450 staff and MAX IV will employ 250. However, many of the most highly skilled research staff are likely to be recruited internationally – particularly for the multi-country funded facilities at ESS. In terms of numbers of jobs, the best labour market opportunities for the region are therefore likely to be further down the skill ladder, encompassing everything from administrative and support staff to lab assistants and technicians. These, too, are skilled jobs, but they are far more likely to be sourced locally if the relevant skills can be supplied in Skåne. Thus, in order to gain the maximum labour market impact the region will need to:

- **Retain international staff recruited to the facilities.** The region will need to ensure that the supply of housing, cultural facilities and international schools is sufficient to ensure that highly skilled researchers attracted to the region by the facilities choose to locate in Skåne, rather than across the Öresund in Copenhagen, and to increase the likelihood that they choose to remain in the region even if they leave their work at the facilities.
- **Train skilled workers.** This will involve engendering aspirations among youth to pursue an engineering career and facilitating joint projects between universities, research centres, and industry. Examples of such co-operation between research centres and training institutions include: the "Diamond Light Source", in Oxford, which works with local schools at the primary level to raise interest in research and, at the same time, with national education authorities to develop curricula, training modules and training for teachers of scientific disciplines. A second example is provided by the Swiss Paul Scherrer Institute (PSI), which offers vocational training to ensure that, in addition to scientists, the skills required for the operation of the facilities can be found in the region. PSI is also working with educational programmes at higher levels and has launched a joint Master's programme consisting of one semester at the ETH University in Zurich, one semester at the EPF University in Lausanne, and one or two semesters at the PSI, with the possibility of an internship in a private company.
- **Facilitate the recruitment of appropriately skilled administrative staff.** Finally, in order to get the maximum labour market impact from ESS and MAX IV, the region will need to ensure that administrative staff, who are more likely to be recruited locally, can be easily sourced in the local labour market.

Industry. The complexity of the research area creates a substantial barrier for integration with regional industry, and despite efforts such as the provision of industrial offices at the facilities, international experience would suggest that use of the facilities by regional industry is likely to remain limited, at least in the short term. Regional hopes currently rest on the potential to develop successful spin-offs and on the potential for local suppliers to benefit from procurement contracts generated by the facilities.

Box 2.3. **Harnessing the impact of MAX IV and ESS** (*cont.*)

- **Spin-offs.** The high-tech nature of the facilities is likely to ensure that spin-offs are supply driven and rely on former researchers. In Switzerland, SPI generates an average of one spin-off per year (usually started by former staff and sold to other research facilities) and these extreme high-tech firms are often isolated from the rest of the regional economy due to their extreme specialisation. Nevertheless, a role for the region arises in providing support functions – similar to those in place in the innovation sector – to make it easier for entrepreneurs to commercialise their results. Furthermore, if the region is to take full advantage of such spin-offs when they arise, it will need to put in place a long-term strategy to ensure that companies built around such spin-offs continue to operate in the region.

- **Procurements.** In a bid to increase the impact of ESS/MAX IV via local procurement of contracts, the TITA project has directed an information campaign at the regional business community which includes: facts about the research facilities, upcoming procurements, and future business opportunities. However, while a number of regional companies have already qualified as potential suppliers to MAX IV, procurement contracts won by local business are likely to remain limited to the provision of low- to medium-tech equipment except in fields where there is already an established production chain in the region.

Note: 1. TITA is the Swedish acronym for the project "ESS MAX IV in Southern Sweden – Growth, Innovation, Accessibility and Attractiveness".

Box 2.4. **The TITA project: enhancing the benefits from MAX IV and ESS for the region**

The ESS MAX IV – TITA project has been launched to use the establishment of the research facilities to stimulate growth, strengthen the innovation structure and promote accessibility and attractiveness in the region. TITA is the acronym for the Swedish words for growth, innovation, accessibility and attractiveness.

The project runs from January 2010 to December 2012. It is a partnership of: Region Skåne, the municipalities of Skåne, Lund University, Invest in Skåne, ESS AB, Malmö University, the County Administrative Board of Skåne, Kristianstad University, Region Blekinge, the Swedish University of Agricultural Sciences at Alnarp, and Blekinge Institute of Technology. The project is partly funded by the European Regional Development Fund.

The main principles on which the project builds are:

- Society for Science – Science for Society: the importance of interactions between the science plants and the region, and between the region's stakeholders to achieve growth as a result of the establishment of research facilities;

Box 2.4. The TITA project: enhancing the benefits from MAX IV and ESS for the region (*cont.*)

- long-term commitment to dialogue and co-operation between regional stakeholders is crucial to utilise the possibilities of the establishments;
- the competence and knowledge built up through the TITA-project need to be translated into action by the relevant stakeholders;
- in the work ahead, a strong leadership and clear definition of roles and responsibilities is needed.

The project acts on several channels to foster the influence of MAX IV and ESS on regional development:

- **Relocation support:** ESS and MAX IV will attract many international companies and researchers in the coming years. This sub-project works to facilitate the establishment of companies and the assimilation of their employees and, where applicable, employees' families into the region.
- **Marketing:** for the region to fully benefit from the establishment of the research facilities, the region must be marketed internationally to potential suppliers, large corporations and institutions. The sub-project is responsible for the dissemination of information to target audiences with respect to information about the facilities, the region and business establishment opportunities.
- **Meeting point – Lund NE:** the site of ESS and MAX IV and their immediate surroundings will attract many visitors from all over the world. The purpose of this sub-project is to identify opportunities and success factors that will help create and design the physical environment for innovation and creative venues in the district of Lund North East.
- **Foresight:** the vision "Society for Science – Science for Society" has been presented in the report "The ESS in Lund: its effects on regional development". The vision describes how growth and development can be achieved through collaboration. The purpose of this sub-project is to ensure that the vision is developed and rooted through a foresight process.
- **ESS and MAX IV as an innovation catalyst for trade and industry:** the potential of the facilities should be exploited by the businesses, academia and people of Skåne to ensure that it generates innovative power for the whole region. The purpose of this sub-project is to create new "meeting places" and optimise existing ones; it is characterised by internationalisation, innovation and a holistic approach.

Box 2.4. **The TITA project: enhancing the benefits from MAX IV and ESS for the region** (*cont.*)

- **ESS and MAX IV, a growth factor for local and regional businesses:** it is difficult to predict how trade and industry will benefit from the development opportunities that the new facilities will offer. This sub-project is designed to facilitate and promote collaboration between municipalities, businesses and trade and industry players and make relevant information available to the region's business community.
- **Urban planning and transport infrastructure:** having good access to and around the facilities will make the region attractive to both business and workforce. Sub-project analyses look at future needs regarding urban planning and the need for infrastructure measures. The sub-project also focuses on interaction and accessibility with respect to jobs, housing, services, etc.
- **Land availability register:** the establishment of the research facilities can result in an increased demand for land in the region. This sub-project establishes a land registry over available land for dwellings and business; this will help companies select the best available geographical locations for their needs.
- **Pilot study for competence supply needs:** big demands will be made on the surrounding community in terms of skills necessary for building and operating the ESS and MAX IV facilities and to utilise potential innovations as they occur in the surrounding society. The sub-project runs a feasibility study and designs a strategy that answers questions about long-term competence development and supply.

Source: http://essmax4tita.se.

Like many other science and technology hubs, Skåne depends on a few large companies for private R&D activities. The concentration of patents in Southern Sweden in electronic communications technology and in medical science (data 2003-2007, Region Skåne, 2011a) is linked to the presence of ST-Ericsson, Sony-Ericsson and Astra-Zeneca, with important research activities in the region so far. The move of Astra-Zeneca research centre outside the region at the end of 2011, due to internal restructuring, will most likely result in a sharp drop in patents in medical science. Even if the reasons for this restructuring were mainly internal to the firm (another Astra-Zeneca site existed in Västra-Götaland, which fitted as a place to host the activities in Skåne) the relocation of Astra-Zeneca research facilities outside the region represents a shock for Skåne. It also undermines the branding potential for the Öresund Region. This event underlines the need to ensure that all elements are in place to retain such important actors in the region. A good move has been taken by regional stakeholders, with plans to

turn the abandoned site into a "Medicon Village": it is clear though that the loss of a main actor will not be compensated overnight by the establishment of a new company location site.

Human capital as well as quality of life issues are very important to maintain the top position of Skåne as an innovative region. Retaining and attracting companies and talent in the region is not only a question of investing in R&D and innovation resources. Many other factors influence the decision of people and companies to settle and innovate in Skåne, such as those discussed in the next two chapters and in the TITA project presented above: the quality of human resources is certainly the most important element for a knowledge hub to thrive, but the availability of adequate transport infrastructure and housing, the level of environmental protection, and many elements that together increase the quality of life of the citizens, all play a key role in getting Skåne on the map as a top innovative region in Europe and worldwide.

Skåne has a less favourable position with respect to value creation from innovation

There is concern that value creation and the employment rate remain rather weak in Skåne: innovation does not seem to act as Skåne's growth engine. Despite Skåne's strong resource endowments, high investments in R&D, and specialisation in knowledge-based activities, regional growth is rather weak, as evidenced in Chapter 1. Table 2.3, focusing on economic variables for the "knowledge and technology hub" peer group of Skåne, displays a much less favourable picture than the above, R&D-oriented picture in Table 2.2. Skåne has a GDP per capita well below its peer group's average, and an unemployment rate more than double of the average.[2] As mentioned in Chapter 1, productivity growth in Skåne tends to be lower than the national growth. The high immigration trends are not matched by sufficient job opportunities, resulting in high unemployment. Skåne was severely hit by the recession in 2008, with rising levels of unemployment due to firms closing, and unemployment remains at a high level. Hence, it appears that the strong innovation power of the regional economy, as measured by the available indicators, is not sufficient to act as a growth and employment driver nurturing the whole regional economy.

The "innovation paradox" between high R&D investments and limited value creation is, however, only an apparent paradox. Multi-national companies carry out important R&D and patenting activities in Skåne, and the HEI and public research infrastructure are strong too: however, the spillovers from these input activities are not likely to be captured in the

Table 2.3. **Peer group: economic variables**

	GDP per capita	Population density	Unemployment	Employment in manufacturing	Employment in public sector	Primary sector employment
South Sweden	32 985	96.64	7.43	16.43	38.95	3.26
Knowledge and tech hubs average	42 559	224.46	3.25	14.00	36.00	2.00

Notes and list of variables: see Table 2.2.

Source: Ajmone Marsan, G. and K. Maguire (2011), "Categorisation of OECD regions using innovation-related variables", *OECD Regional Development Working Papers*, No. 2011/03, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8bf42qv7k-en*.

region. Explanations for this apparent paradox of strong resources for innovation but weak economic returns are threefold: globalisation of value chains, deficient entrepreneurship and weak SME innovation:

- The internationalisation of production functions of large firms has gone faster than the internationalisation of R&D functions: hence the return on private R&D investments by large firms located in Skåne are mostly captured abroad.
- Economic exploitation of public R&D in the form of academic spin-offs takes place, but the number of those firms remains limited. Weak entrepreneurship also explains the low number of new technology-based firms (NTBF) creation (in OECD comparison). And when they are created, NTBFs tend to remain small. They may also be sold to overseas investors. Hence the economic returns on R&D are not easily retained locally either.
- Indicators used to characterise the "innovation power" of a regional innovation system are weak proxies of the innovation phenomenon because they miss the important share of innovations that are not science- or technology-driven, but generate new business and employment. As in many other EU regions, too few SMEs in traditional sectors in Skåne innovate, SMEs are insufficiently open to external sources of knowledge and face a variety of innovation barriers (many of these not linked to technology).

Like in many of the most advanced and high labour cost OECD regions, value chains in Skåne are in general quite short. The regional economy is dominated by large multi-national companies, which increasingly carry out production out of high labour cost countries. Skåne specialises in

knowledge-intensive services and in R&D, while production is often carried out elsewhere. Since this part of the value chain is not likely to create many jobs, it will be important to ensure the growth of knowledge and R&D-intensive activities into a larger part of the economy.

The dynamics of new firm creation and most importantly their growth rate are weak. The Swedish culture, oriented towards large enterprises and the public sector, creates hindrances not only for new firm creation, but more importantly for the growth of small firms. New firm creation rate in Skåne is low in an OECD perspective (though not bad on Swedish standards). In the region, many initiatives focus on new firm and academic spin-off creation. However, these newly created firms lack a growth orientation. As a result their contribution to overall growth and employment remains limited.

Employment in the public sector is comparatively large. Another feature of Skåne that emerges from the peer group comparison on economic variables in Table 2.3 is the important share of employment in the public sector (39%): in times of tightening public budgets, this presents a risk as a number of these jobs funded by public money might not be sustainable. On the other hand, if innovation also extends to public sector workplaces, many of these jobs could be transformed into more innovative jobs, enhancing their productivity. The health sector in particular, which represents a large share of those public jobs in Skåne, could offer such an opportunity for innovative practices.

The need to reinforce the diffusion power of Skåne's regional innovation system provides a rationale for a two-track innovation policy

Skåne's innovation policy should respond in a smart way to the apparent paradox through a double-track approach: a technology-push answer is insufficient and needs to be complemented by a demand-driven response. The objective for policy should not be to establish full value chains within the region through local research exploitation, since this is unrealistic for a Swedish region in a globalised world. However, it is necessary to reinforce the knowledge-based part of the economy further, for which Skåne has the best comparative advantages. This can be done in the traditional technology-push way, by investing in the research and technology base, and by promoting technology transfer to companies and sectors that are intensively using scientific and technological knowledge. This is the first, linear track for policy. Its limits are clear, even in an advanced region like Skåne: NTBFs and technology-driven businesses are not sufficient to provide jobs to all citizens and in all parts of the region. The instruments for

this policy lie mostly under the realm of national authorities. A second track, targeting business innovation rather than technology transfer and research exploitation, is thus needed: its aim is to enlarge the base of innovative firms. This is a key challenge for policy, as it departs from the traditional linear approach for innovation policy, which is dominant at national level (see below). This second, demand-driven track, embraces a much broader view of innovation:

- it targets both new and existing firms;
- it considers all sectors, including those so-called low tech sectors (which often innovate through smart use of existing technologies);
- it spreads to all of the region's corners;
- it targets all types of innovation, technological and non-technological, in industry and services;
- it covers innovation in the public sector too.

The policy approach adopted in Skåne responds to system challenges

The strategic approach for innovation policy in Skåne is in line both with the diagnosis and with the "smart specialisation" concept

Innovation policy has climbed very high on Skåne's policy agenda. The regional authorities of Skåne have worked on an innovation-driven regional development policy for more than a decade, and this work has accelerated in the last few years. The key actor of this policy development is Region Skåne. Between 2008 and 2011, the design of a regional innovation policy has gained momentum: the regional authorities have engaged in a systematic, participative, comparative and evidence-based process to build a strategy for innovation addressing regional development challenges and exploiting Skåne's unique assets.

The policy process that led to the adoption of Skåne's innovation strategy is a well-informed, well-articulated strategic process. The policy work has been inspired by conceptual developments in regional innovation policy, conducted in academic and European policy circles, to which Skåne's decision makers are well connected. Extensive analyses by academics and consultants, as well as regional dialogues involving a large set of regional actors, and two international peer review exercises, were undertaken with the view of developing a regional innovation strategy for Skåne. During this process, Region Skåne produced two key documents "Skåne's innovation capacity: a situation analysis" and "Skåne's innovation

capacity: an action plan for a more innovative Skåne" (Region Skåne, 2009a; 2009b). These key documents led to a shared vision of the strengths and weaknesses of the region (outlined below), and paved the way towards the "International Innovation Strategy for Skåne 2012-2020" adopted in October 2011 (Region Skåne, 2011b).

The strategy includes a vision and priority areas of intervention. The Skåne International Innovation Strategy starts from a shared vision of Skåne as a top innovative region, where assets are fully exploited to create an attractive, internationally oriented and sustainable innovation environment. The strategy aims at developing innovation areas where Skåne has unique capabilities and which respond to global challenges. This is believed to be the way to improve Skåne's attractiveness for people, skills and innovations. The main way to reach the strategy's overall objective is to develop "knowledge-based open innovation arenas" to engage in international collaboration. This concept is not further defined in the strategy, but it will likely build on existing clusters initiatives which are at play in the region (see below). The strategy emphasises that clusters should not only support existing areas of strengths but also promote the emergence of new areas that are not yet present but respond to societal challenges in an innovative way. Two priority areas have been defined on the basis of wide consultations and prior experience in the form of cluster initiatives:

- personal health;
- smart and sustainable cities and regions.

The themes highlighted in the strategy are well in line with the diagnosis of the regional innovation system. The strategy focuses on six priorities. Some of them constitute good responses to the above strengths and weaknesses analysis of the regional innovation system, others address policy governance challenges (discussed below). Overall they respond well to the need for the "second-track" policy presented above, to complement the traditional linear policy:

1. **Develop systemic leadership:** this priority is notably addressed by the creation of two advisory bodies, the FIRS and the SIS (see below).
2. **Broaden the sense of what innovation is – include more people:** this relates to a broadening of the innovation concept to encompass social innovation and ensure a more inclusive strategy covering the whole region. The goal of strengthening innovation culture and right attitudes to innovation and change in the broad population, is well present in the strategy.

3. **Streamlining the support structure for innovation:** this priority addresses the identified weaknesses in the business support infrastructure, which needs to become more integrated, visible and effective.
4. **Developing new innovative areas and creative environments:** this item targets the core of the action of the region to support innovation, i.e. promoting platforms where actors within and across different clusters can exchange and discover new opportunities for innovation.
5. **Developing international co-operation:** this priority targets regional participation in global research and innovation networks, the opening up of "innovation arenas" to outside actors and the creation of international strategic alliances and cross-border co-operation, notably within Öresund.
6. **Strengthening innovation capacity in existing industry and public sector activities:** besides the classical challenge of university-industry co-operation, this priority addresses the need for SMEs to co-operate amongst themselves and with larger companies, to improve a variety of skills, as well as the role of the public sector as a driving force for innovation.

The strategy shows an evolution from research commercialisation towards a more systemic approach. In complementarity with national policy (see below), which is targeted towards commercialisation of research, the strategy in Skåne tries to focus more directly on innovators and take into account their environment at large, rather than just the transition from research results to commercial exploitation. This will have implications on the fine-tuning of the policy mix, which includes instruments responding to both goals.

The governance of the policy is reinforced to ensure ownership of the strategy. In the course of the strategy-building process, two new bodies have been established: the Skåne Research and Innovation Council (FIRS), an advisory body, and the Sounding Board for Innovation in Skåne (SIS), a co-operative forum for innovation in Skåne. The aim is to ensure appropriation of the strategy by the diversity of actors in the regional innovation system, and to receive proposals and advice for the direction of policy. Neither of the two bodies have decision-making power. The FIRS meets four times a year and the agenda is prepared by a secretariat with partners from Region Skåne and Lund University. It is chaired by an elected figure of Skåne, and includes high-level executives from large municipalities, the public sector, enterprises, universities, institutes of technology and students. It works as a long-term strategic enabler. The SIS

has a similar composition and role but there are two differences between the two bodies: the SIS is composed of people at a more operational level and the representation of enterprises is larger. The SIS has been notably involved as a partner for the analysis of the intermediary network in Skåne (Daal et al., 2009). Having such representative partnerships, acting in a transparent and well-informed mode, is an essential component of a well-functioning regional innovation strategy. Classical issues that may appear in such a configuration are, however, to be considered in the case of Skåne:

- A definition of boundaries between the roles of the two bodies might be difficult to achieve in practice, since neither has decision-making power and both discuss at the strategic level. In case the boundaries become blurred, the interest of keeping the co-existence of two bodies might be questioned.
- Thanks to their strengths and in line with a policy oriented towards research commercialisation, the region has a history of close collaboration and dialogue between the HEI sector and public administration. In a new demand-oriented policy configuration, the reinforcement of the voice of companies in those two bodies (e.g. for preparing FIRS' agenda) is needed in order to increase the user relevance of the policy.
- The real power of consultative bodies for innovation policy varies a lot in practice, from a "no voice" situation to real decision power. In cases where these bodies are weak, key decisions tend to be taken outside of them, and they are downgraded to talking arenas, a situation that quickly undermines their role and pushes them into the category of dormant bodies. It will be important for Skåne to establish rules indicating when and how the advice of these bodies is required, and if this advice is binding or not.
- The role of advisory councils tends to become stronger when they also develop policy intelligence functions, either internally or through commissioned studies (analysis of the regional innovation system, evaluations, foresight, etc.). The wide composition of the advisory bodies, which gives them access to existing knowledge on the innovation system spread in the region, is an asset to be exploited. The decision on strategic areas for policy can be supported by an advisory council, if it can rely on robust evidence and engages in a participative process, as shown in the case of the Flemish Council for Science and Innovation in Belgium (Box 2.5).

Box 2.5. The Flemish Council for Science and Innovation: combining advisory and policy intelligence functions

The Flemish Council for Science and Innovation (VRWI) is the strategic advisory body of the Flemish Government on science and innovation policy. The VRWI has 20 members, appointed by the Ministry of Science and Innovation, representatives of universities, research centres, and the Economic and Social Council.

Its advice is compulsory on draft bills concerning science and innovation policy or draft conclusions of the Flemish Government concerning science and innovation policy, of strategic importance.

It has the right to produce advice on its own initiative, and responds to government requests for outlines of Flemish science and innovation policy; agreements of strategic importance which the Flemish Community or the Flemish Region wishes to enter into with the federal state or with other Belgian communities and regions, and on drafts of European and international treaties of strategic importance; and policy notes submitted to the Flemish Parliament.

Furthermore, the council offers strategic advice and performs studies on long-term developments and challenges in science and innovation policy, in particular on their international dimension. It also publishes a yearly advisory report on the current and future budget policy concerning science and innovation policy.

VRWI, in co-operation the University of Leuven, carried out an exploratory study on a macro level, with the aim to present a road map for Flemish innovation policy and its relation to socio-economic developments. The following six strategic clusters were selected for Flanders:

- Strategic cluster 1: transport – services – logistics – supply chain management;
- Strategic cluster 2: IT and healthcare services;
- Strategic cluster 3: healthcare – food – prevention and treatment;
- Strategic cluster 4: new materials – nanotechnology – processing industry;
- Strategic cluster 5: IT for socio-economic innovation;
- Strategic cluster 6: energy and environment for service and processing industry.

Box 2.5. **The Flemish Council for Science and Innovation: combining advisory and policy intelligence functions** (*cont.*)

Its process-based approach fosters the involvement of all innovation actors to establish a vision for the future of Flanders. Per strategic cluster, a panel of experts from industry and knowledge institutions was selected. These experts, each in their own domain, analysed some 160 technological and economic developments and compared them to the Flemish situation. This resulted in 30 high-priority technology domains in which Flanders could be leading by 2015 in Europe and in the world. Moreover, 15 secondary conditions were listed to increase Flanders' innovative power.

Source: www.vrwi.be.

Skåne's new regional innovation policy is a sound application of the EU idea of "smart specialisation". The "smart specialisation" concept has been proposed by the European Commission as a condition for allocating Structural Funds to innovation in the regions (Box 2.6). This concept has been developed to respond to deficiencies observed after two decades of regional innovation policies in Europe. This relates notably to: the dispersion of efforts across too many fields of intervention with a lack of critical mass; the weak international orientation of most strategies; and the limited knowledge about the impacts of the strategies. In this context, innovation policies assume a new role: they should favour experimentation in existing and new areas of activities, and adjust according to lessons learnt from these experimentations. Innovation involves risks and the outcome of innovation investments cannot be predicted in advance: it is not the role of policy makers to decide about future areas of success for their regions, but they should provide the appropriate conditions so that unexpected new combinations leading to commercial innovation can flourish. This is, according to the smart specialisation idea, best developed through an "entrepreneurial discovery process" by which actors (companies, clusters, research centres, federations, universities, etc.) identify and nurture those activities that can provide a leading edge to the region (Foray et al., 2009).

The smart specialisation idea covers both technological and non-technological innovation. The smart specialisation approach is valid for science-driven activities as well as for traditional sectors where innovation is often more incremental and non-technological. Rather than trying to replicate the same high-tech agglomerations everywhere, regions are invited to identify their own niche of comparative advantage: the concept is not confined to science and technology hubs with high creative capability; it is

open to all regions and requires the development of absorptive capacities and an outward orientation. Fostering such experimental approaches goes hand in hand with the development of sound monitoring and evaluation practices: these are needed to draw the lessons from the experiments and adjust public action accordingly. All those elements are present in the Skåne regional innovation strategy.

Box 2.6. **The EU concept of smart specialisation**

Regional innovation strategies for smart specialisation are integrated, place-based transformation strategies that:

1. concentrate public resources on innovation and development priorities, challenges and needs;
2. outline measures to stimulate private R&D investment;
3. build on a region's capabilities, competences, competitive advantages and potential for excellence in a global perspective;
4. foster stakeholder engagement and encourage governance innovation and experimentation;
5. are evidence-based and include sound monitoring and evaluation systems.

Source: European Commission (2011), "Smart specialisation platform", *http://ipts.jrc.ec.europa.eu/activities/research-and-innovation*, European Commission, Brussels.

The policy in Skåne exhibits a good interplay between the national and regional levels

The national level is important for regional policy making in Swedish regions. Swedish regions, even those which, like Skåne, have a directly elected government in charge of promoting regional development, enjoy relatively limited powers and have little own resources to conduct innovation policies on their own, in comparison with regions in OECD federal countries such as Belgium, Canada, Germany, or Spain. Complementarity and synergies between regional- and national-level policies are thus required to ensure effectiveness of regional efforts (OECD, 2011c).

Swedish innovation policy is traditionally inspired from a linear view of innovation. National innovation policy in Sweden was under revision during the time of this review, a new policy being expected by autumn 2012. The developments in Skåne were considered by national policy makers as interesting inputs for the ongoing revision of the strategy: the main reason is

that both exercises aim at broadening the concept of innovation beyond R&D-driven innovation. At the time of investigation, the key components of the national policy reflected this orientation towards commercialisation of research as a main approach for national innovation policy (Box 2.7). The scope of this policy reflects the dominant role of large corporations in the country. As is the case in Switzerland, large companies often advocate a policy that gives priority to funding of public research at universities and technology transfer, in line with the linear view of innovation (OECD, 2011a): these companies do not need the same type of diversified support as SMEs as they can rely on internal resources, and are able to enter into research partnerships with universities. Swedish national policy is oriented towards the commercialisation of research results, mainly carried out at universities which are the dominant actors on the public side (government-funded research or technology centres account for a minor part of public research in Sweden), and there is comparatively little attention to the role of end-users in innovation. This has led some commentators to argue that "Sweden has a conservative and narrowly focused strategy" because it "puts too much emphasis on science as a source of innovation (STI – science – technology driven – innovation) and too little on experience-based learning (DUI – doing – using – interacting)" (Lundvall, 2008). The DUI mode of innovation refers to innovation developed mainly through user-producer interactions with demanding customers, and a highly competent in-company workforce combined with a learning-oriented work environment.

Box 2.7. Key components of Sweden's Research and Innovation Policy

1. Key orientations of policy

- **Increased research prioritisation:** towards strategic research areas where public research is excellent and business competence and society needs are high.
- **Enhanced research commercialisation:** enhancing the third mission of universities, strengthening industrial research institutes, supporting academic spin-offs.

2. Main governance mechanisms

- **Key policy documents:** 2008 Research and Innovation Bill; Service Innovation Strategy 2010.
- **Key decision-making bodies:** the Ministry for Education and Research and the Ministry for Enterprise, Energy and Communications.

Box 2.7. Key components of Sweden's Research and Innovation Policy (*cont.*)

- **Key funding bodies:** VINNOVA, the Swedish Agency for Innovation System, funds needs-driven research (total: SEK 1 968 million in 2011). Three research councils VR, Formas and FAS, fund research mostly in universities (total: SEK 5 910 million in 2011), additional public research foundations fund research in specific areas (total: SEK 1 209 million in 2011). Sweden Energy Agency funds energy research (total: SEK 1 200 million in 2009). *Tillväxtverket*, the Swedish Agency for Economic and Regional Growth, funds development projects in regions, with a growing share addressing research and innovation (total: SEK 10 000 million in 2011).

3. Science base, universities, public research

- **Universities and university colleges:** universities dominate the landscape. Governmental funding to universities (total: SEK 14 110 million in 2011). Five universities (Karolinska Institutet, Lund, Uppsala, Göteborg, and Stockholm) out of a total of 50, receive 60% of R&D funds. The funding system, based on the number of students, is evolving towards a more competitive and quality-based mechanism (based on publications and citations, external funds attraction).

- **Industrial research institutes:** they are partly publicly funded and carry out research oriented towards the business sector, which is paying for the services (total: SEK 3 300 million in 2009). The 2008 Bill aims at strengthening these institutes.

4. Technology transfer and public-private research partnerships

- **VINNOVA applied R&D programmes** are the main vehicle to fund research at the interface between academia and industry. As a general rule, support provided requires co-funding and is made on a competitive basis. Challenge-driven innovation programmes fund collaborative research in strategic areas (health, sustainable cities and transport, ICT, production materials and natural resources). VINNMER Fellows grants fund researchers working on needs-driven research.

- **VINNOVA VINN excellence centres** (successor to competence centres): public-private partnerships funding research with academic excellence and industrial relevance.

- **VINNOVA Verification for Growth** supports proof of concept for commercialisation of public R&D.

- **VINNOVA Key Actors** supports the development of expertise and methods for research commercialisation.

Box 2.7. **Key components of Sweden's Research and Innovation Policy** (*cont.*)

- **University technology transfer offices "*Innovationskontor*":** public funding to strengthen commercialisation efforts at universities.
- **Institute Excellence Programme**, jointly run by VINNOVA and the Research Foundation, funds applied research on industrial research in co-operation with universities and businesses.

5. R&D in SMEs

- **VINNOVA "Research and Grow":** support to R&D in SMEs.
- **VINNOVA SMINT:** grants for SMEs for feasibility studies for international technological collaboration.

6. Entrepreneurship and start-ups

- **Industrial fund:** seed and venture capital.
- **Innovation Bridge (*Innovationsbron*):** funds incubators and invests in venture companies.
- **Incubators and science and technology parks,** usually located close to, and partially funded by universities.
- **ALMI:** supports start-ups and SMEs with loans and advice.
- **VINNOVA NU:** competition for technology-based start-ups.

7. Regional growth oriented programmes

- **VINNOVA VINNVÄXT:** support to regional projects to promote internationally competitive research and innovation environments in specific growth fields.
- ***Tillväxtverket*** (Swedish Agency for Economic and Regional Growth): funds regional growth programmes with a strong accent on innovation.

Note: 1. This does not include defense-related research (total: SEK 2 223 million in 2011).

Sources: European Commission (2010), "European trend chart on innovation: country report Sweden", European Commission, Brussels; *ERAWATCH Database* (accessed 1 February 2012); Sweden Agency for Growth Policy Analysis (2011), "The performance and challenge of the Swedish National Innovation System: a background report to the OECD", report 2011:04.

National and European funds support innovation in Skåne. National policy plays an important role for the support of innovation in Swedish regions, and particularly in Skåne. The annual public budget for the regional innovation system in Skåne (excluding funding for research at universities and institutes of technology) at the time of adoption of the strategy amounted to around SEK 1 015 million in 2011 (Table 2.4). This budget consisted of national, European and regional contributions, in a proportion of 50%, 18% and 14% respectively. Contributions of Region Skåne amounted to a little more than SEK 140 million of this total. This highlights that the region cannot act as a big investor and points to the importance of a good alignment between regional, national and EU priorities. The region can act as a facilitator, and has the capacity to leverage on national and EU funds. The important share of European funding in the budget (larger than the regional budget) is also worth highlighting.

Table 2.4. **Annual public budget for the regional innovation system in Skåne, 2011**

SEK millions

Action lines	Region (% regional budget)	National	EU	Local	Other	Total public
Policy support and development	18 (13%)	25	0	1	3	47
Clusters and business networks	35 (25%)	32	14	11	8	100
Science parks and incubators	35 (25%)	21	10	18	53	137
Advisory support system for start-ups and companies	43 (31%)	57	54	10	31	195
Funding to start-ups and companies (loans, venture and seed capital, subsidies)	1 (0%)	303	105	0	0	409
Funding for industry-oriented research at universities in co-operation with companies	8 (6%)	68	0	0	49	125
Total budget innovation and entrepreneurship (% by level of authority)	140 (14%)	506 (18%)	183 (18%)	41 (4%)	145 (14%)	231.872 (100%)
Total budget regional development	1 586					

Notes: EU= Structural Funds, Rural Development Fund, Framework Programme. Other includes university funding.

Source: Region Skåne. Provisional estimations, some sources missing.

Skåne's thematic priorities are in line with national priorities. In 2010, the Swedish Agency for Innovation Systems VINNOVA undertook a strategic exercise to define the priority areas to focus its action. Those are: sustainable and attractive cities; health, wellbeing and medical care;

competitive industry and information society 3.0. The first two challenges are those selected by Skåne in its new strategy: this will facilitate the use of national programmes by regional actors and ensure matching funds for regional action.

National cluster policy opens paths for more demand-oriented policy and carry out a regional dimension. Looking in particular at the role of VINNOVA, an evolution towards a more demand-oriented policy is visible in Sweden. VINNOVA, established in 2001, is the national agency for innovation policy with a mission to support "needs-driven research and development" and a focus on supporting synergies between private and public actors: most programmes target co-operation between enterprises and universities or public research institutes and are thus inspired by the linear approach. The VINNVÄXT national programme, launched in 2003, strives towards a change in orientation: it aims to promote sustainable growth based on international competitiveness in regions, by "developing internationally competitive research and innovation environments in specific growth areas. This is done by funding needs-driven R&D to strengthen the cutting-edge competence of the respective environments and by means of strategic efforts for the development of innovation systems". The programme funds specific cluster-type initiatives for a period of ten years with funding up to EUR 1.1 million/year. Funding goes for a large array of initiatives depending on the needs of the clusters. Outcomes and impacts are evaluated on triennially. The 2010 evaluation of the first projects concluded that the programme was performing very well and recommended its continuation and extension, building on lessons learnt (Cooke et al., 2010). The long-term orientation of the policy is seen as a major reason for success: it allows notably the setting up of professional management teams for the clusters.

The limited business orientation of national policy calls for the development of such orientation at regional level. One major cluster initiative in Region Skåne, the Food Innovation Network, was selected in the first VINNVÄXT call in 2003 (see below). Interestingly, in the context of a recent benchmarking analysis of cluster programmes in eight countries, managers of this programme reported that the programme was not important within the Swedish policy mix, arguing that "the debate on cluster policy has started just recently in Sweden and there is no overall innovation policy framework assigning relevance to the programme. The programme is also very small in terms of budget" (Lämmer-Gamp et al., 2011). Indeed, VINNVÄXT accounts for 4% of VINNOVA's budget, which itself accounts for 6%-7% of the Swedish budget for R&D. Thus the evolution towards a business-oriented innovation policy is still a marginal trend at national level. This provides an opportunity for regions to engage in more business-driven

policies: the above budgetary figures suggest that this is the direction chosen by Skåne.

Regional policy at national level has increased its orientation towards innovation. *Tillväxtverket*, the Swedish Agency for Economic and Regional Growth, has been added into the picture of national instruments in support of innovation in Box 2.7, even if it technically does not belong to the two main policy domains covering innovation, research and economy. *Tillväxtverket* is the main national funding source to support regional development. The programme reflects a change in orientation of regional policy towards supporting endogenous strengths of the regions. As a result, innovation is a core focus of *Tillväxtverket* funding. A programme with a similar aim, VRI was established in 2007 in Norway: the emphasis in this programme is on the interplay between national and regional initiatives, and on human capital development (Box 2.8). The latter aspect, in particular the mobility schemes, might be useful to use as a benchmark for *Tillväxtverket*, in order to determine whether such a component might be useful in the Swedish context.

Box 2.8. **The Norwegian Programme for R&D and Innovation in regions, VRI**

The VRI Programme is a national programme with an initial time-frame of ten years (2007-2017). It is a Research Council of Norway initiative, targeted toward research and innovation at the regional level in Norway. It offers professional and financial support to long-term, research-based development processes in the regions. The programme is designed to promote greater regional collaboration between trade and industry, R&D institutions and the government authorities, and to establish close ties to other national and international networks and innovation measures such as the Arena programme, Norwegian centres of expertise (NCE) and the EU Regions of Knowledge initiative.

The Research Council uses national, merit-based competition to ensure the quality of the activities and projects funded under the programme. Fundamental components of the VRI Programme include research activity, exchange of experience, learning, and co-operation across scientific, professional and administrative boundaries.

One of the instruments being implemented to increase co-operation between industry and the R&D sector is the placement of researchers into companies for a given period of time to take part in product development activities. Similarly, company employees may be deployed to work on a research project at a university, college or research institute.

The programme was established to build links between nationally important R&D priorities with areas of regional focus. The aim is to generate regional mobilisation within priority areas such as the environment, tourism, the maritime sector, and the marine sector.

Source: www.forskningsradet.no.

National money goes to regional clusters thanks to the national *Tillväxtverket*. Many cluster programmes are funded through *Tillväxtverket* as main elements of regional strategies for growth. The key criteria for support are: impact on the industry sector and companies; SME participation, and long-term commitment of regional stakeholders. The focus of the programme has evolved from linking mature clusters with one another and with research and knowledge actors, to supporting new business opportunities and industry renewal (Lämmer-Gamp et al., 2011). Independent evaluations of the programme are carried out every two years. The programme funds a variety of cluster initiatives, spanning through the whole range of goals and instruments found in OECD countries, since there is no single model imposed by the programme (Box 2.9). The clusters can be very light initiatives, limited to the creation of exchange platforms (focusing on "engaging actors"), or they can develop more heavy interventions, either focusing on business development, or more dedicated to R&D and innovation. Often clusters embrace a diversity of instruments within the large menu presented in Box 2.9.

Skåne's Regional Innovation Strategy needs to move from concepts to reality

A full-blown action plan in line with the Skåne Strategy is still to be developed. The International Innovation Strategy for Skåne 2012-2020 is going to be developed into an Action Plan, which was not yet available at the time of this review. The implementation step is crucial: in many instances OECD regions have developed and adopted sound innovation strategies, which were subsequently not followed by concrete implementation plans. As a result, the strategies' value remained limited to the sharing of a vision and broad direction, but unhelpful in changing policies towards the desired goals. A large disconnect between an innovation strategy and concrete implementation steps is relatively frequent in regional innovation policy practice. An implementation plan for innovation policy in Skåne is thus needed, that includes: identification of action lines along with a policy mix including concrete programmes, actions or initiatives, responsible actors, target indicators, and associated budget lines. There is a need to develop clear indicators to monitor and evaluate the efficiency of policies and initiatives (via a mix of objective and subjective measures) and mechanisms of rewards and sanction. The communication of the strategy is important, both at "vision" stage but also with respect to the policy mix. Hence, there are two key steps in a smart specialisation strategy that are still missing in Skåne: the "policy mix definition" and "monitoring and evaluation" steps (European Commission, 2011a).

Box 2.9. Diversity in goals and instruments for cluster policies across OECD countries

Goal	Instruments
Engage actors	
Identify clusters	– Conduct mapping studies of clusters (quantitative and qualitative) – Use facilitators and other brokers to identify firms that could work together
Support networks/clusters	– Host awareness-raising events (conferences, cluster education) – Offer financial incentives for firm networking organisations – Sponsor firm networking activities – Benchmark performance – Map cluster relationships
Collective services and business linkages	
Improve capacity, scale and skills of suppliers (mainly SMEs)	– SME business development support – Brokering services and platforms between suppliers and purchasers – Compile general market intelligence – Co-ordinate purchasing – Establish technical standards
Increase external linkages (FDI and exports)	– Labels and marketing of clusters and regions – Assistance to inward investors in the cluster – Market information for international purposes – Partner searches – Supply chain linkage support – Export networks
Skilled labour force in strategic industries	– Collect and disseminate labour market information – Specialised vocational and university training – Support partnerships between groups of firms and educational institutions – Education opportunities to attract promising students to region
Collaborative R&D and commercialisation	
Increase links between research and firm needs	– Support joint projects among firms, universities and research institutions – Co-locate different actors to facilitate interaction (i.e. science parks, incubators) – University outreach programmes – Technical observatories
Commercialisation of research	– Ensure appropriate intellectual property framework laws – Overcome barriers to public sector incentives in commercialisation – Technology transfer support services
Access to finance for spinoffs	– Advisory services for non-ordinary financial operations – Public guarantee programmes and venture capital – Framework conditions supporting private venture capital

Source: OECD (2007), *Competitive Regional Clusters: National Policy Approaches*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264031838-en*.

The regional policy mix for innovation in Skåne needs to be adapted to the new strategy. The new strategy includes new orientations, broadening the scope of policy intervention well beyond the traditional research commercialisation focus. The region is full of existing programmes, organisations and initiatives, some old and some more recent, which need to participate to the new goal. Experience in OECD regions shows that a large degree of inertia exists in innovation policy, and that instruments originating from various rationales tend to accumulate without forming a coherent whole (OECD, forthcoming). All key components of the regional innovation policy mix in Skåne need to be reviewed in the light of the new orientations. The following sections discuss first clusters policies – as these are an important action line for regional authorities, and then various other elements of the policy: the role of HEIs and research infrastructure to support innovation; the intermediary support system; the promotion of entrepreneurship and support to new firm creation; the promotion of innovation in the public sector; and the policy intelligence used by policy makers.

The key components of regional innovation policy in Skåne include clusters, HEIs and intermediaries

Skåne has a relatively well-balanced mix of clusters

There are six cluster initiatives present in Skåne, these target domains of activities – both established and emerging – in which Skåne is specialised. The cluster initiatives target sectors in which the region is specialised (a traditional one, the food sector and a more recent one, life science) as well as emerging sectors which show rapid growth: mobile and moving media, cleantech and packaging.[3] An early study of cluster potential in Skåne based on 1999 data identified food and life science as clear domains of specialisation of the regional economy, while a few other domains showed some cluster tendencies (wood, hospitality and tourism, ICT and packaging) (Nilsson et al., 2002). A 2010 study confirmed the importance and competitiveness of the food and life science clusters in Skåne (Henning et al., 2010). The same study showed a concentration on the R&D part of the value chain for the ICT sector and a relatively strong specialisation in packaging. For wood and hospitality/tourism, the results did not picture these sectors as potential areas for clustering. Hence, apart from the cleantech sector which has not been subject to this investigation, the domains chosen for cluster support do indeed represent areas of specialisation of Skåne. The links with the two major specialisation areas defined in the new strategy – personal health and smart and sustainable

cities/region – are clear since all these domains can contribute, directly or indirectly, to at least one of these broad areas.

The **Skåne Food Innovation Network (SFIN)** gathers companies involved in food production with the view of enhancing their market development opportunities. The geographic scope of members extends beyond the region. The network builds on an earlier initiative from 1994, the Skåne *livsmedelsakademi*, founded by businesses and academia. SFIN was founded in 2003 thanks to a ten-year national subsidy from the VINNVÄXT programme: it was amongst the first three initiatives selected at the start of the programme. SFIN is co-funded by Region Skåne and receives EU money as well. Its funding sources also include co-funding by companies (10% in 2009) and project-specific funding. The network carries out the following activities: *i)* foresight to identify megatrends and strategic directions for the cluster; *ii)* organising cross-cluster exchanges to identify specific challenges and innovation opportunities; *iii)* joint research with the members on the identified challenges; *iv)* support to pilot projects; *v)* initiatives directed towards students and jobs in the industry; and *vi)* marketing Skåne as a food region. SFIN has developed a priority on health food and the development of adapted food for schools and hospitals. Another important focus is to work on innovative public procurement for food in hospitals or schools. The 2010 evaluation reported that the initiative has succeeded to shift from an academia-led towards a business- and user-driven network. It praised the density of networking; the quality of the selection procedure for projects to be funded by the network; the high level of commitment of the board and CEO network; the professionalism of the management team and the implication of Region Skåne, both in management and as a financer. A combination of financial support to pilot project and mentoring by peers is seen as a very powerful means to promote innovation in the regional food industry. A challenge for this cluster is to ensure further funding after termination of VINNOVA funding in 2013. The evaluation identified a series of weaker elements in the cluster: the need to accelerate the internationalisation of local firms; the necessity to focus projects even more in selected niches such as institutional, organic and functional food; and the necessity to develop monitoring of business projects. The evaluation recommended a shift from individual project funding to a few SMEs towards the funding of collaborative projects of benefit to groups of firms (Cooke et al., 2010). A survey on cluster members reveals that the satisfaction degree of members was high, especially with respect to the creation of new networks and the meeting of new partners, but also that companies consider that the cluster brings positive contribution to business development (Box 2.10).

Box 2.10. A survey on participants in the Skåne Food Innovation Network (SFIN)

A survey on cluster members of the SFIN cluster was conducted by Oxford Research. The response rate was 51% and companies constituted 70% of the respondents, followed by universities/institutes of technology at 16%.

The survey showed that the two main activities that the members expect from the cluster organisation are: "spreading technology and innovation" and "attracting new companies and workers to the region". In terms of the benefits brought by the participation to the cluster activities:

- 64% of respondents think that membership of SFIN has contributed to new networks to a high or very high degree. None of the respondents think that membership of SFIN has not led to any new networks at all;
- 41% of respondents have gained increased knowledge of the industry to a high or very high degree;
- 40% of respondents experience increased collaboration with other companies to a high or very high degree, 30% to a certain degree, while just 7% have not experienced any change in this matter;
- almost 40% attach great or very great importance to SFIN for their business development and none of the respondents consider SFIN to be insignificant to their business development;
- 29% of respondents state that to a high or very high degree they have developed new products and services;
- 31% of respondents have experienced increased competitiveness to a high or very high degree.

Source: Oxford Research (2011), "Evaluation model for Skåne cluster initiatives", report to region Skåne.

The **Medicon Valley Alliance (MVA)** in life science is a joint initiative from Denmark and Sweden, with the aim to promote life science (biomedicine, biosciences, medical science) over the Öresund Region. Its goal is to promote cross-border linkages to raise the status of the cross-border region as a world leader in life science research and commercialisation. MVA was created in 1997 as Medicon Valley Academy on the joint initiative from Lund and Copenhagen Universities, joined by large pharmaceutical companies. It was subsequently renamed the Medicon Valley Alliance to indicate that its focus has broadened towards a business-driven cluster with a goal that is not limited to research, but also incorporates access to capital and an orientation towards society. The

members of MVA are universities, hospitals and life-science companies from both sides of the straight. MVA has a strong international orientation and aims to develop international research partnerships (Box 2.11). The activities of MVA are mainly funded by membership fees. Research infrastructure is also being funded: a Life Science Foresight Institute has been established in the region, and co-funded by Region Skåne. According to a recent analysis of clusters in Skåne, the current efforts of MVA, which are targeted to R&D and business development, could yield even more benefits if more attention were devoted to human capital development and mobility, and cross-sector integration (Henning et al., 2010).

Box 2.11. **Life Science Ambassadors strengthen the international dimension of the Medicon Valley Alliance**

The goal of the Life Science Ambassador Programme of the MVA is to facilitate the building of sustainable international partnerships and collaboration through bilateral exchanges of ambassadors. Whereas ambassadors are government officials, serving as official representatives of their countries, the Life Science Ambassadors are non-government representatives working exclusively to facilitate international collaboration within the life science.

The Life Science Ambassadors will be exchanged between Medicon Valley and leading life science clusters in Asia, North America and Europe for a period of three years. The Ambassadors will live and work in their host clusters and scout for win-win relations. Their role is exclusively to develop life science linkages in business and research. By leveraging their extensive network and connections within their home cluster, the Ambassadors are well-positioned to work as liaisons and link the clusters closely together.

The Ambassadors work to serve the companies and research institutions of their home cluster. The Life Science Ambassador representing Medicon Valley is positioned overseas and will seek out opportunities for companies, research institutions and universities in Medicon Valley, while the Life Science Ambassadors from overseas, hosted by MVA in Medicon Valley, will pursue similar opportunities for his/her region. The Ambassadors are integrated into the day-to-day operations at the host organisation, receive support from the host organisation, and thereby are embedded into the local network of the cluster where they are based.

Currently, five regions are participating in the exchange of Life Science Ambassadors: Medicon Valley, Denmark and Sweden; Kobe-Kansai, Japan; British Columbia, Canada; Seoul, Korea; and Boston, United States.

Source: www.mva.org.

Mobile Heights in mobile communications is a recent cluster, launched in 2008, driven by the main large firms in the sector, Sony Ericsson, ST Ericsson, Ericsson Group and Telia Sonera. It also includes small ICT start-ups. Lund and Malmö Universities are also members of the cluster. The fierce competition from Asia in this sector, endangering the position of the companies even in their core R&D function (e.g. the Chinese firm Huwai has established its research centre in Lund), was the main driving force for establishing the cluster. Sony Ericsson has engaged in open innovation practices with innovative start-ups. Mobile Heights is active in five types of activities: *i)* applied research and support to knowledge transfer from university: three university research centres are closely linked to Mobile Heights; *ii)* joint training actions involving businesses and universities and awareness-raising events for jobs in ICT; *iii)* support to start-ups and to existing companies location in the region and in the incubator Mobile Heights Business Center; *iv)* support to existing companies for internationalisation (in collaboration with Invest in Skåne); and *v)* branding of the sector with the aim of attracting companies and people and ensuring exchanges within the region. The cluster is involved in international projects, including over the Öresund Region. The Skåne Region is a member of the board and supports the cluster financially. In addition, Mobile Heights is funded by the European Structural Funds, VINNOVA and by company membership fees (the latter amounts to 20% of total budget).

Media Evolution, previously named Moving Media Southern Sweden (MMSS), is another recent cluster initiative in Skåne. Launched in 2008, it gathers firms, research institutes and other organisations active in the domain of moving images for digital media. Half of the board members are from the private sector, while the other half represent public sector bodies. The main activity of the cluster is to fund joint R&D activities with a view of promoting start-ups in the field and supporting their growth. Active partners are the University of Malmö and the Blekinge University of Technology, which are interested in promoting academic spin-offs. It incorporates the earlier Media Möteplats Initiative (MMM) of 2005, a network focusing on moving images in new media. The cluster is active in: *i)* research (at Malmö University and Blekinge University of Technology); *ii)* training; *iii)* business support with notably the Minc incubator; and *iv)* branding of the region to enhance its international attractiveness. The funders are the two adjacent regions of Skåne and Blekinge, the Cities of Malmö and Helsingborg, Malmö University, European Structural Funds and national sources (NUTEK, the Knowledge Foundation, etc.) and members through fees. The rate of public funding is 87%. An enquiry conducted in 2011 on its members reveals that many companies do not think that they have yet got a sufficient knowledge of other actors in the industry. The

majority of respondents attach a certain importance to Media Evolution for their business development. The opportunity to network and meet new collaboration partners are the areas where respondents see the greatest benefits. A large number of respondents also find Media Evolution to be an important knowledge support within the media industry (Oxford Research, 2011).

The **Sustainable Business Hub (SB Hub)** was established in 2002, on the initiative of Region Skåne, the City of Malmö, the County Administrative Board and regional companies. Contrary to the other regional clusters, the public actors were the most important driving force for the establishment of the cluster. It focuses on cleantech development and applications for smart and sustainable cities. It helps create synergies between companies involved in cleantech business and spurs the identification of new business opportunities. In contrast with other cluster initiatives in Skåne, this cluster has less dense links with the knowledge establishments. In 2007, Region Skåne established the Sweden Cleantech Incubator (SCTI) with the help of EU funds, focusing on start-up companies. Its members consist of supplier firms, municipalities and cities and research institutes, from Skåne but also from elsewhere in Sweden. Renewable energies and sustainable district heating systems are under the focus of the cluster activities. The main objective is to develop and commercialise Swedish expertise in systems optimisation for renewable energy production, district heating and cooling, recycling and waste and waste water management. The cluster is working with lead customers such as cities and municipalities and hospitals and helps develop public procurement opportunities as a way of boosting the sector's competitiveness. The incubator SCTI is run by Teknopol: the aim is to support new cleantech companies in market development, through advice and business mentoring, and facilitate access to capital. SB Hub is financed by Region Skåne, EU Structural Funds and members' fees and services. The share of public funding is 90%. SCTI is funded by the region, the EU Funds and *Innovationsbron*. Some cross-cluster collaborations exist, notably with the food sector (use of agricultural waste for energy), with mobile technology in the field of control technology for intelligent houses, and with the packaging cluster. The main benefits of SB Hub, according to a 2011 survey of its members are: the opportunity to network with other players within the industry, and SBH as a knowledge bank for business opportunities in other countries. The latter goal is particularly important in the rapidly expanding new field of environmental technologies (Box 2.12). The main expectations for the role of the cluster are: to build networks between persons and companies; to develop activities that aim to attract new companies and workers to the region, strengthen the region's brand, develop

existing companies and spread innovations and technology (Oxford Research, 2011).

Box 2.12. The Finnish Green Net cluster: building an international knowledge bank in green technologies

Green Net Finland is a cleantech business network that brings together the expertise and resources of Finnish cleantech companies, public authorities and scientific and educational institutions. Its mission is to promote cleantech innovations and the growth of business, exports and expertise through public-private co-operation, networking and project development. Its network includes around 60 members, including major corporations and SMEs in the Finnish cleantech sector, cities and regional organisations, universities and research centres. Green Net Finland is actively looking for co-operation with cleantech companies and research organisations all over the world.

Green Net Finland prepares and implements projects combining public and private funding together with its member organisations and other environmental sector actors both nationally and internationally. It collates and centralises a wide range of environmental and energy sector know-how in order to create new business opportunities, support the development of small- to medium-sized entreprises and improve export activities.

- **Cleantech Incubation Europe** (CIE) focuses on supporting and stimulating entrepreneurs and SMEs working in the field of clean technology (green, sustainable products, services and processes). CIE helps authorities to choose suitable policy interventions/instruments, attuned to their own local/regional situation. CIE is based on a partnership consisting of partners from Delft (lead partner), Helsinki, Budapest, London, Peterborough, Paris and Turin. The partners are cities/municipalities, universities and incubators (founded by the authorities). The universities and the incubators work on a daily basis with local/regional policy makers to support the cleantech SMEs with their business processes. CIE is funded by INTERREG IVC programme (75%) and has a total budget of EUR 1.4 million.

- **Innovation pipeline** aims to develop a new, customised and tested co-operation and operational model for the commercialisation of expertise in both the public and private sectors. The project will develop the operational model for a cleantech-sector innovation system, which will include phases of innovation recognition and evaluation, product development, testing in Living Lab conditions and other test environments and global commercialisation. Bottlenecks in the innovation commercialisation process will be identified and examined and information about the process will be communicated to different stakeholders. The more new ideas from the public sector, researchers and companies reach experts for evaluation, the greater the opportunity to develop those ideas into viable innovations and products. The project budget is EUR 2 500 000 and is funded by the European Regional Development Fund.

Source: www.greennetfinland.fi.

Packbridge is the most recent cluster in Skåne. Established in 2010, it focuses on packaging innovation for smaller specialist firms engaged in local food industry and for pharmaceutical firms. It interacts closely with SFIN and SB Hub. A key actor of this cluster is the company Tetrapak, located in the region. Members are found in Skåne but also in other Swedish regions. The cluster is funded by public money up to 67%, the rest comes from private contributions. The cluster started its activity with research on new trends for this domain of activity. Besides interactions with the food and cleantech clusters, which are relatively obvious given the area of action of Packbridge, the cluster is also developing cross-cluster interactions with ICT clusters. Opportunities to develop applications involving mobile telephony for applications addressing payment, traceability, "food finder" (using GPS systems) and food recipes are being explored. A survey carried out on the cluster members revealed a large rate of satisfaction. The main benefits identified by cluster members are: increased knowledge of the industry; increased co-operation with other companies and increased co-operation with R&D players (Oxford Research, 2011).

Cluster policies pursue the goal of economic transformation of Skåne

Cluster initiatives are a main vehicle for regional authorities Skåne to support innovation. The cluster initiatives combine to a varying degree European, national and regional support and have reached different stages of development. They represented approximately 25% of the regional budget devoted to innovation in the region in 2011, and are therefore an important action of Region Skåne to support innovation-driven regional development. This funding has a high leverage effect on other sources of funding from national and European origin.

The cluster-oriented innovation policy of Region Skåne appears as a relevant policy orientation to reach the main "transformation" goals of the regional innovation strategy. Cluster policies are meant to contribute to the goal of Skåne becoming an attractive, internationally visible, knowledge-driven region. According to a recent in-depth study of the clusters in the region, there is a good correspondence between the cluster domains and the regional assets and areas of specialisation in Skåne (Henning et al., 2010). The policy uses the leverage power of the region to catalyse initiatives aiming at defining areas of smart specialisation and finding innovative niches in those areas. The regional policy is trying to support clusters both in existing and emerging industries and, what is most interesting, it focuses on finding new opportunities **at the interface** between clusters (Cooke and Eriksson, 2011). This responds to the criticism that the narrow cluster concept, based on specialisation only, does not necessarily provide a good an argument for regional competitiveness. The case of the

Skåne Food Innovation Network is an interesting case of a cluster that is progressively trying to exploit opportunities offered in other domains such as life science and ICT, through, e.g. projects targeting food for diabetics, using new distribution systems relying on mobile solutions (Box 2.13). In addition to supporting the clusters as such, Region Skåne also supports intermediaries which provide services and finance to businesses across several sectors, such as Teknopol (see below). These generic support organisations have a particular role to play in reinforcing cross-cluster interactions.

Box 2.13. **ZIRRO, at the interface between food and ICT clusters**

Zirro is an arena where new solutions can be initiated, developed and become available more quickly – solutions that contribute to the vision by preventing and/or mitigating the effects of diabetes. The Skåne Food Innovation Network, Mobile Heights and Teknopol are key partners of the project.

Nutrition and food products, telecommunications and game development, individual health care, electronics and imaging, positioning and sensor technology, business development and innovation – are fields of knowledge to activate to create a new innovative approach for addressing the diabetes problem. All actors involved in Zirro are specialists in their field and have experience with innovations that solve large and real concrete problems. In collaboration with industry, academia, investors and motivated entrepreneurs, the project will develop business opportunities and influence the markets to create commercially viable solutions, growing businesses and jobs.

Project Zirro is still in a study phase, financed by Region Skåne, *Tillväxtverket* and Vinnova.

Source: www.zirrodiabetes.com.

Skåne clusters tend to be defined according to functional region boundaries and work increasingly internationally. A classical flaw of cluster policies is to limit their action to regional administrative borders. Compared to many other regional cluster initiatives, clusters in Skåne have an increasing international dimension, and are open to members from outside the region: Medicon Valley Alliance is a good example of such an "open-border" cluster.

Cluster policies also respond well to the need for policies to evolve from a supply-driven to a demand-led focus. The diagnosis of the Skåne innovation system has put in evidence a weakness in the capacity of using science and technology advances for value creation on the market: difficulties in assessing market potential for innovative ideas prevail and the clusters have the potential to respond to this deficit through the development

of business-led projects responding to new societal needs. The case of Media Evolution can be taken to illustrate the point: while most of the support system is oriented towards the supply of research and technology transfer, innovation in this domain mostly emerges from demand- and user-driven forces. The cluster targets innovation stemming from the demand-side, with e.g. Malmö Living Labs aiming at exploring innovation opportunities from a user perspective. One element that is also at the core (and at the origin) of Media Evolution is the human capital needs. The training and education dimension is a dimension that is not very often present in regional clusters, despite its crucial importance for innovation at the regional level as shown by the example of Norway (Box 2.14). Another aspect of demand-side policy covered by the clusters is the use of public procurement as a driver for innovation (e.g. Food Innovation Network working with hospitals and Sustainable Business Hubs with municipalities).

Box 2.14. **Human capital development at the core of the Norwegian Subsea Cluster**

Norwegian Centre of Expertise (NCE) Subsea is an initiative by the subsea industry in the Bergen area for the strengthening and internationalisation of business, R&D and education. The objective is to promote innovation activities, increase international involvement and improve the capacity, competitiveness and value creation of individual players within this cluster as well as the cluster as a whole.

The main participants are: NCE Norway, Bergen University College, the Science and Technology University of Norway, the University of Oslo, the Ministry of Education and Research, Statoil, FMC Technologies, Aker Solutions, AGR, Sparebanken Vest, SpareBank, SRBank, the Municipality of Fjell.

The oil and gas industry has been blooming in Norway for the past 15 years, forging technology developments now used worldwide for offshore oil and gas production. The Bergen region subsea cluster has seen a growth in turnover from EUR 450 million in 2004 to EUR 1 463 million (225%) from 2004 to 2008. In the same period, the number of employees/manyears increased from 2 500 to 4 600. Rapid growth puts considerable strain on recruiting qualified personnel. The subsea cluster stated a requirement for establishing a Bachelor degree in Subsea Technology focusing on industry demand for skilled employees.

Box 2.14. **Human capital development at the core of the Norwegian Subsea Cluster** (*cont.*)

NCE Subsea co-operated with Bergen University College (BUC) in establishing the first ever subsea specific bachelor degree (BS) in Norway, starting up in the fall of 2006. NCE Subsea recruited specialists in cluster companies (Statoil, FMC Technologies, Aker Solutions) to join BUC in designing the curricula Practical training for the students was organised in cluster companies (they spend 20% of their time in practical training). Financing of the BSc was a challenge, as BUC did not have access to new capital and the Ministry of Education and Research (MET) was unwilling to support with money. NCE Subsea organised for two regional banks to support the establishment. In addition, a local industry company supported the establishment with providing free prime quality facilities in the middle of an industrial area. Securing proximity between academia and industry was one of the main reasons for the Municipality of Fjell to be active in this process. In the mean time, the cluster executed a campaign towards the Norwegian Government in order to secure long-term financing for the education. In 2009, the bachelor was financed by MET over the annual state budget. In partnership with the Science and Technology University of Norway, the cluster established an MSc degree in Subsea Technology, and a MSc in Innovation and Entrepreneurship, focusing on the subsea industry with BUC and the University of Oslo. The owner of a big cluster company has donated EUR 625 000 in order to engage a professor and two research fellows. The cluster also supports students financially and helps them in organising student visits and exchange with the University of Vila Velha, Vitoria, Brazil.

Alongside the developments in education, the cluster has initiated, co-operated on, and established a vast number of training courses for the industry.

The benefits of the cluster are numerous. The students are highly skilled and valuable for companies employing them. The 40 students graduating from the BSc are now either employed by a cluster company or are an MSc student. Cluster companies have realised the benefit of working together in issues common to all, securing future industry needs. It has improved the ability of the cluster to co-operate. In 2008, 61% of cluster companies reported that they had executed projects or activities with other cluster actors based on NCE Subsea activities. Eighty-six percent reported that NCE Subsea had improved co-operation between cluster participants and towards external organisations. Sixty-three percent reported that the cluster had contributed to improve the competitive power and value creation for the cluster. An agreement was signed with the Brazilian state of Espirito Santo on mutual efforts in establishing a Norwegian-Brazilian Business and Innovation Centre in Vitovia, opening a gateway for cluster companies and institutions into Brazil.

Source: Danish Agency for Science, Technology and Innovation (2011), *24 proofs of Cluster Excellence - Successful Stories from Clusters in Northern Europe*, Danish Agency for Science, Technology and Innovation, Copenhagen.

The multi-dimensional scope of clusters activities call for integrated policies. The clusters in Skåne deploy their activities in a wide range of domains: support to collaborative R&D, networking, market and trends analysis, detection of innovation opportunities, internationalisation, entrepreneurship and new firm promotion, use of public procurement for innovation, training and education, etc. This calls for co-ordination with other organisations providing specialised services in these domains. Many of the above-mentioned activities are not ones that clusters should be responsible for alone, but can to a larger extent be organised together with other networks and organisations in the region, such as Invest in Skåne, Teknopol, Business Region Skåne and the universities. This places an important demand on the innovation support system functioning as an effective network (see below). Such a conclusion also emerged from comparative studies of cluster programmes across Europe (Box 2.15).

Box 2.15. **Lessons from benchmarking cluster policies**

The following policy recommendations result from a benchmarking analysis of 16 cluster programmes from Denmark, Finland, France, Germany, Greece, Iceland, Norway, Poland and Sweden.

1. **Improve co-ordination of cluster programmes and other relevant funding programmes.** Ideally there should be only a limited number of co-ordinated cluster programmes that target different types of clusters. With a limited number of cluster programmes that support the establishment of cluster management organisations at the core of an overall cluster development strategy, additional individual R&D/innovation, business development and infrastructure (e.g. in the educational sector) programmes can address the specific needs of the different actors within a cluster. In this regard, programme strategies, instruments, time frames and target groups of programmes should be co-ordinated and efforts should be made to limit administrative burdens for applicants as much as possible. Programmes should also be aligned with policies that pursue an improvement of the framework conditions which have an impact on the development of a cluster (e.g. educational or labour policies).

2. **Tailor-made assistance for clusters should have a high relevance in the programme strategy.** The economic impact of a cluster depends not only on its size and maturity. It is also the technology domain of the cluster that matters in terms of the structure, the governance and the performance of a cluster. Cluster programmes therefore should take the different framework conditions of industries and technology domains into account through assistance that is tailor-made according to the specific needs of a cluster.

Box 2.15. **Lessons from benchmarking cluster policies** (*cont.*)

3. **Programmes should put emphasis on cluster management excellence.** Cluster support is not about the mere establishment of clusters, but about developing excellently managed clusters that are internationally competitive and that have an impact on the national economy. In this context, grant funding of cluster management organisations is less important than supporting those through targeted, need-focused services such as relevant workshops and seminars, benchmarking as well as a continuous strategic dialogue to question and further develop strategies and activities. Labeling of excellent cluster management is another important aspect in this context; not only because it creates more visibility for a cluster, but also because it encourages cluster management to provide excellent management in order to earn and preserve the label.

4. **Cluster programmes should develop world-class clusters in industry sectors that are internationally competitive.** Without limiting the attention to the development of clusters for the purpose of regional economic development, there should also be programmes that support the development of clusters that are internationally competitive. The support should focus on those industries in which a country's economy shows pronounced comparative advantages on the global market. Cluster management excellence should be a key priority of such programmes.

5. **Long-term, but flexible support of clusters is required.** In order to meet the specific development conditions of clusters, support should be provided on a long-term basis of five to ten years. Furthermore, programme requirements and processes should not only be less bureaucratic, but also flexible enough to respond quickly to changing economic and technology environments in which clusters are operating in.

6. **Monitoring and evaluation of the results and impacts of a programme is important and should be done in a smart and purposeful manner.** From the very beginning the programme should be based on clear targets that can be measured through a purposeful set of indicators that provides information relevant to the implementation processes. The implementation of a programme should be accompanied by a formative evaluation which provides recommendations for programme adaptation on a continuous basis. It is important that there is a balance between the cognitive interest of programme owners and policy makers and the burdens for beneficiaries that result from monitoring and evaluation.

7. **Technical assistance instruments are important for the promotion of international activities of clusters.** Although public financial support is certainly useful to support international projects of cluster management organisations and/or cluster members, it is not the financial assistance that matters in the first place, but rather the availability of technical assistance,

Box 2.15. **Lessons from benchmarking cluster policies** (*cont.*)

e.g. through workshops and trainings to support strategy development and competencies such as language or cross-cultural skills. Further support in this regard can be also provided through national export promotion agencies.

8. **Different industry sectors need different support for internationalisation activities.** There are huge differences between industry sectors when it comes to the effect of the work of cluster management on international activities of SMEs. The promotion of cluster management activities for internationalising the cluster should therefore take the specific framework conditions of industry sectors into account. Corresponding instruments should be developed by programme owners to provide need-based support for cluster management.

Source: Lämmer-Gamp, T., G. Meier zu Köcker and T. Alslev (2011), *Clusters are Individuals: Creating Economic Growth through Cluster Policies for Cluster Management Excellence*, Danish Ministry of Research, Innovation and Higher Education/Competence Networks Germany, Copenhagen/Berlin.

The way forward involves deepening the cluster dynamics and contribution to innovation-driven growth, rather than expanding their number. There is no easy answer to the question of how many clusters a region like Skåne should host. Given the limited public budget available to the region for cluster policy, the need for prioritisation of interventions, the existing knowledge specialisation in the region, and the limits to be set in regional branding around niches of excellence, the current number of six cluster initiatives is probably close to an adequate critical mass. It seems at this stage more important to ensure effectiveness, business-driven character and transversality of these cluster initiatives, than to multiply them. To this end, better monitoring and evaluation of outputs and impacts is needed. Exit strategies for cluster policies should also be on the agenda: good practices in OECD cluster policies recommend notably a public support that is declining over time and progressively replaced by private contributions. Currently, the participation from private actors in Skåne's clusters for which information is available seems to be in the range of 10%-20%: an increase of this share should be planned to secure the business relevance of the clusters. To sum up, upgrading cluster policies to raise effectiveness of this major regional tool is a priority in the transition from strategy to action plan for innovation in Skåne. Section 2.2 will provide a number of recommendations to this end.

Higher education institutions and key research infrastructures: towards an enhanced third mission

Universities have played a role in economic transformation of the region. In addition to their basic missions of education and research, higher education institutions (HEI) in the region have taken an active role to engage in regional development: this mission goes beyond their "passive" role as major employers, buyers of goods and services, or contributors to the built environment (Goddard, 2011). An active mission can be broken down into four areas: the supply of skilled human resources, the contribution to the social and cultural environment, engagement in local civil society and in regional policy and, most importantly, in regional innovation, under focus here. The Lund University, with its strengths in life science and technology, has irrigated the industrial tissue in traditional sectors such as food and packaging and contributed to the rise of new activities in pharmaceutical or medical instrumentation (Table 2.5). Region Skåne supports this role: e.g. an Anti Diabetic Food Centre has been established at the University of Lund as a public-private partnership gathering funds from private actors, the region and the university. The newer Malmö University has contributed to the emergence of new sectors like media, games or cleantech (see cluster policy above). The HEIs are all engaged in the cluster initiatives in the region.

Table 2.5. **The role of Lund University in the economic transformation of Skåne**

Sector	Knowledge base	University innovation support
ICT	Synthetic/ analytical, mature high technology	– Spin-off companies – Responding to firm-based knowledge demands – Collective research in platform technologies
Life science	Science	– Disruptive technology – Infrastructure sharing
Food	Synthetic, mature technology	– Participating in intermediary organisations and networks – Consultancy support and advice in associated technological areas

Source: Adapted from Benneworth, P., L. Coenen, J. Moodysson and B. Asheim (2009), "Exploring the multiple roles of Lund University in strengthening Scania's regional innovation system: towards institutional learning?", *European Planning Studies*, Vol. 17, No. 11.

The higher education institutions in the region have established structures and activities to support regional innovation. The contribution of HEIs with respect to business innovation should be seen within the Swedish institutional context. The "teacher exemption" regulation assigns intellectual property of inventions to the individual university staff, rather than to universities: this rule is regularly under debate, critics arguing that it undermines the possibilities for universities to take a larger role in research

commercialisation. In compensation, many governmental initiatives aim at supporting university research commercialisation (e.g. Innovation Bridge, see above). Despite the official assignment of a third mission to universities in 1998, funding to universities has only recently started to incorporate third mission criteria and there are few career incentives for academic entrepreneurship. In this relatively unfavourable context, HEIs in Skåne are active, with a variety of instruments, on three fronts for the promotion of innovation: *i)* the promotion of spin-offs from research; *ii)* the supply of competences and skills to existing companies; and *iii)* the provision of independent analysis of the regional innovation system (the latter type of contribution will be dealt with in the section on policy intelligence below):

- Regarding the **promotion of spin-offs**, HEIs have established internal structures to help research results find their way into the business world, and rely also on external structures. Universities own departments or subsidiaries for the support to academic spin-offs: Lund University has established Lund University Innovation, an organisation that supports researchers to develop their ideas into commercial ventures, and Lund University AB, the university's holding company that invests venture capital in new companies (with specialisations in clean technology, bioscience and food science). Malmö University has established Drivhuset to support its students for business creation. Research parks and incubators are present in Skåne's major cities and linked to the universities. Ideon in Lund is the oldest Swedish research park and the largest regional park (it has three incubators: Ideon Innovation, Lund Bioinkubator and Venture Lab); Medeon and Minc in Malmö and Krinova in Kristianstad. The specialisation and size of these research parks vary: Ideon hosts 260 companies mostly in IT and pharmaceuticals; Medeon 30 companies in medical technology; Minc 120 companies in the creative sector and IT/media and Krinova is smaller (60 companies) and more generalist (with a focus on food and biogas). Technology transfer offices (TTO) are present in each university, and these form part of the regional network of TTOs, the "Innovation Office Southern Sweden".
- Regarding the **supply of competences and skills** to the business world, HEIs have established bodies in charge of delivering training and expertise to businesses and individuals, namely LU Education AB at the University of Lund, the Innovation and Development Unit at the University of Malmö, Partnerskap Alnarp at the Swedish University of Agricultural Science and Högskolan Kristianstad Uppdrag AB at the Kristianstad University College.

More user feedback is needed to assess the complementarity between the HEIs' contribution to regional innovation and that of the other actors in the support system. The HEIs' third-mission activities target high-technology businesses and reaches out well beyond regional boundaries. The role of the other actors in the intermediary system (discussed below) extends to many sectors of activities beyond the science-based sectors and is more place-based according to the mission definition of some of these actors. From this, a natural division of labour emerges that creates a complementarity between HEIs and the rest of the system in terms of their role for supporting innovation. This could constitute a good basis to implement the "two-track" innovation policy in Skåne. However, to ensure this complementarity in practice, a more detailed view is needed on: the actual target group and customer base for each organisation, the range of services offered, and the articulation between the various players, seen from a recipient perspective.

The establishment of MAX IV and ESS in Skåne is recognition of the region as a top science and technology hub but hardly a direct source of regional business innovation. These large infrastructure investments are excellent opportunities to brand not only Skåne but the broader Öresund Region as a dynamic region, hosting research activities at world excellence level. While the direct economic effects of building the two research infrastructure can be estimated, trying to quantify spill-over effects in terms of new companies and job creation within the region (beyond the direct and indirect jobs created at MAX IV and ESS) is hazardous: the expected world level scientific developments will lead to new general purpose technologies that will be translated in applications on a European and worldwide scale. The greatest challenge will be to attract sufficient international students and qualified researchers to work at the facilities, and ensure the availability of sufficient amenities (schools, houses, cultural offer, etc.) (see Chapters 3 and 4). The increase in tuition fees for foreign students at Swedish universities is a hindrance in this respect.

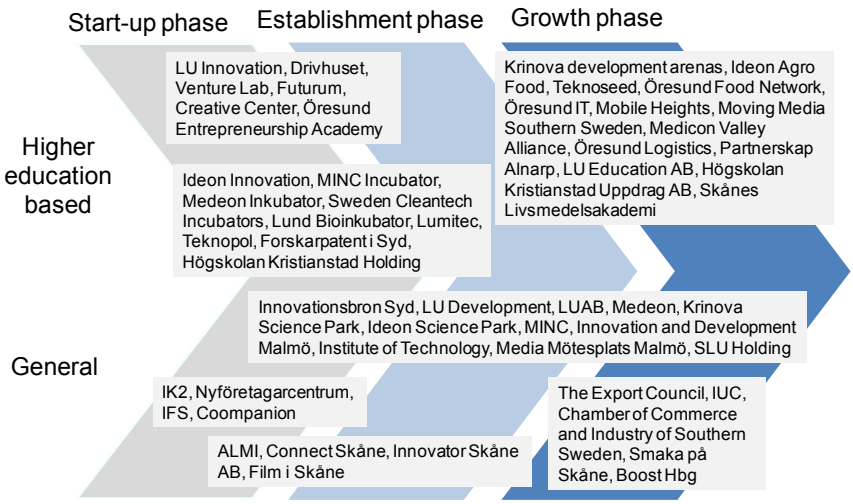
HEIs also play a role in the governance of innovation policy. Through their participation in FIRS and SIS, regional HEIs are active stakeholders in the conception of regional innovation policy, bringing their expertise into the strategic process. This is a positive element, but the move towards a business-oriented policy requires that dialogue with the business community is made equally strong.

The intermediary support system: towards more visibility, coherence, openness and effectiveness

The new Skåne Innovation Strategy has acknowledged the fact that support structures for innovation should be streamlined and become

collectively more efficient. Figure 2.2, elaborated by Region Skåne, presents the set of organisations in place in the region to support innovation, from the start-up to the development phase. The organisations take a different position on the map according to their origin: the HEI system or the economic world. As indicated above, a substantial part of the support system is formed of organisations emerging from the higher education sector, most of them focusing on the early establishment phases and on research-driven businesses. This reflects the traditional Swedish policy focus on research commercialisation. Cluster organisations are placed on the "higher education-based" line: while this may be correct when looking at the origin of some of these clusters, and is a natural feature of the life science cluster, the goal of the clusters is evolving towards the support of innovation in all its forms, in line with the broader goal of the new strategy. Hence, a first clarification for the system would be to indicate more clearly the business-oriented and business-driven orientation of the clusters. This diversity in target groups and origins calls for clarification of roles and for collaboration between the structures. Like many regions with a rich industrial past, Skåne has seen a flourishing landscape of intermediaries, each established with its own goal, structure, funding mechanisms, working methods, but with a lack of collective understanding of the overall system of intermediaries (OECD, forthcoming).

Figure 2.2. **Innovation support system in Skåne**



Source: Region Skåne (2009), "Skåne's innovation capacity: a situation analysis", Region Skåne.

The respective roles and functions of key intermediaries in the system need clarification. At the core of the intermediary network, besides Region Skåne and the organisations linked to the HEI, are two organisations: Teknopol and ALMI. According to an analysis of the innovation system carried out in 2009, those two intermediaries display high rates of interactions within the network (Daal et al., 2009). Their division of work could tentatively be described as: technology-driven innovative new businesses are the target group for Teknopol, while companies which are innovative without necessarily being technology-driven, both new and established ones, are the target for ALMI. However, if this distinction makes sense for the intermediaries, in practice it is neither clearcut nor explicit for all users of the system. This creates a sense of confusion and a waste of time for companies, which are unable to identify their entry point into the system.

Teknopol is a key actor on the high-tech business creation side: it is well-placed to develop the cross-fertilisation between clusters and good practices for business incubation. Teknopol is a business advice agency with the mission to support new business creation. It does so by delivering soft support to companies. Teknopol supports more specifically three clusters: Life Science, Mobile Heights and Sustainable Hubs. Thanks to its generic position, Teknopol is in a good position to favour "innovation at the interface" between clusters. Examples of interface projects supported by Teknopol are: mobile ICT systems for remote diagnosis treatments and functional food collaborations around diabetes treatment (Cooke and Eriksson, 2010). One interesting feature of Teknopol is that it supports with staff and methods, several other actors in the system: Blekinge Business Incubator, Ideon Bioincubator, Ideon Innovation, Inkubator Kronoberg, Malmö Högskola, Medeon, Minc. This provides opportunities for sharing information and methods to the benefit of the intermediary system as a whole.

Almi's rationale is business development: it can help bridge the gap in the system between research exploitation and business development needs. Almi Skåne is jointly owned by the national Almi organisation and by regional partners. Its mission is to support the start-ups and development of SMEs, through the provision of advice and finance (grants and loans). It does not have a particular focus on research-based companies. Almi's lending activity is self-financed. The key resource in ALMI is the competence of its specialised consultants, based in regional offices. Almi consultants are characterised by a broad range of skills and long experience. Many consultants have several years of experience of working with business and entrepreneurs.

Many other intermediaries are acting in the region to support innovation in various ways, but the whole does not function as a system. A number of other organisations are also present in the region, with missions close to or overlapping that of Teknopol and Almi, among others: the Nyföretagar centres, depending from the Jobs and Society Foundation, and with subsidiaries in several parts of the region, provide help through advice to would-be entrepreneurs. Coompanion supports new and existing companies in the social sector. Connect Skåne is a network of business angels and advisers for new companies. Industrial development centres (IUC) support industrial companies with innovative projects, providing mostly services in product and process development. According to the analysis of innovation intermediaries carried out in 2009, the range of organisations active in Skåne to support innovation in new and existing businesses cannot be judged as forming a coherent network (Daal et al., 2009). This situation can be characterised as follows:

- Individual intermediaries have a sufficient understanding of their own mission and knowledge of their target group, but do not identify clearly the role of other organisations in the system.
- Competition between intermediaries on the same market often delivers sub-optimal solutions and blurs the picture for beneficiaries.
- Tools and expertise are developed within each organisation but few of these are shared within the system.
- Intermediaries tend to work with their own (or parent) resources only and are not used to refer clients to other members of the network.
- Under-critical size and "race for funding sources" to ensure survival, causing a dispersion into projects that are peripheral to the core business, are frequent problems for intermediaries.
- International connections of the intermediaries are too limited.
- Feedback from users is, at best, limited to individual intermediaries (typically, through satisfaction enquiries), but not shared across the network, resulting in a lack of understanding of the gaps and redundancies seen from the eyes of target groups.

Improving business innovation support through a regional network is a good option. The intermediary system in Skåne is suffering from weaknesses similar to many regions with an industrial past, but also faces opportunities through developing a better networked system of intermediaries (Table 2.6). Regional innovation agencies can be organised

as centralised or networked agencies, depending on the context and history of business support. In the situation of Skåne, a well-functioning network seems to be a realistic option. Generic lessons from other OECD countries can be used for ensuring that missions, activities and funding modes of the various intermediaries at work in Skåne are fine-tuned towards more joint effectiveness.

Table 2.6. **SWOT analysis of regional innovation agencies: lessons from OECD countries**

Category	Key issues
Strengths	– Knowledge of the specific situation of local companies – Proximity with local public and private actors in charge of innovation promotion – Central position to enhance regional partnerships and social capital, facilitator role – Well-placed to achieve horizontal co-ordination of portfolio of services
Weaknesses	– Unclear mandate – Lack of impact evaluation of activities – Difficulty to find and retain qualified staff (due to unstable funding) – Inward-looking view constrained by administrative boundaries – lack of vertical co-ordination
Threats	– Unfair competition with private services – Dispersion into multiple projects to find financial resources – Public status and absence of competition induces lack of performance incentives – Inward-looking strategies – unnecessary competition with other regions
Opportunities	– Co-ordination and synergy of regional innovation support (to avoid fragmentation) – Acquiring legitimacy through the demonstration of goals achievement – need for strategic evaluations – Development of tools and professional support for own governance and to fuel strategic policy intelligence – RIAs as change agents in the regional innovation system, "one step ahead" – Overcome administrative boundaries to obtain effective innovation promotion
Success criteria	– Institutional recognition as a legitimate regional policy instrument – Complementarity of services, either internally or externally, in either one or another of two models: integrated or networked – Flexibility in services portfolio definition (adaptability to new needs) – Strategic management capacities – Goal-oriented approach and (partly) performance-based funding – Quality of human resources (professionalism, specialisation) – Suitability of structural funding sources (not too high, not too low)

Source: OECD (2011), *Regions and Innovation Policy*, OECD Reviews of Regional Innovation, OECD Publishing: Paris, *http://dx.doi.org/10.1787/9789264097803-en*.

A challenge exists in Skåne to align goals and missions and ensure complementarity between actions of the various intermediaries, as well as to improve their joint effectiveness. This challenge is one of the main strategic lines of the International Innovation Strategy. Solving it would imply the

following actions: a neutral and centralised identification of actual mission and activities of each intermediary (beyond self-declarations); a clearer definition of target groups; the generalisation and sharing of satisfaction enquiries, including also enquiries to control groups of firms which are not clients of the system; the definition of quantitative and qualitative target indicators by each organisation, as well as for the network as a whole; the establishment of performance-based funding mechanisms based on those indicators, with a view of influencing behavior to fill gaps and increase effectiveness (e.g. supporting joint actions between members of the system); and the development of outward-orientation of the intermediaries, whose mission should evolve towards the development of strong international linkages. The evolution towards a better networked innovation support infrastructure is not contradictory to an increased outward openness: each actor in the system should act as an interface with foreign organisations, putting its own connections at the disposal of the other networks' members.

Promoting innovative entrepreneurship

Many instruments are in place to promote technology-driven start-ups in Skåne but their focus should extend towards growth after creation. There has been a tendency in Sweden, and this is also the case in Skåne, to consider entrepreneurship promotion mainly under the angle of academic start-up promotion. As mentioned in the above overview of national policy for innovation, many instruments are put in place to support academic entrepreneurs (technology transfer offices, incubators, etc.) and those are well represented in Skåne. They have a main focus on firm creation: a frequent criticism to those programmes is that they result in the creation of firms that subsequently do not grow. In addition, the majority of new innovative firms do not originate from academia. A broader focus on the skills necessary to support innovators (e.g. entrepreneurship, sales and marketing) could help better translate ideas into sustainable businesses. This demands different approaches than the ones needed to translate research results into commercial ventures: programmes where entrepreneurs help other entrepreneurs are interesting avenues to pursue in this respect as suggested in the example of the Finnish VIGO Programme (Box 2.16).

Supporting high-growth firms requires a revised policy mix. A policy supporting not only firm creation but also firm growth requires multiple instruments, both from a supply and a demand side perspective (Table 2.7). Many such instruments are in place in Skåne but they are not all oriented to support firm growth. A number of new functions could be allocated to existing intermediaries to care for this goal. It also implies the incorporation of growth parameters in evaluation systems and as criteria used for funding mechanisms.

Box 2.16. The Finnish VIGO Programme: entrepreneurs support new companies' creation and growth

The Finnish Ministry of Employment and Economy launched the Vigo Programme in 2009. Vigo is a new type of acceleration programme designed to complement the internationally acclaimed Finnish innovation ecosystem. The programme bridges the gap between early stage technology firms and international venture funding.

The backbone of the programme is formed by the Vigo Accelerators, carefully selected independent companies run by internationally proven entrepreneurs and executives. These Accelerators help the best and the brightest start-ups to grow faster, smarter, and safer into the global market. The Accelerators are not consultants – they are co-entrepreneurs who invest in the companies they work with to guarantee common goals and passionate development effort. As independent companies, the Accelerators negotiate on a case-by-case basis, agreements with the target companies and investors, including the investment amounts, activities and objectives, ownership amount, possible service fees, etc. The target companies have access to both private and public funding sources. Private sources include venture capital funds, business angels, and the Accelerators.

The programme's aims are:

- Incentivising the best business developers to help the most promising start-ups grow into successful companies.
- Ensuring early stage funding for the target companies, increasing their shareholder value, and making them attractive targets for venture investors.
- Raising significant venture capital investments for continued expansion of the target companies after the acceleration stage.
- Invigorating the Finnish venture capital market and bringing more international acceleration and venture capital players into Finland.

Source: www.vigo.fi.

Breeding new entrepreneurs should be a priority as they are a very scarce resource in Skåne. Untapped potential for entrepreneurs exists in certain population categories, such as immigrants, youth, and women. Mobilising this dormant pool could have a double impact: increasing the number of new companies and bringing more diversity, which is a breeding ground for innovation. Chapter 3 discusses in detail the challenges and opportunities to exploit this important reservoir for innovation in Skåne.

Table 2.7. **Policies to support high-growth firms**

Growth driver	Demand side policies	Supply side policies
Gorwth motivation	Fiscal incentives to pursue organisational growth (e.g. favourable treatment of trade-sale income for fast-growth firms; tax-neutral treatment of share options as managerial compensation in new firms)	Explicitly tying financial and other support to the achievement of growth milestones
	Education and media policies to increase social appreciation of high-growth performance (e.g. teaching entrepreneurial attitudes in secondary education; media promotion of entrepreneurial success stories)	Using growth motivation as a qualification criterion in entrepreneurial support programmes
	Size-neutral treatment of capital accumulation in growing firms	
Growth ability	Promotion of venture capital financing through funds of funds arrangements	Promotion of venture capital financing through funds of funds arrangements
	Creating incentives for the formation of competent management teams	Provision of managerial advice
	Networking programmes to facilitate experience exchange among high-growth firms	Accelerator programmes
Legitimacy	Media strategies to promote cultural acceptance of new firms as suppliers	Initiatives to match senior executives with high-growth firms (e.g. non-executive boar member matching)
Market demand	Government procurement to favour innovative high-growth firms	Cluster initiatives to promote the creation of new industry sectors (e.g. mobile gaming)
Resource availability	N/A	Supply chain-oriented networking programmes
Appropriability	N/A	Effective law enforcement of IP protection laws

Source: Autio, E. (2012), "Dinosaurs, mice, gazelles and ecosystems: removing bottlenecks of growth for innovative firms", Discussion paper for the 2012 ERAC Mutual Learning Seminar on Research and Innovation Policies.

Promoting public sector innovation opens new ways for increasing innovation in Skåne

Innovation in the public sector offers huge potential, provided that a broad approach is taken and intellectual property (IP) issues are solved. In line with the new strategy orientation, a pilot experience is being held in the region. Innovator Skåne AB is a public limited company, fully owned by

Region Skåne, with the aim to scout, validate and support the development of innovative ideas in the public sector. The programme is funded by VINNOVA and the region. Most experiences take place in the health sector, as this sector is under regional control. The company supports ideas emerging from any person in the sector, in various forms: product, process or organisational innovation and helps with commercialisation with the support of an external consultant. The region acts both as a developer and an early customer. The intellectual property of the innovation belongs to Innovator Skåne AB and future profits should be reinvested to support innovation. The programme has a huge success and attracts all types of ideas, technology- and non-technology driven, but the fact that the intellectual property goes to Innovator Skåne rather than to the inventor is seen as a barrier by some participants to the programme. There is potential, after assessment of the initiative's outcome, to transfer the idea to other public sectors, such as the school system. Innovation in the public sector could be promoted to address the problem of youth unemployment (see Chapter 3).

Cluster initiatives could also embrace the opportunities for innovation in public sector. The experience of the Food Innovation Network provides a range of interesting experiences in this respect, which could emulate other clusters to explore this potential (Box 2.17).

Strategic intelligence used by regional policy makers

Over the last few years, Region Skåne has developed a solid evidence base and a robust learning capacity in order to sustain its policy-making efforts. The region engaged in systematic analytical work, with the view of getting a deep understanding of the assets and weaknesses of the regional innovation system. An impressive number of studies and peer review reports of high quality and policy relevance were produced and incorporated in policy making (Evertsen et al., 2009; Daal et al., 2009; Eriksson et al., 2010; Henning et al., 2010). Three remarkable aspects of these strategic intelligence developments are:

- the international openness (most analyses and reviews incorporated contributions from international experts);
- the regional-national collaboration (VINNOVA has supported several of these exercises);
- the direct incorporation of the work into policy making: this was facilitated by a close follow-up of the studies and peer reviews by staff in Region Skåne, and by large consultations of regional stakeholders during the analyses.

Box 2.17. **Promoting food innovation in the public sector**

The Swedish market for pre-selected groceries is growing strongly. A study performed by SFIN shows that there are currently about 35 different pre-selected grocery offers. These are available primarily in metropolitan regions, but home grocery delivery is also available in smaller towns. The basic concept is essentially the same for all offers. Each pre-selected grocery bag includes five dinners for two adults and two children, including a somewhat more special dinner for Friday. The raw ingredients are packed along with recipes and simple cooking instructions and delivered to the customer's home. The study also showed that one or two special diets are offered by a few actors, but there are no specifically health-promoting alternatives. This could be interpreted to mean that there is no market for healthy pre-selected groceries – but there is a need. Many Swedes, often those who are older, suffer from one of a few predominant widespread diseases – high blood pressure, gastrointestinal disorders, cardiovascular diseases and diabetes.

In partnership with Region Skåne, SFIN is examining opportunities to carry out an "innovation procurement" of a Healthy Grocery Bag for each of these diagnoses. The idea is to gradually procure a combined product and service that can be recommended or prescribed by primary or elective care with a view to offering healthy meals for groups with one or more of the conditions mentioned.

Three surveys are currently being performed in order to build a strong knowledge base related to food and meals. In connection with "Joy of Food for the Elderly" and the Skåne Model, a study is clarifying the nature of the meals situation in all special housing for the elderly in Skåne, with regard to both how food and meals are prepared and served, but also how various roles and responsibilities are allocated within the organisation. Another study is oriented towards how food procurements are carried out in Skåne and the lessons learnt by procurement officers and head nutritionists in the course of the work. A third survey is aimed at local political engagement in food and meals issues as manifest in written legislative bills/motions and newspaper articles in the last two years.

In order to bring about a development towards the public sector imposing higher demands on the food industry, it is important to bridge the gap that current application of the Swedish Public Procurement Act has created between a generally weak buyer and an increasingly oligopolistic supplier market. Change will require new approaches to be legitimised by political representatives who take a stand for better food and meals for students, care service users, social service users and patients. Discussions have begun with the Chair and Deputy Chair of the Regional Board and the Chair of the Regional Growth and Development Committee, all with the Skåne Regional Council, particularly through a meeting between these leading politicians and the SFIN Network. With regard to the 33 municipalities in Skåne, discussions are in progress with the Scania Association of Local Authorities concerning forms of co-operation among municipal politicians and SFIN.

Source: SFIN, Open Innovation Network, *www.livsmedelsakademin.se*.

Regional HEIs are also contributing to policy intelligence. In addition to this range of studies directly linked to policy making, Region Skåne regularly commissions studies on various aspects of innovation to external experts. Amongst them, the most prominent is the Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE) at the University of Lund. CIRCLE joins research traditions in innovation and entrepreneurship, and, over a few years, has become a rapidly growing and prominent research group with high visibility in policy-relevant innovation studies in Europe. Its founder, Charles Edquist, is an eminent academic contributor to the "innovation system" concept and the group's researchers have made important contributions to the regional innovation system literature and policy practice, notably with the concept of "constructed regional advantage" (Cooke and Asheim, 2006). The research group has been regularly involved in research of value for Region Skåne, notably on Medicon Valley and on clusters in the region (Henning et al., 2010; Coenen and Moodysson, 2008). The region could consider entering into systematic agreement with academic centres that would be given tasks in support of its various policy areas, including innovation as done in Flanders for example (Box 2.18).

Box 2.18. **Academic research centres support innovation policy in Flanders**

In 2001, the Flemish Government launched the Policy Research Centres (*Steunpunten*) Programme to provide a scientific basis for policy.

The focus of the policy research centres is both on problem-driven short-term research and on fundamental long-term basic research on themes that the Flemish Government regards as priorities and relevant to its policy. The task further includes the transfer of knowledge, the provision of scientific services, the building up of collections of data, the unlocking of data sources and data analysis. The Flemish Government selects the themes on the basis of its policy priorities. It assesses research group candidacies by using scientific, policy-relevant and management-oriented criteria. On the basis of this judgement, a single candidate to become a policy research centre is accepted for each theme. The management contract sets basic rules and procedures for the running of the policy research centre, plus a long-term plan that states obligations as to the content of the research.

In 2006, a new generation of 14 policy research centres (2007-2011) was approved. The 14 centres include one on R&D indicators, which, for instance, calculates the Flemish progress towards the 3% Barcelona target, and one on entrepreneurship.

Source: Belgian Science Policy Office (2010), *Belgian Report on Science, Technology and Innovation 2010*, BELSPO, Brussels.

The main challenge that Region Skåne faces with respect to strategic policy intelligence is to develop and put in motion a continuous and integrated monitoring and evaluation system for its policies. At present, the region lacks an integrated and systematic view on all initiatives and projects that are implemented in the region. This information is partially available for administrative purposes but the task is to develop a strategically oriented observatory to monitor and evaluate the deployment of the policy. Recent initiatives such as the new evaluation model for the cluster initiatives could provide inspiration to extend evaluation to other areas (Oxford Research, 2011). The evolution towards more outcome-based funding mechanisms necessitates such an organised information base. Section 2.2 provides recommendations under this headline.

Conclusion: Skåne's regional innovation policy is well advanced along the lines of the new policy paradigm

Region Skåne has, over the last few years, succeeded in developing an innovation-driven regional development strategy of the new generation. This strategy, which responds to the emerging new paradigm for regional innovation policy (Table 2.8), combines both knowledge creation and knowledge absorption through the development of specialised niches, in a cross-border context and with an international perspective. Region Skåne acts as a facilitator and focuses on system interfaces. The regional innovation policy has a strong "cluster" orientation, focusing both on more traditional fields such as the food sector, and high-tech domains such as life science or media. The cluster policy evolutions in Skåne reveal a remarkable orientation: not only is the policy trying to build clusters in both existing and emerging industries, but it also focuses on finding new opportunities at the interface between clusters. In addition, the policy in Skåne can provide a useful response to the often criticised linear orientation of Swedish innovation policy, neglecting the systemic nature of innovation: the fact that national authorities are revising their policy, taking on board the lessons from Skåne, needs to be noted as a positive sign. The policy also tends to focus more and more on innovation in the public sector, notably the health sector, which creates potential for synergies with an important area of responsibility of Region Skåne. With only a medium level of institutional power in innovation (in an OECD comparative perspective), the regional authorities in Skåne have succeeded to use this power in a clever way, combining regional with national and EU resources. It has developed policy intelligence sources and should further establish monitoring and evaluation mechanisms in order to implement the policy as an outcome-driven process. The importance of combining such a policy with human capital development

policy can never be understressed, since skills and creativity of the workforce are the key ingredients for innovation.

Skåne's regional innovation policy is a good model to follow to address the frequent weaknesses of regional innovation policies. The core ingredients that make Skåne's regional innovation policy a good prototype for the new wave of policies are the following:

- The **role of public authority** is to act as a facilitator of change and catalyst of interfaces. The role of Skåne Region is to improve conditions for innovation, notably by supporting platforms for increasing synergies between actors from the region and beyond.
- The **policy goal** is to improve system coherence, resilience and evolution capacity. This is a difficult role which requires much more policy intelligence and efficient policy mixes, than the traditional role of resources allocator.
- **Interventions are selective and concentrated,** targeting promising growth areas and concentrating resources on those areas with a view to build critical masses in world-class excellence clusters. This capacity of selecting priority areas has been developed both thanks to good knowledge of the regional potential and through a bottom-up process to leverage knowledge present with existing actors.
- The **strategy is outward-oriented,** as it takes into account Skåne as a functional region rather than being confined to administrative borders, and sees the region's specialisation in an international perspective. Cross-border policies are present and the very goal of regional interventions is to bring regional actors on the international scene.
- The **strategy combines effective leadership and strong stakeholder involvement:** it is the result of a collective endeavour led by Region Skåne, perceived as a legitimate leader, and involves the academic world, public authorities and the business community, as well as innovation users. The recent establishment of the FIRS and the SIS testifies the drive towards enhanced stakeholders involvement.
- The **approach is experimental and evidence-based:** in addition to the contribution of regional stakeholders, the strategy is nurtured by numerous studies, expertise, and peer reviews and the analytic knowledge at the disposal of decision makers is remarkable.

Table 2.8. **A new paradigm for regional innovation policy**

	Traditional paradigm	New paradigm
Nature of innovation	Linear, science- and technology-push	Interactive, the product of exchanges and synergies between actors in the system
	Closed innovation	Open innovation
	Technological innovation	Technological, non-technological, organisational innovation
	Radical innovation	Incremental innovation
	Main driving force: technology supply and accessibility	Main driving forces: demand, entrepreneurship, competences, creativity
	Codified knowledge	Tacit knowledge, embedded in human beings and know-how
	Local and national competition	Global competition
Innovation policy target	Individual actors	Actors as part of the system, networks and value chains
	Manufacturing sector	Manufacturing, services and public sectors
	Public and private R&D actors	Innovative public-private partnerships
Innovation policy goal	Resources endowment, reinforce supply and diffusion of scientific and technological knowledge	Facilitate flows in the system and synergies, new opportunities identification, improve learning capabilities and creativity, support the creation of new markets
Innovation policy approach	Best practices, standardisation	No unique model, adaptation to specific situation
	Generic, top-down policy	Smart specialisation strategy, bottom-up and participative
Role of public actor	Funding on the basis of market failures	Change facilitator, catalyser of interfaces, addressing systemic failures
Implementation	Fragmentation between policy domains	Integration across policy domains
	Focus on science and technology policy instruments	Policy mix integrating instruments from economic, environment, infrastructure, training… policy domains
Expected result	Optimal resources allocation	System coherence, resilience, evolution capacity
Policy governance	Administrative, routine monitoring and control-oriented evaluation	Strategic intelligence along policy cycle, learning evaluations, intelligent benchmarking
	Vertical orientation and programming of policy (within ministries and agencies)	Horizontal co-ordination for orientation and programming of policy (across ministries/agencies)
Territory	Administrative region	Functional region

Source: Adapted from Nauwelaers, C. (2009), "European Approaches to Regional Innovation Policy", in J. Osmond (2009), *Regional Economies in a Globalising World*, Institute of Welsh Affairs, Cardiff.

2.2. Recommendations for regional innovation policy in Skåne

Skåne's regional innovation policy needs to be reinforced in its implementation

Implementing the strategy is not a straightforward task as it requires a change in perspective to ensure that the policy mix meets the strategy's goals. Despite the remarkable achievements at the strategic level, there are ways for improvement open to the region, to ensure effectiveness for the policy at implementation stage. Effectiveness should be ensured for policy instruments taken individually and for the policy system as a whole: the aim is to ensure that the policy mix contributes to the two-tracked regional innovation policy defined above. Given the legacy of a linear view of supporting science- and technology-driven innovation in the region, inertia in the system should be overcome to implement the change of paradigm that is pursued under the new strategy.

Improvements in regional innovation policy are suggested along four lines:

1. establish, test, use, refine and further integrate monitoring and evaluation systems within the policy cycle;
2. reinforce the trans-cluster dimension of the policy;
3. further develop the cross-border and international dimension of the policy;
4. boost private sector involvement in strategy definition and implementation.

Establishing an integrated monitoring and evaluation system covering all parts of the policy is a must

Region Skåne as a system organiser needs to have a complete picture of the ongoing initiatives and actions implemented with the view of assessing their contribution to the strategy. At the current implementation phase, Region Skåne has started a process of Concerted Action Agenda, in order to both communicate what actions are under way, but also to facilitate cross-learning and indicate areas where more contribution towards the end goal is needed. Currently, the information of the multiplicity of actions is either non-existent, or fragmented and largely invisible. An Innovation

Policy Observatory could be put in place, which would form the basis for monitoring and evaluation of the policy. When the strategy is made operational into action lines and budgets, a first exercise would be to allocate existing and new initiatives under these action lines. This would be the "input" part of the observatory. More difficult is to elaborate the "output" part of the Observatory: this should rely on a co-ordinated data gathering system capturing the outputs of the various action lines. Ongoing regional experiences in other EU regions can provide valuable guidelines in order to set up such an Observatory (Box 2.19). The guidelines in Box 2.19 all appear relevant and provide a good agenda for Region Skåne's work. Two key recommendations are of particular relevance to Skåne. First, the need for the system to build on, and upgrade from, existing practice: this will ensure endorsement of the system by all regional actors and higher quality: a top-down system is both difficult to impose bacause the region is only a co-funder of many initiatives, and unlikely to be well accepted since the diversity of environments need to be respected, hence raising the danger of creating perverse effects. Second, the need to integrate the results of the monitoring and evaluation into the policy cycle: this raises the issue dealt with in the next paragraph: the reinforcement of performance-based funding mechanisms.

Monitoring and evaluation should lead to more performance-based funding practices. The aim of establishing better and more strategic monitoring and evaluation mechanisms is to be able to fine-tune policies for more effectiveness. Hence, the funding should also become more closely tied with performance achievement. This will, for example, allow for the definition of exit mechanisms for cluster policies, something that is missing today.

An important element of the evaluation imperative is the development of better and more integrated systems to capture users' feedback. In a more demand-driven policy framework, the aim is to ensure that policies are acting to promote innovation in businesses. The voice of businesses should thus be captured by appropriate methods such as enquiries. Not only should clients be enquired about their satisfaction for the services, but a control group of companies that are not touched by the initiatives should also be enquired in order to get a view on the penetration of the policies.

This recommendation applies in particular to the work of the intermediaries in place in the region, which should evolve towards a more efficient network mode of organisation. A concerted effort needs to be put in place to define individual and collective systems for monitoring and evaluating the intermediary work, which is in need of improvement. Currently, the feedback from users is still under-developed, and is done at the level of each intermediary, but not collectively. It is crucial to involve

actors of the support system in the establishment of such monitoring and evaluation systems, in a bottom-up mode and relying on existing practices and knowledge. Qualitative aspects would need to be given due consideration, as many of the services are of a soft nature and likely to lead to long-term impacts.

Box 2.19. **Guidelines for monitoring and evaluating regional innovation policy from SCINNOPOLI**

A set of 12 policy recommendations have been formulated as a result of the project SCINNOPOLI "Scanning Innovation Policy Impact". The nine project partners exchanged numerous experiences on the monitoring of the impact of regional innovation policy. These policy recommendations are a set of practical recommendations for the implementation of an effective monitoring system for regional innovation policy.

1. SMART policy objectives and SMART indicators: policy objectives as well as monitoring indicators need to formulated (SMART: specific, measurable, attainable, relevant and timebound).

2. Monitor what you can INFLUENCE: a lot of information is nice to know but for monitoring purposes one should monitor only indicators that can be influenced by the downstream party.

3. Integrate FEEDBACK-LOOPS in the monitoring system: monitoring results should be used to improve the regional innovation policy. Monitoring is not the end of a process.

4. PROCESS ORIENTATION: a key step in the development of an evaluation culture is to recognise the evaluation process as part of a cyclical process of policy design – policy implementation – policy learning.

5. CONSENSUS: the concept of the monitoring system needs to be set-up in consensus with all stakeholders (policy makers/practitioners/programme owners/project leaders) and existing monitoring systems need to be considered.

6. Concise COMMUNICATION and promotion of results: the message and language should be adapted to the targeted public (policy makers, companies, large public, innovation actors). Communication on the innovation policy monitoring process as a whole (objectives, targets, indicators, results) is a condition *sine qua non* of a successful innovation policy.

Box 2.19. **Guidelines for monitoring and evaluating regional innovation policy from SCINNOPOLI** (*cont.*)

7. Monitoring is a POLICY TOOL: monitoring innovation policies are only useful when the monitoring results are used by policy makers.
8. EMBED monitoring in the regional innovation system: monitoring should be embedded in the regional innovation strategy from the start of the implementation of a regional innovation strategy. Adding a monitoring system as an add-on to the regional innovation strategy is not leading to good results.
9. Create a WIN-WIN situation: all groups involved in the monitoring process should find a benefit in the monitoring system.
10. RESOURCES need to be budgeted: resources for the specific support actions defined in the framework of the regional innovation policy as well as resources for the monitoring system itself should be budgeted.
11. LONG-TERM perspective and continuity: one should search for sustainable indicators, even if the regulatory environment is unstable.
12. COHERENCE: an innovation policy monitoring system should be based on a solid, transparent and clear logic. This logic must be maintained from the lowest level (individual innovation support actions) to the highest level (innovation policy design).

Source: www.scinnopoli.eu.

Enhancing the trans-cluster orientation of the policy is a key to reach Skåne's innovation ambition

Cluster policy should help Skåne's actors to exploit "unexpected combinations" across sectors. All OECD regions and countries tend to prioritise similar areas for their innovation strategies, betting on new developments in life science, ICT, new materials, etc. Regions like Skåne, well-positioned at the technology frontier and having access to the latest scientific and technology developments, will thrive internationally in finding new innovation combinations at the intersection between these areas. With the new strategy, Region Skåne has the mission of facilitating innovation through the establishment of new "innovation arenas". Cluster policies represent the current stage reached by the region to implement this mission. Beyond their variety, their common thread is that they rely on "entrepreneurial discovery" processes from key actors in the region and that they act as laboratories for experimentation. The key focus areas defined in

the strategy – personal health and smart and sustainable cities – will bring the potential for economic transformation if the policy succeeds in facilitating the unexpected innovation niches that lie at the interface between the existing clusters, such as food, life science, and mobile media. What can be unique to Skåne are specific applications of the generic technology advances to these societal challenges, with the view of developing new markets around new combinations. Hence, the policy should increasingly be turned to the support of experimentations and the development of competences and critical masses of expertise at the interface between clusters. Responsibilities and funding mechanisms should be established with this goal in mind. The experiences of the Skåne Food Innovation Network provide an interesting example of such trans-cluster initiatives. Establishing a regional cluster platform to promote such a trans-cluster initiative could be a way to foster this orientation (Box 2.20).

Box 2.20. **RegX, a Danish Cluster Academy to improve cluster managers' competences and promote cross-clusters exchanges**

REG X is a Danish platform for competency building, knowledge sharing and networking for people working with clusters. It is located at the University of Southern Denmark. Funding is provided by the Danish Enterprise and Construction Authority, Southern Denmark Region, Bitten and Mads Clausen Foundation (Danfoss) and the European Social Fund.

REG X supports the development of the Danish clusters through competence building, knowledge sharing and networking. The training programmes for cluster facilitators (Cluster Facilitator Training) and for regional policy makers (Executive Policy Programme) constitute the flagship of REG X. The Cluster Facilitator Training Programme consists of six different modules of two to three days. The purpose of the programme is to train facilitators to become strategic innovation agents who are able to promote the development of the Danish clusters and networks. The Executive Policy Programme is developed in collaboration with the Region of Southern Denmark, the Region of Central Jutland, the OECD and leading international universities and experts. Clusters facilitators are gathered in a network that provides a platform to exchange on methods and strategies for cluster management.

REG X participates in a series of national and international projects in order to accumulate knowledge about the incentives for developing strong and innovative clusters. This knowledge is transferred to the Danish cluster actors, i.e. through the two training programmes, the network for Danish cluster facilitators, newsletters and LinkedIn groups.

Source: www.regx.dk.

The cross-border and international dimensions of policy should be further developed

Skåne's regional innovation system and innovation policy are already quite open, and could build on these achievements to further develop cross-border and international linkages. This could mean, for example, investigating the possibility to develop cross-border regional clusters, beyond the Öresund, such as the Moving Media which is jointly supported by Skåne and Blekinge, or the increased development of international linkages with other clusters (Box 2.21). The example of another top science and technology region, the Top Technology Region at the borders between Belgium, Germany and the Netherlands, can also inspire Skåne actors to further develop their cross-border co-operation over the Öresund and beyond. The achievement of higher critical masses and the creation of strong complementary partnerships will require an enhanced understanding of the cross-border region assets (Box 2.22) and will be instrumental in attracting talent to a more visible region (Box 2.23). Attracting new foreign direct investment to the region is a key component of the strategy, and requires the support of foreign investment promotion agencies.

Private sector involvement is key to the success of the strategy

The Skåne Innovation Strategy will only be effective if it is endorsed by a large number and a diversity of stakeholders, with businesses at the forefront. Concrete involvement of regional actors in strategy development and institutionalisation of this involvement through the FIRS and SIS are positive developments along this path. However, since the main challenge of the region is to create value from its innovative assets, a strong and central involvement of companies in the strategy implementation is crucial: enhanced private sector involvement in strategy definition, review and implementation is essential to make sure it remains business-oriented, as illustrated in the case of the Brainport Foundation (Box 2.24). This is true for regional strategy as a whole and for cluster/arenas policies as well. The examples of both the Medicon Valley Alliance and the Food Innovation Network have shown that shifting from an academia-led towards a business-led initiative was a positive move in order to ensure that the clusters would deliver according to expectations. The establishment of initiatives with businesses at the core such as the "big companies helps small" focus of the Mobile Heights cluster are also paths to follow to reinforce the business-driven dimension of the strategy. Increasing the share of private funding of cluster initiatives is a way to raise private involvement.

Box 2.21. SME vouchers to support trans-border cluster activities in life science

Biopeople is the Danish innovation cluster for the life and health science sectors. It helps academia and industry to co-create and to develop ideas into new projects, products, and services to benefit global health and welfare. Biopeople partnered with other regional bioclusters in the FASILIS initiative, a cross-border project to spur innovation in life science across borders.

After gathering over 100 world-class facilities from the 6 bioclusters participating in the initiative, the opportunity to form a partnership with a facility and to win funding for a short R&D project was presented to several hundred life and health science SMEs at 7 different events across Northern Europe in the spring of 2010. These matchmaking events and follow-up activities resulted in over 90 SME/facility partnerships being brokered and 69 demo or pilot projects being funded with vouchers worth EUR 6 000 each in the summer of 2010.

While national voucher programmes to fund R&D projects for SMEs and multi-biocluster meetings to promote partnering are well known in Europe, the novelty of the FASILIS initiative comes from combining these two and adding an essential third component: the vouchers awarded to SMEs for their pilot projects were to be used only at facilities outside the SME's home biocluster. In other words, the initiative promotes transnational R&D collaboration. The public-private projects that have resulted have allowed the six participating bioclusters to explore the synergies among their regional life and health science centers of expertise.

Both life and health science SMEs and facilities have benefitted in three ways:

- Successful completion of 24 applied R&D projects between world-class facilities and their experts and innovative SMEs in Denmark; the knowledge transfer has been so useful that 16 of the 24 projects are now ongoing and many SMEs have taken their products and services one step closer to market.
- New contacts to collaborators in other bioclusters for future projects, strategic alliances. And,
- Increased funding opportunities.

Source: Danish Agency for Science, Technology and Innovation (2011), *24 Proofs of Cluster Excellence – Successful Stories from Clusters in Northern Europe*, Danish Agency for Science, Technology and Innovation, Copenhagen.

Giving priority to experimental projects and initiatives with a clear private sector drive is thus an essential condition for the effective implementation of the strategy. Given the strategy's accent on social innovation and creative industries, the notion of private sector should be broad enough to

incorporate actors from those sectors. Reinforcing the business involvement in FIRS, as mentioned before, is another relevant direction.

Box 2.22. A Top Technology Region relying on cross-border innovation promotion

ELAt, the Eindhoven-Leuven-Aachen triangle, is a geographical area of high-tech activity in the Dutch, Belgian and German cross-border region. The total ELAt area covers 14 269 square kilometres, has a population of nearly 5.9 million, a workforce of 2.9 million and an aggregate GDP of EUR 157.5 billion (2005). High-tech, knowledge-based industries account for a direct share of 20% in the GDP. The driving force of these industries creates large multiplier effects on the economy. The estimated R&D spent in ELAt is EUR 4 billion, representing 2.5% of ELAt's GDP.

To understand the full potential of the clusters in ELAt, the partners initiated a process to identify, define and describe the clusters and the innovation ecosystem they are part of. This action was the starting point for a collaborative process, involving innovation stakeholders (companies, research institutions, universities, intermediary and network organisations and government) towards the creation of a joint innovation strategy. The strategy addresses those topics where collaboration on an ELAt scale optimises the value and yields of joint action, which cannot be achieved outside the ELAt constellation.

The ELAt strategy is driven by the following leading principles:

1. ELAt is a content- and market-driven network of networks. ELAt is not *a priori* a co-operation between regions but a network of networks with many stakeholders with triple helix roots in the ELAt area. So there is broad ownership, rooted in the business and science community and supported by public parties (government). These stakeholders co-operate on the basis of content, complementary competences, inter-disciplinary critical mass and joint opportunities. They initiate new projects; and intensify and anchor existing activities as a part of the innovation ecosystem.
2. Building on regional strengths and growth potential.
3. Focus on distinctive knowledge domains and value chains (creating knowledge, creating value, capturing value). The ELAt agenda is not a comprehensive economic strategy but focuses on the value chains of a limited and distinctive number of competitive clusters with critical mass and growth potential: high-tech systems and materials and Lifetec.
4. Open innovation that thrives in a cross-border innovation ecosystem.
5. Making optimum use of the capacity of the organisations involved regarding transferring, adapting and linking innovation activities.

Box 2.22. **A Top Technology Region relying on cross-border innovation promotion** (*cont.*)

Seven strategic lines contribute to the strengthening of the competitiveness of the ELAt clusters and the economy as a whole. These seven lines are based on matching the strengths of ELAt and opportunities in the global market place:

- clusters;
- entrepreneurship;
- brains;
- public resources;
- connecting ELAt;
- mapping ELAt;
- marketing.

Source: www.brainportdevelopment.nl.

Box 2.23. **Brainport Foundation: an active policy for attracting international talent and R&D**

Brainport Development, the development company with the aim of developing Brainport Eindhoven Region in South Netherlands as one of the top technology regions of Europe, requested a study to highlight the potential of the "Big Ten" regions, i.e. the European regions that show comparable knowledge and innovation strengths as the Brainport Region in the Southwest Netherlands. The aim is to map with which regions Brainport is developing relations to attract knowledge workers and develop joint R&D and innovative projects. This study prepares the implementation of the Strategic Plan Brainport 2020, which underscores the importance of developing co-operation with other top regions, notably in the form of programmes for attracting and exchanging talent (students and workers).

A network analysis has been carried out on 15 regions, with which the diversity and intensity of relationships was put in figures. With respect of the attraction of international talent, the study revealed the following trends:

- The share of international knowledge workers in large multi-national firms in Southwest Netherlands is between 10% and 20%, and is lower for SMEs. In knowledge institutions, this share is, with 30%, much higher.

Box 2.23. **Brainport Foundation: an active policy for attracting international talent and R&D** (*cont.*)

- Companies report a shortage of qualified workers, especially in technical professions and natural sciences.
- The first channel for international knowledge workers to be hired in regional companies is through having first a study time in a Dutch university; the second channel is through alumni networks and active promotion from the big regional firms in foreign countries. An increasing number of knowledge workers come from countries in recession or where the job supply is shrinking (Southern and Eastern European countries).
- International knowledge workers are mobile and pay important attention to overall living conditions and are thus difficult to attract and retain. Companies and knowledge institutions deploy a lot of efforts to support these workers and their families with all aspects of their life (schooling, housing, culture, language, etc.). The region experiences comparative disadvantages such as: the language (Dutch); salary conditions at universities; administrative burdens for non-EU foreigners.

The study confirmed the steady importance of border regions in R&D co-operation. However, the growing importance of BRIC regions also showed up in the analysis, and leads to a need for a larger international orientation of the policy.

To cater for the needs of international knowledge workers, Brainport has established the office *Brainporttalentregion*, which provides information on work and study opportunities and on all practical aspects of interest for knowledge workers (housing, culture, amenities, etc.). Brainport International Community (BIC) is the networking community for all international focused organisations and international knowledge workers living and studying or working in Southeast Netherlands. Its main activity is the worldwide promotion of the Brainport Region to build networks and attract international talents. BIC assists corporate organisations and companies in Southeast Netherlands in recruiting international knowledge workers. This is done through the website *www.brainporttalentregion.com*, by creating networking contacts and by participating in career events all over the world. BIC also initiates and maintains networks with overseas universities, research institutes and alumni associations.

Note: the ten benchmark regions are Bayern, Baden-Württemberg, Catalonia, South Finland, Rhône-Alpes, Lombardy, East England, Istanbul, Massachusetts, Ontario, California (Sillicon Valley), Singapore, Sao Paulo, Bangalore, Shanghai.

Sources: Dialogic (2011), "The global pipelines van de global buzz in Zuidoost Nederland: een verkennende netwerkanalyse en benchmark", report for Brainport Development and *www.brainporttalentregion.nl*.

Box 2.24. **Brainport Foundation: ensuring the commitment of businesses towards a Top Technology Region**

Brainport Development can be characterised as is a "horizontal triple helix collaboration" partnership, since large companies and SMEs, knowledge institutes and governments collaborate at various levels. Of the triple helix parties, the regional authority (the provincial government) is perhaps the least dominant, least powerful, and most limited in terms of resources. The project management approach builds on the model of the former Horizon Programme which consisted of a large number of bottom-up initiatives with external project owners. Brainport tries to persuade one of the involved firms or knowledge institutes to take ownership of initiatives or projects. Brainport Eindhoven has won the Eurocities Award 2010 in the "co-operation" category, for co-operation among companies, knowledge institutions and government in the Brainport Region.

In line with the limited role of public government and public R&D investments, the innovation system of the region is privately driven. The development of the strategy was led by the former Vice President of the multi-national company DSM and the steering group also included a former manager of Philips. In line with the approach of the agency to appoint external people as "project-owners", many initiatives and projects are led, or "driven" by businessmen on a personal basis. Private companies like Philips have become important actors regarding governance of RTD-policy in North-Brabant. The involvement of Philips has increased over the last years with the adoption of the concept of "Open Innovation" and most notably by the High-Tech Campus which has been built around Philips' R&D home-base in Eindhoven. It is to a large extent a private policy, but with large impact on the innovation performance in the region. The Innovation Policy Intermediates became involved in further development of the campus by providing incubation support. The campus model of open innovation is adopted and implemented elsewhere in the region.

The most recently published regional innovation strategy is "Brainport 2020: Top Economy and Smart Society". Development of this vision and strategy along with a tangible implementation programme was asked for by the Cabinet of the national government. The assignment reads: "Develop, parallel with the airport and seaport visions, a cohesive and comprehensive vision of Brainport. At the level of Southeast Netherlands with Brainport as pivot and with a focus on cross-border links to Flanders and Nordrhein-Westfalen". To develop this strategy, the following activities took place during spring and summer of 2010: 4 expert group meetings with 45 experts; 10 breakfast sessions with 200 participants from different sectors also including SMEs, venture capitalists, and education institutes; and 50 bilateral meetings with stakeholders in the region.

Source: Wintjes, R. (2011), Regional Innovation Monitor: Noord-Brabant, Technopolis Group, *www.rim-europa.eu.*

Conclusion

The innovation policy developed and implemented in Skåne is well-aligned with most of the requirements associated with a regional innovation strategy that contributes effectively to boosting regional competitiveness. It is a long-term, future-oriented and politically endorsed strategic exercise, relying on a robust evidence base and on the engagement of many stakeholders. It succeeded in defining priorities based on regional knowledge-based comparative advantages and aims to build critical mass to raise the attractiveness of the region in an international perspective. The existing "open" cluster policies and the support infrastructure that are in place in the region offer an excellent basis to support these ambitious orientations. The policy thus has a good potential to bring the region close to its target of being "Europe's most innovative region in 2020" and to become a flagship model for other regional innovation policies as well as national and European policies.

The strategy should be developed into a sound action plan – incorporating monitoring and evaluation based on clear targets and indicators – implemented through a performance-based funding mechanism, with businesses at the forefront. In this manner, the strategy can act as an excellent vehicle to support Skåne's evolution towards a top innovative region, able to provide its own citizens with wealth and employment perspectives, and nurture other regions with innovative solutions to address the societal challenges that it addresses: personal health and sustainability in cities and regions.

Box 2.25. **Key recommendations for Skåne's innovation policy**

Recent achievements with the design of a new regional innovation policy in Skåne point towards a "double-track" policy:

- The first track continues to promote science- and technology-driven innovation, with a key role for the regional HEIs and various technology transfer and start-up promotion mechanisms.
- The second track enlarges the innovation base by increasing the engagement of SMEs in all types of innovation, as well as public sector innovation.

The technology-push innovation policy alone is insufficient from a growth and employment perspective: full returns on R&D investments cannot be captured in the region due to the openness of value chains, weak entrepreneurship and limited absorption capacity with many regional SMEs. In order to achieve the paradigm shift towards a more demand-driven policy for innovation while implementing the strategy, Skåne should follow four (inter-related) orientations.

Box 2.25. **Key recommendations for Skåne's innovation policy** (*cont.*)

Ensuring outcome-driven policy with the help of better monitoring and evaluation

Many innovation policy instruments that should support the strategy are already in place in Skåne. Now that the policy is becoming explicit, there is a need to define more precisely the missions for all these instruments, attach target indicators for achievements, follow-up activities in line with the goals, and ensure funding mechanisms work in a performance-based mode. Each instrument should be monitored and evaluated not only with respect to its own missions, but also with respect to its contribution to the policy system as a whole: this is the key to get a better functioning intermediary system. Both quantitative and qualitative indicators are needed. An integrated Observatory for innovation policy could be established with the participation of all actors: bottom-up processes have to be followed here in order to avoid perverse effects. Funding sources from all levels (EU, national, regional, local) should be covered by the Observatory. A key element for evaluation is to get users' feedback, in particular from SMEs, be they client of the support system or not.

Enhancing the effectiveness of cluster policies, notably by focusing on cross-cluster innovation opportunities

Cluster policy is a key instrument used by Region Skåne to implement its innovation policy and this instrument fits well with the new policy orientations. Region Skåne acts as a facilitator and supports experimental work in the various clusters: this needs to go hand in hand with tailoring and exit mechanisms to fine-tune the support to individual clusters. Since niches for smart specialisation are likely to occur at the interface between clusters, cross-cluster innovative projects should be given priority in policy. Beyond their diversity, there are lessons to be learnt across clusters in terms of cluster management methods and areas for cross-cluster exchange should be developed.

Reinforcing the cross-border and international dimension of the policy

Skåne's openness beyond regional borders, into Öresund and beyond, is an important asset that should be exploited further for the region to overcome its secondary position to Sweden's capital region. This could be done at the level of the various regional intermediaries, which could provide services over the border, possibly using cross-border innovation vouchers schemes. Clusters and networks could also further extend across regional borders, including Swedish and foreign partners and seeking international partnerships. Attracting human capital internationally is a key need to solve ongoing and future bottlenecks for the regional innovation system.

Putting businesses firmly at the centre of the policy

The success of the new strategy will be measured in improved innovation capacity in businesses. This requires businesses to be more firmly involved in the policy, both at the strategic level through their involvement in the consultative bodies FIRS and SIS, and at the implementation level in being part of the decision-making bodies for initiatives such as the clusters or technology transfer organisations. Private co-funding of public initiatives is a clear indication of business involvement. Initiatives linking businesses to businesses, e.g. in mentoring schemes, should be given higher priority.

Notes

1. The data used refer to Southern Sweden (Skåne and Blekinge), which is the territorial unit used on the *OECD Regional Database*. Since approximately 90% of the population of Southern Sweden is located in Skåne, the use of data pertaining to the larger geographical unit only slightly biases the picture.
2. Note that unemployment excludes commuters (see Chapter 1 for a discussion).
3. There is mention of another cluster "training region", focused on risk and safety, but little information was available on this cluster.

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Chapter 3

Building a more efficient and cohesive regional labour market in Skåne

Skåne has long been one of the three major engines of national growth but it has been underperforming both the other metropolitan regions since the late 1990s. While the population it has attracted both from abroad and elsewhere in Sweden has tended to concentrate in a few large municipalities, this demographic dynamism has not translated into corresponding gains in terms of productivity and skills. This calls for a particular focus on building a more efficient and cohesive labour market. This chapter begins with an overview of the labour market context – the national policy context, and the regional context – within which regional policy operates. The chapter then continues with a deeper focus on the labour market experiences of the categories of workers particularly vulnerable and underexploited in Skåne's labour market: immigrants, youth, the low-skilled. Finally the chapter concludes with a look into potential policy directions for the region.

Introduction

Policies to improve the labour market need to be a key component of Skåne's structural growth policy package rather than simply a social welfare policy. Since much of Sweden's labour market policy is set at the national level, effective regional policy will need to work within the framework of national policies to complement and supplement worker support and to appropriately tailor policy to the local context. In Skåne, more than elsewhere in Sweden, this will mean a focus for regional policy on mobilising the potential of groups who often face difficulties on the labour market – immigrants, youth, and the low-skilled.

Current national labour market policies tend to emphasise employment subsidies over upgrading of skills through training. Sweden is among the OECD countries with the highest level of public expenditure on active labour market policy (ALMP) measures. However, these are heavily tilted towards subsidised employment (59% of expenditures vs. the OECD average of 31% and 40% in Denmark, Finland, and Norway) as opposed to training (only 7% vs. the OECD average of 25% and 30% in the Nordic countries) (OECD, 2011a). In part, this reflects the fact that much training is provided by other institutions and does not fall under the auspices of the employment service. Approximately 44 000 individuals undertook vocational training in 2011 under the auspices of higher vocational education providers (Swedish National Agency for Higher Vocational Education) and whilst these are not, in the strict sense, labour market training, they do nevertheless point to a wide supply of vocational training opportunities. However, even taking account of this fact, one observes an unusually high level of expenditure on subsidised employment and the separation of vocational education from public employment services may bring its own difficulties in terms of targeting vocational skills to those demanded by the market.

This expenditure pattern is largely reflected at the regional level, as direct and indirect wage subsidies to employers together represent almost 95% of total labour market expenditure in Södra Götaland (Skåne and Blekinge) (Table 3.1). The cost-effectiveness of such an approach could become increasingly questionable in the tighter long-term fiscal context and opportunities for more proactive investment in the region's human capital assets need to be tapped.

Table 3.1. **Labour market expenditure by category in the Södra Götaland labour market area, 2010 and 2011**

	2010		2011	
	SEK	%	SEK	%
Wage subsidies to employers	1 538 995 751	61.8	1 240 833 794	64.0
"New start job" tax credit (indirect wage subsidy to employers)	738 353 524	29.6	592 695 663	30.6
Labour market training	214 579 447	8.6	106 370 339	5.5
Total	2 491 928 722	100.0	1 939 899 796	100.0

Note: Södra Götaland refers to Skåne and Blekinge.

Source: Public Employment Service.

3.1. Realising fully the potential of immigrants

While legislation aimed at the integration of migrants is highly developed, employment rates and wages among Skåne's foreign-born immigrants are substantially below those of native Swedes. Sweden has a highly developed migration integration policy, and is the highest scoring country according to the Migration Integration Group's *Migration Integration Policy Index* (see Chapter 1). Nevertheless, the employment rate for natives was 75.7% in 2009, while for migrants it was just 62.5%; among those refugees from non-OECD countries, this figure was below 50%. Migrant employment rates do not peak until migrants are between 40 and 45, suggesting that even those migrants who do succeed in finding a position in the Swedish labour markets take many years to do so. Disparities in PISA scores that persist among second-generation migrants indicate that whilst language barriers and education at arrival may be part of the story, less tangible factors may also be at work. Highly developed migrant integration policy has not proven sufficient in Sweden.

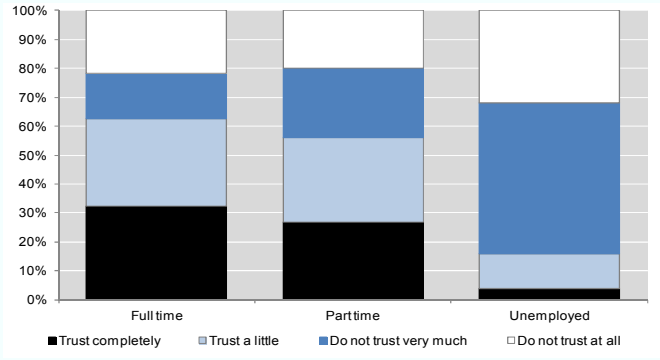
Sweden has traditionally seen the integration of migrants in the labour market through the lens of urban and social policy.[1] However, while inward population flows present challenges in the short-run, in terms of integrating migrants and maintaining regional productivity, if efficiently utilised these inward population flows have the potential to be one of the region's strongest assets. Recognising this, recent changes in integration policy have enhanced the emphasis on labour market integration, yet this view of migrants as productive assets has yet to fully permeate the region.

Box 3.1. Social cohesion and employment status

The relationship between employment and social cohesion can flow in both directions. Whilst it may be easier for those who are willing to co-operate and engage with others to find jobs, jobs can also shape the attitudes of those who hold them. Data from the latest World Values Survey highlight that there is a strong relationship between people's employment status and level of trust in Sweden. Over 60% of those in full-time work trust those in their neighbourhood, compared with only 15% of the unemployed (see figure below). This pattern of higher trust among the employed is evidenced across different countries but particularly pronounced in Sweden, which suggests that policies for improving employment outcomes may have an even greater payoff in terms of trust and social cohesion in Sweden than elsewhere in the OECD.

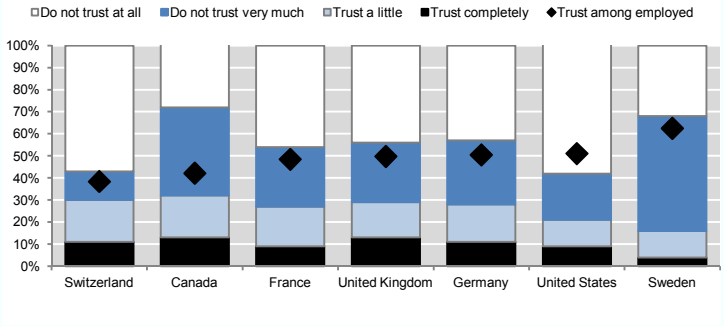
Employment status and trust in neighbourhood, 2006

A. Trust in neighbourhood by employment status, Sweden



Note: Results may be influenced by disparities in the characteristics of the neighbourhoods in which the different categories of citizens live.

B. Trust in neighbourhood among the unemployed and full-time employed, by country



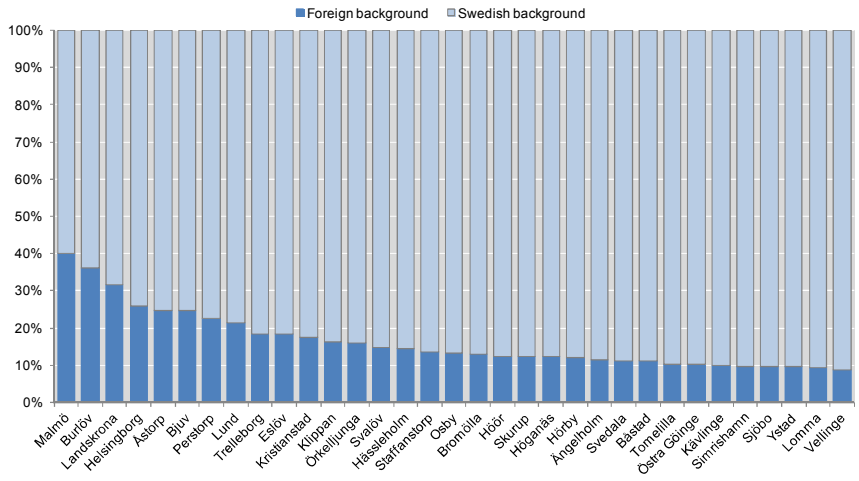
Note: The column refers to the unemployed, and the marker refers to the full-time employed who trust completely or a little.

Source: World Values Survey.

Migrants to Skåne are numerous and come with myriad backgrounds

In Skåne, the share of population with a foreign background ranges between around 10% and 20% in most municipalities and peaks at 40% in Malmö (Figure 3.1). About 70% of foreign-born people live in five municipalities (Malmö, Helsingborg, Lund, Kristianstad and Landskrona).

Figure 3.1. **Share of population with foreign and Swedish background, by municipality in Skåne, 2010**



Source: Based on data from Statistics Sweden.

Migration to Skåne encompasses heterogeneous categories of individuals. Some 18% of Skåne's 1.2 million inhabitants were born overseas, in a total of 193 countries. Approximately one-third of the foreign born have lived in Sweden for over 20 years and 30% for less than 5 years. Following the 2008 reform of labour migration policy, the Swedish labour market is now one of the most open in the OECD. This has helped businesses hire foreign workers more quickly and cheaply (OECD, 2011b). Over time, immigration to Sweden has shifted from mainly labour migration from European countries to mainly refugee and family migration from non-OECD countries. Among EU citizens of working age who arrived in Sweden in 2006-2008,[2] slightly less than a third were labour migrants[3] and a quarter came through family migration channels. Among non-EU citizens, however, about half were family, one-third entered through asylum channels and less than 4% were recorded as labour migrants (Table 3.2). Sweden

(together with Norway and Switzerland) is among the countries that receive the most asylum requests relative to population (OECD, 2011c).

Table 3.2. **Distribution of foreigners who arrived in Sweden in 2006-2008, registered as residents in 2009, by migration category**

%

	Labour	Family	Asylum	Study	Other	Unknown	Total
Non-EU	3.7	49.4	32.7	10.1	0.3	3.8	100 (106 720)
EU	30.5	20.4	0.0	3.1	3.2	42.7	100 (32 138)

Note: STATIV database. This table includes only foreign nationals registered as residents in 2009 aged 16 to 65.

Source: OECD (2011), *Recruiting Immigrant Workers: Sweden 2011*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264167216-en.*

Migration policy in Sweden is largely designed at the national level, but local and regional authorities can play a key role in complementing national policy. Since December 2010, the Public Employment Service (PES), at the national level, has primary responsibility for the integration of immigrants across Sweden.[4] A key component of the new process is to give greater consideration to the potential for work when deciding on the place of residence of a migrant. Thus, while the PES will take a co-ordinating role – conducting introductory interviews, drawing up introduction plans and deciding on appropriate introduction benefits – local and regional authorities can provide important inputs to the process of assigning migrants to municipalities, working with the PES to provide local information to facilitate matching migrant competence with local needs. In addition, regional interventions can supplement national level strategies in response to particular local labour market needs as well as co-ordinating local policy interventions to benefit from cross-sectoral policy interactions.

Migrant labour supply: developing and recognising migrant skills

Effective integration requires utilising migrants' existing skill sets

Recent changes have put more focus on a tailored approach to immigrant integration, and have put more emphasis on providing immigrants with incentives to learn Swedish and find employment (Box 3.2). Following the 2010 Law on New Arrivals, the Public Employment Service plays a new role in devising an establishment plan with newly arrived immigrants (such as refugees or asylum seekers) based

on their qualifications and work experience. These introductory programmes, including language training, civic studies, and labour market activities, clearly form part of the necessary first steps in enabling migrants to access the labour market. As these arrangements are very new, there are, as yet, few results indicating the relative success of the New Establishment (*etablering)* Programme. However, the first outcomes are promising: between December 2011 and February 2012, of 330-370 migrants enrolled in the programme in Malmö, 2.8% were in subsidised employment, 0.6% in unsubsidised employment, 25.8% were openly unemployed, and 59.5% had moved on to another programme (including traineeships or training programmes.

Box 3.2. **Regional offices for Swedish language courses and adult education: *Folkuniversitetet***

Folkuniversitetet is a non-profit association of five legally independent trusts (regional offices attached to the Universities of Stockholm, Uppsala, Göteborg, Lund and Umeå), with a total of over 40 local branches throughout Sweden. During the 1950s and 1960s, it rapidly developed as the main supplier of foreign language courses and Swedish for immigrants in Sweden. In the 1970s and 1980s, *Folkuniversitetet* became a leading actor in lifelong learning. Every year over 140 000 students attend a variety of lectures, short courses or full-time study programmes with a duration of six months to two years. *Folkuniversitetet* receives some public financial support but most activities are financed by course fees from private individuals, businesses and organisations. The annual turnover is approximately EUR 100 million. It employs around 400 teachers on a full-time basis and a further 7 000 part-time. An administrative staff of some 500 people works with administration and development.

Source: More information available from the *Folkuniversitetet* website *www.folkuniversitetet.se/Global/DOKUMENTBANKEN/Gemensamma%20dokument/lifelong_learning_folkun.pdf?epslanguage=sv.*

Many skilled foreign-born workers remain in low-qualified jobs because their credentials fail to be recognised. While this represents not only a local but a national challenge, a key step taken at the regional level would be to establish a "speed line" to validate credentials acquired overseas and make these individuals operational in Swedish. In particular, a non-profit organisation called *Folkuniversitetet* offers a wide range of adult education courses throughout Sweden, including Skåne, and has one of its five regional offices is located in Lund (Box 3.2). It is especially committed to strengthening the position of immigrants on the labour market. For instance, a special Swedish language programme for immigrant medical and healthcare staff focuses on enabling them to use their professional skills in

Sweden. Such measures could be expanded and complemented using experience from other OECD countries that have implemented specific measures to address the needs of overqualified immigrants. These programmes require strong governance partnerships between regional actors, municipalities, universities and non-governmental organisations (Box 3.3).

Box 3.3. **Examples of programmes targeting over-qualified immigrants in OECD countries**

In **Australia**, some states have established programmes to overcome the problem of over-qualification among recent skilled independent migrants. In Victoria, for example, the Overseas Qualified Professionals Programme (OQPP) provides recently arrived professionals who acquired their skills abroad with a work-experience placement to enhance their opportunities for employment in their field of study. The participants must be either unemployed or employed in low-skilled jobs. The programme consists of an initial six-week training period to develop job-search skills, followed by a four- to six-week work-experience placement in the participant's field or in a closely related occupation. The work-placement component is generally not remunerated. The programme includes mentoring elements and industry-specific networking sessions with employers and professional associations to provide further orientation and networking opportunities. Six months after completing the programme, more than 60% of participants were in paid employment in a field corresponding to their qualifications and experience.

Following a different approach, in 2004, **Denmark** established regional knowledge centres for assessing the skills and qualifications of immigrants – a joint project by the Ministry of Employment and social partners. The assessment is generally done in workplace situations at companies and participants obtain "competence cards" relating immigrants' skills to labour market needs. The centres also assist in finding employment that matches the immigrants' skills.

In other countries, programmes have focused on over-qualification in specific occupations. In **Portugal**, two non-governmental organisations (the Gulbenkian Foundation and the Jesuit Refugee Service), jointly with universities and various ministries (Health, Interior and Foreign Affairs), developed a programme for foreign-trained doctors who were found to be working in low-skilled occupations such as in construction or cleaning. The programme provided for the translation of documents, bridging courses at medical faculties, as well as comprehensive preparation material, internships in teaching hospitals, and vocation-specific language training. Participants had to pass a final assessment examination. At the end of the pilot project, about 90% of the participants were employed as doctors. Participants were followed for one year after completion of the programme to ensure a lasting integration. The programme has now been mainstreamed.

Box 3.3. **Examples of programmes targeting over-qualified immigrants in OECD countries** (*cont.*)

Finally, one group that is particularly affected by skill under-utilisation is that of refugees, who are often highly qualified but whose primary objective for migration is not employment. The **Netherlands** has set up several specific training programmes for highly qualified refugees. The Netherlands has been an important destination country for humanitarian migrants since the fall of the Iron Curtain, particularly for refugees from Afghanistan, Iran and Iraq. Their relatively high qualifications are largely discounted on the labour market. The Central Agency for the Reception of Asylum Seekers (COA) conducts a skills assessment for each accepted asylum seeker with a detailed description of his/her professional experience, and a so-called personal development plan to assess his/her possibilities on the Dutch labour market. During this phase, the refugee takes Dutch as a second language courses and courses on societal and professional orientation. Special work-study programmes have also been implemented for recently arrived refugees in a number of municipalities. In addition, the Ministry of Health offers specific training programmes for highly qualified refugees who wish to pursue their career as a doctor or a dentist. To this end, a project was developed with the aim of allowing refugees to register with the main regulatory body in the Dutch health care sector. There have also been similar programmes for other regulated professions such as technicians and teachers. In 2005, the Ministry of Social Affairs and Employment started – in co-operation with the Foundation for Refugee Students (UAF) and a range of other actors – a campaign to bring 2 600 highly educated refugees into skilled jobs by January 2009. This is done by training, traineeships and apprenticeships, mediated in co-operation with employer organisations, as well as sector and business funds. By the beginning of May 2008, more than 1 800 people had obtained employment through this initiative. The recruitment campaign is mainly targeted at employers in the technical, medical and financial sectors, as well as at municipalities. In 2006, an interactive website was launched on which employers can place their vacancies and highly qualified migrants their CV.

Source: Drawing on information from Quintini, G. (2011), "Right for the job: over-qualified or under-skilled?", *OECD Social, Employment and Migration Working Papers*, No. 120, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg59fcz3tkd-en*; and OECD (2008), *Jobs for Immigrants (Vol. 2), Labour Market Integration in Belgium, France, the Netherlands and Portugal*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264055605-en*.

… fostering the development of skills across the education life-cycle

Migrant disadvantage in the labour market cannot be explained solely on the basis of disparate migrant educational attainments, nor on insufficient utilisation of existing credentials. Indeed, the persistence in labour market disadvantage among second-generation immigrants is particularly

pronounced in Sweden (see Chapter 1). Thus, while the Swedish PES is increasingly taking a targeted perspective to help identify and recognise migrants' diverse skill sets and disparate immediate training needs, there remains a role for the region in co-ordinating policies with the education sector to take a longer view to integrating immigrants through enhancement of their skills.

Investing in integrating young minorities in early childhood development and school education can be crucial in reducing the inter-generational transfer of labour market distance. The benefits of an integrated early childhood education system touch on all components necessary to enhance labour market outcomes: *i)* skill supply: early childhood education has been shown to have a strong and significant impact on enhancing the quality of skills in later life – both cognitive and non-cognitive (Heckman, 2009); *ii)* skill demand: by integrating children from different backgrounds at a young age, early childhood education can help to reduce the discrimination that results from segregation; and *iii)* matching: integration in the school system from a young age can help to endow migrants with networks comparable to those of their native counterparts, networks which can be crucial in obtaining employment in later life.

Keeping parents and the family of target youth informed on the options available within the education system can increase parents' understanding of how the system works and reinforce the importance of education for their children's future labour market outcomes (Froy and Pyne, 2011). Sweden's universal voucher scheme should, in theory, enable parents to choose the school in which their children are educated without cost calculations entering into their decision calculus. Yet immigrant parents are often less informed regarding the options available to them with the result that they can often end up remaining in the less well performing of municipality schools (Box 3.4).

Increasing migrant parents' involvement in language learning during their children's early years of schooling can help migrant children to succeed. Foreign parents are confronted with additional difficulties in supporting their children's educational achievement. Their limited skills in the Swedish language or the methods of instruction often prevent them from helping their children learn. In order to tackle such barriers, in Frankfurt, for example, a special scheme has been set up in which the parents of children in primary schools and kindergartens join their children in the classroom for two mornings a week and learn German (Box 3.5). Providing mother tongue language support and highlighting the value of multilingualism can also ensure that young people master additional skills (which are increasingly valued in globalised economies) while supporting the development of

stronger cognitive and linguistic abilities. Another interesting initiative in Frankfurt awards a family scholarship as part of a two-year programme. The Diesterweg Scholarship involves the whole family in extra classes in German and field trips, while also providing funds for educational materials. In Toronto, Canada, some schools have also hired teachers' aides specifically trained in foreign languages to facilitate proactive dialogue with foreign-born parents of students.

Box 3.4. **Sweden's universal voucher scheme and potential unintended effects**

Sweden is the only European country operating a universal voucher scheme. Since 1997 vouchers fund 100% of the average cost of a place in a local school. Academic research (see for example Nechyba, 2000) has found that endowing parents with a choice over educational establishments can lead to competition that can increase quality. At the same time, however, universal vouchers can also have the unintended negative effects on the equality of schooling options. This negative effect can result from a number of factors:

1. If children with parents who asses the return to schooling to be high leave underperforming schools for those that are performing better, and if these children are also among the more able students, there is likely to be a negative peer effect such that those that are left behind no longer benefit from more able peers.
2. It is possible that funding per student may decrease if political pressure is reduced in those schools in areas abandoned by those families more focused on the educational opportunities of their children.

In Sweden, in order to be eligible for voucher funding, independent schools are not allowed to charge top up fees nor to select on ability. These provisions, to some extent, assuage equity concerns.

Impact on quality: studies (Rouse et al, 2007) have found not only that competition from independent schools has improved results in state schools, but moreover that new independent schools are more likely to be established in areas of under-performing state schools serving disadvantaged children.

Impact on equality: studies have also found evidence of sorting effects and it appears that an increase in the independent school share in a municipality prompts a disproportionate outflow from public schools of native-born students and those with parents that have high income and education and are immigrants. In the presence of peer effects, this sorting may have negative implications for those left behind.

Box 3.5. **Language courses for foreign parents of children in kindergartens and primary schools: Frankfurt, Germany**

Frankfurt has long boasted a highly international population. An estimated 40% of its population is foreign born, collectively representing over 170 countries of origin. The authorities have long since developed training and language courses for migrant workers, but later started to experiment with family-based learning amongst immigrant groups, especially from the Turkish community. First developed by the City of Frankfurt, together with the Office for Multicultural Affairs and the city's schools and nurseries in 1973, there are about 100 courses in Frankfurt today. Funding is provided by city authorities and EU sources. Immigrant parents of children in primary schools and kindergartens join their children in the classroom for two mornings a week and learn German. The contents of the language classes are very much focused on the practical – the everyday words and expressions needed to navigate their new life. All participating schools have found that children demonstrated significant improvement in language and vocabulary skills as a result of increased use of German in their homes. Improved communication skills also enabled the children to participate more in school, improving education and social integration. It forms the basis for a stronger relationship between schools and immigrant parents, building more binding social capital amongst the community. It also allows parents to learn German without having to pay or make arrangements for costly childcare. Because a child's academic success is strongly influenced by the involvement and collaboration of parents, and because adults are often most keen to learn a new language or other new skills in order to help with their child's education, this has two simultaneous goals. Frankfurt is extending the programme into secondary schools and throughout Germany.

Source: Froy, F. and L. Pyne (2011), "Ensuring labour market success for ethnic minority and immigrant youth", *OECD Local Economic and Employment Development (LEED) Working Papers*, 2011/09, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8g2l0547b-en*.

Migrant labour demand: highlighting opportunities and overcoming discrimination

The region can work with private sector firms to identify migrant potential

Many migrants to Skåne come from emerging markets that will be key targets for the region's private sector. They bring with them language skills, networks, and knowledge of the local business conditions. These assets are currently under-utilised in Skåne's private sector due to the high costs of sourcing these skills and providing initial training. Better structured communication among public and private local actors can help raise

awareness among the private sector regarding the availability of skills in the migrant population. In Canada, an interactive website was launched in 2006 on which employers can view the CVs of highly qualified migrants.

Governance partnerships between municipalities and local firms could help tap into the existing and potential qualifications of the migrant labour force. An interesting example of a bottom-up partnership between local government and local industry can be found in Malmö. During the spring of 2011, many hotels in Malmö asked the city government for help in finding asylum seekers who could work in the hotel industry in order to better address the needs of increasing numbers of international guests. In the summer of 2011, the City of Malmö started offering a programme of adult education combined with Swedish language education and workplace training for asylum seekers, with the promise that if participants achieved a set of given standards they would then secure a job in a hotel. Only 30 spots were available but the initiative attracted as many as 300 participants, and 23 out of the 30 candidates found jobs within 2 months. Similar projects could be encouraged in the future, including other sectors, such as healthcare, which need professionals able to communicate in foreign languages. The multi-national group IKEA is currently building a new conference centre and a hotel in Malmö that will host training programmes for their employees from all over the world. Combined with targeted training mechanisms, this could be used as a pivotal opportunity to harness the diversity of languages and other professional skills available within the region's migrant labour force and bolster Skåne's international brand.

… and tackle discrimination in the labour market

The disparity between Sweden's highly developed migration integration policy and the labour market outcomes of migrants and their children suggest that something is lost in translation. Indeed, excluding those Danish commuters living in Skåne and commuting back to Denmark, migrants and their children make up one-third of all Öresund commuters (Nordstat, 2008). Given that 40% of the population are located in Malmö this figure, at first glance, is not striking. However, considering the lower levels of work force participation, and the reduced income of migrants to Sweden, the magnitude of flows may indicate that migrants are finding Skåne's labour market less hospitable than that of Copenhagen. An ILO study conducted in 2005 found serious inequalities in the Swedish labour market regarding access to employment for Swedish employment seekers of immigrant background.[5] Discrimination was found to be particularly pronounced against minority males in Malmö. Candidates were matched to be as similar as possible in terms their job application profile as well as in actual appearance, attitude and personality. Table 3.3 shows that there are significant differences

between the majority and minority testers in terms of how many jobs they had to apply for before being preferred or chosen.

Table 3.3 **Employer discrimination against migrants**

	Gothenburg		Malmö		Stockholm		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Tries for the minority	26.4	7	11.9	18.4	7.2	10.8	11.1	10.4
Tries for the majority	4.1	3.3	5	5.2	3.6	4.1	4.1	4.1
Difference	22.3	3.7	6.9	13.2	3.6	6.7	6.9	6.3

Source: ILO, *www.ilo.org/public/english/protection/migrant*.

In the context of economic downturn, debates on immigration constitute an ever more sensitive policy area and have become increasingly fraught in many OECD countries. Some governments are actively reducing or capping immigration. In Sweden, recent surveys have suggested that the population of Skåne tends to consider that the difficulties of integrating immigrants are more related to the immigrants themselves than to native Swedes' attitudes toward them (Table 3.4). Negative perceptions of migrant communities in the government, public opinion and media call for an objective assessment of the benefits of effectively integrated migration, including: helping to counter the demographic "time-bomb" (low birth rates, growing elderly dependency ratios and soaring costs in terms of pensions and healthcare); helping to fill skill shortages in key occupations (including in the public sector); increasing tax revenues from enhanced participation in the labour market; and expanding global trade networks. Active work with employers to create diversity plans and better understand the ways in which they directly and indirectly discriminate against minority workers may be necessary in order to reduce the distance between labour market integration policies and the reality of the experiences of immigrant labour in terms of employment and wages.

Matching migrant labour supply with demand

Links between integration programmes and labour markets should be strengthened…

Contact with the labour market need not be only the goal of integration policy but also a tool. There is a risk that integration programmes that involve insufficient contact with labour markets and native Swedish society may create lock-in effects and further entrench migrant segregation. Labour market contact can help to solve other integration problems, such as poor language skills, and lack of access to informal networks. All activities in introduction programmes, language education, qualification validation,

should be undertaken in close collaboration with both public and private employees. Recognising the potential of overburdening migrants with theoretical labour market integration classes (with Swedish language and civic education), the public employment service is now aiming to increase the practical component in labour market integration courses, and provide migrants with incentives to progress beyond language classes within a short time frame.

Table 3.4. **Views of inhabitants of Skåne on various statements concerning difficulties in integrating immigrants into the Swedish society**

	Correct (A)	Incorrect (B)	Trust index (A-B)
Poor Swedish language skills	73	17	+56
Immigrants' disinterest	63	22	+41
Immigrants' dependency on welfare	61	24	+37
Housing segregation	69	17	+52
Discrimination in the workplace	58	24	+34
Swedes' negative attitudes	56	27	+29

Note: The trust index is the proportion that responded that the statement is correct minus the proportion that responded that it is incorrect.

Source: Sannerstedt, A. (2010), *Regional demokrati. Om politik och medier i Skåne*, The SOM Institute, University of Göteborg, Göteborg.

…and migrant networks fostered, in the short- and long-term

The causes of labour market disparities between migrant and native workers go beyond those explained by differential skill supply and demand. Migrants benefit neither from the labour market knowledge nor the networks of their native counterparts. In Sweden, as in many other OECD countries, many job vacancies are filled through informal recruitment methods. Such methods rely heavily on the existence of networks – both for the flow of information and as the basis of trust. Migrants to Skåne, particularly first-generation migrants, do not benefit from networks comparable to those of their native counterparts. Two studies from Sweden (Olli Segendorf, 2005; Behtoui, 2006) show that natives get jobs through their networks more frequently than immigrants. In addition, compared to using formal channels, getting a job through personal networks means higher wages for natives but lower wages for immigrants. In this respect, there is reason to believe that there are important differences between the networks of immigrants and those of the native-born population in terms of the size and "quality" of the networks. The networks of natives are likely to be more extensive and consist of people with access to resources that are valuable on the labour market.

Fostering professional networks and mentoring relationships among migrants should take a dual approach. Networks are formed through friends made in the neighbourhood and at school. If the neighbourhood is socially segregated, i.e. to a great extent consists of low-wage earners and non-employed, the composition of the individual's network will be poor in resources. The same is applicable to socially segregated schools, where parents of classmates will command fewer resources compared to schools where parents are less socially disadvantaged. In the light of this, the importance of integrating communities and the children of immigrants with those of natives will be imperative if the immigrant labour market disadvantage is to be overcome in the longer term. In the shorter term, the region can foster the creation of artificial networks through mentorship schemes that put newly arrived migrants into contact with those that have successfully gained a foothold in the labour market (Box 3.7).

The Public Employment Service works with privately contracted **guides** who act as the main contact with new arrivals, constituting a link with society. The aims of the role are wide and range from employment preparation activity to provision of social support. Whilst remuneration to the guide is results-based – thereby providing an incentive to facilitate quick employment – the tools available to the guide are defined by the PES, leaving limited scope for innovation. A recently launched programme in the United Kingdom adopts a similar results-based approach, but relies more heavily on the power of incentives by adopting a **black box** approach – that is, by letting providers develop their own methods and rewarding them on the basis of the results of those methods (Box 3.6).

Box 3.6. **The Work Programme in the United Kingdom**

The Work Programme is an attempt to help Britain's long-term unemployed people find work. Under this scheme, private and not-for-profit providers are paid for each jobseeker they get back into work. The aim of the scheme is to tap into provider incentives in order to make the most efficient use of limited public funds.

Flexible? It is hoped that payment-by-results will enable a black box approach, endowing suppliers with flexibility regarding what kind of support they give. Following the second year of the contract, the market share of each provider will be shifted each year by 5% from low-performing to high-performing providers thereby rewarding success and allowing more participants to access the services of successful providers.

Box 3.6. **The Work Programme in the United Kingdom** (*cont.*)

Coherent? In contrast with previous UK welfare programmes designed for specific groups, the Work Programme aims at creating a single programme under which different groups – including those at risk of long-term unemployment, younger and older unemployed people, those with limited work capabilities and lone parents – will access the programme in different ways.

Long term? The scheme is based on an output-based-financing model, with only 10% of contract money paid up front. The aim is to engender long-term horizons among service providers. Previous incentive mechanisms utilised under the US Job Training Partnership Act were criticised on the basis that the short-run measures used to monitor performance were only weakly, and sometimes perversely, related to long-run impacts (Heckman et al., 2002).

Cream-skimming? Cream-skimming – whereby providers target their services towards the lowest hanging fruit – is always a risk with output-based financing. The Work Programme attempts to surmount this potential hazard by randomly assigning participants to a provider in their area.[1] However, concerns have emerged regarding the potential for cream-skimming on a geographic basis: the government has set national performance expectations, and a national payment structure that takes no account of local and regional variations in labour demand. Whether contractors invest enough in the tough areas, where they know there will be fewer job outcomes, remains to be seen.

Note: 1. Random assignment will also facilitate performance comparisons.

Source: UK Department of Work and Pensions (2011) "The Work Programme", *www.dwp.gov.uk*.

Regional dialogue mechanisms are key to helping immigrants gain their first – crucial – work experience. The Toronto Region Immigrant Employment Council (TRIEC) was set up in 2003 by the private sector – the Metropolitan Toronto Board of Trade – to address the need to recognise the skills and credentials of immigrants in a way that allows them to obtain long-term employment in occupations for which they have been trained. TRIEC was established to link together employers, training institutions and service providers, unions and community groups representing immigrants. The Board of Trade established a "table" around which these key stakeholders discuss business needs and skills availability in targeted immigrant population groups across metropolitan Toronto. The focus is on getting individual companies either to hire or, more critically, to provide apprenticeship and mentoring opportunities to immigrants in the occupational field for which they have been trained abroad, so that they gain their first Canadian work experience (Box 3.7).

Box 3.7. Matching skills supply and demand: the role of the Toronto Region Immigrant Employment Council

The Toronto Region Immigrant Employment Council (TRIEC) has, since 2003, been bringing together multiple stakeholders – employers, regulatory bodies, professional associations, educators, labour, community groups, government and immigrants – to build understanding and develop local and practical solutions to integrate Toronto's immigrant community into the labour force.

Objectives: TRIEC's work is focused on three objectives:

1. Increase access and availability of services and programmes that help skilled immigrants effectively enter the local labour market.
2. Work with key stakeholders, particularly employers, to build capacity to work better with skilled immigrants.
3. Work with all levels of government to increase local co-ordination of public policy and programming.

Whilst TRIEC's goals are focused on integrating immigrants, their methods are widely applicable to the broader objective of re-integrating those who have become isolated from the labour market.

Mutual benefits: the forum for dialogue is beneficial to all stakeholders. Employers benefit from improved recruitment channels and access to new distribution; potential employees benefit through building their professional connections and experience through mentoring; educational institutions benefit from help with the development and distribution of learning tools and the curriculum; and finally government benefits through increased support from the private sector and independent interaction between those that supply and those that demand labour force skills.

Harnessing networks: TRIEC relies heavily on the support of mentors within the business community. This can include immigrants who have successfully integrated with the labour force and former **"mentees"** – graduates of TRIEC's mentorship programme. These mentoring schemes fulfil the dual role of enhancing the networks of new immigrants, whilst at the same time providing them with role models to focus their aspirations.

Data: through the Workplace and Employee Survey (WES) – panel data covering 24 197 employees within 6 693 workplaces annually since 1999 – TRIEC is able to supplement its qualitative **"histories"** of the successful trajectories of its participants with data matching detailed employee characteristics with search methods and labour market outcomes. TRIEC is thus able to provide tangible evidence of what works as well as identifying industries in which employee skill levels are best (and worst) matched to the requirements of the position.

Source: OECD (forthcoming), *OECD Territorial Reviews: The Chicago Tri-State Metropolitan Area, United States 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264170315-en*.

3.2. Engaging youth: accelerating the transition from school to jobs

Policy efforts at both national and local levels need to focus on preventing the crisis from having long-lasting scarring effects on youth. As a result of the crisis, more and more youth, even those who have performed well in good times, risk becoming a "lost generation" (Scarpetta et al., 2010). It is important to support their job search or, if that proves to be difficult, to help them strengthen their skills so as to enhance their chances of finding a job when the economic recovery strengthens. The experience of Japan during the "lost decade of the 1990s" illustrates the long-lasting effects for the generation of youth entering the labour market during the crisis. With the declining importance of lifetime employment and school-firm linkages in the transition process, the incidence of long-term unemployment for youth more than doubled between the mid-1990s and the early 2000s. If this experience is replicated in Sweden, Skåne faces the risk that employers may be tempted to hire "fresh" graduates rather than graduates trapped in long-term unemployment or persistent inactivity when the economic recovery gains momentum. There is a strong relationship between length of unemployment spells and difficulties in returning to work, as skills decay and motivation are affected.

National measures could be better tailored to the causes of youth unemployment

Unemployed youth in Skåne are eligible for the national Youth Job Guarantee. The Swedish Government has introduced the Youth Job Guarantee for those aged 16-24 who have been unemployed for more than 12 weeks. Phase 1 lasts at least three months and consists of job search and coaching activities. In phase 2, participants may be offered work-placement or short training measures. Participation cannot extend beyond 15 months or until the participant reaches the age of 25 (after which the participant is referred to the Job and Development Guarantee, which targets those that have been unemployed for more than 60 weeks).

Job guarantees are unlikely to address the causes of youth unemployment in a sustainable way. That unemployment among youth is higher than among adults suggests that employers place a heavy value on experience over and above education, and whilst the guarantee of a job is one way to overcome the hurdle of obtaining initial experience, it may not be the most efficient. Job guarantees are often fulfilled through the provision of jobs in the public sector and thus fail to provide youth with the experience necessary to increase their productivity across the skills spectrum. Improving the relevance of technical training, by increasing the practical

component of vocational courses would represent a better targeted alternative and a more sustainable solution.

There is increasing awareness that upgrading skills is a key measure to prevent youth unemployment. In the OECD area in 2009, low-skilled youth who did not complete upper-secondary schooling had an unemployment rate on average 1.8 times that of tertiary graduates[6] (Figure 3.2). The risk was at least three times as high in seven OECD countries, including Sweden (the Czech Republic, Estonia, Finland, Norway, Switzerland, and the United States). A successful skills policy is not only a matter of boosting educational attainment, but about a strategic approach to produce the right mix of skills, both for the short and the long term, as underlined in ongoing work for the OECD Skills Strategy. In Sweden, the government delegated to Region Skåne and other bodies in charge of regional growth, the responsibility to establish "skills platforms for collaboration within skills supply and training planning for the long and short term". Region Skåne's Regional Growth Board set up a political working group in 2010 to find solutions to youth unemployment.

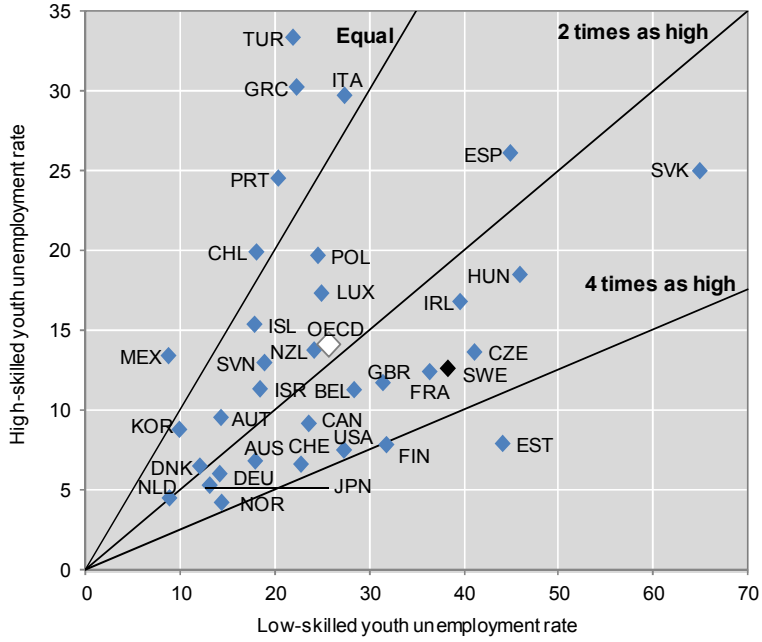
Raising outcomes

Steps must be taken at the local level to reduce school drop-outs

Early action to curb school drop-outs can contribute to reducing the risk of youth of being neither in employment nor in education or training (NEET). Skåne's share of NEET youth aged 20-25 is higher than the national average (24.6% vs. 21.7% in 2009),[7] with some municipalities being hit particularly hard (e.g. Åstorp, Landskrona, Klippan, Bjuv and Skurup). The Steps to College Programme in Dalton, Georgia, offers a good example of how intensive work with older students can improve grades and reduce drop-out rates (Box 3.8). Dalton High School had one of the highest drop-out rates in the United States, with even higher drop-out rates among Latino students. The Steps to College Programme has been perceived within the local community as a successful policy intervention to achieve a turnaround. The programme works mainly with high school students of Hispanic origin to improve their graduation test grades through a one-month summer preparation programme held on the local college campus. By exposing them to college life and giving them the opportunity to meet college professors and students and select study programmes, it also encourages them to expand their horizons, social networks and aim higher.

Figure 3.2. **Unemployment rate for low-skilled and high-skilled youth aged between 15 and 24, 2009**

As a % of the labour force



Note: "Low-skilled" refers to lower than upper-secondary education and "high-skilled" to tertiary education. For Japan, "low-skilled" refers to less than upper-secondary education as well as upper-secondary education. 2008 data for Belgium.

Source: European Union Labour Force Survey and national labour force surveys as quoted in Intereconomics (2012), "Challenges facing European labour markets: is a skill upgrade the appropriate instrument?", *www.oecd.org/dataoecd/56/36/49567835.pdf*.

Partnerships with local schools and organisations can raise educational outcomes

Building on its network of social economy and local schools, Skåne could develop a regional partnership to encourage disadvantaged youth to pursue education. An innovative example from Toronto is the Pathways to Education Programme, a community-based programme that has been helping youth in low-income communities stay in school and graduate to

Box 3.8. **Steps to College Programme, Dalton, Georgia, United States**

The Steps to College Programme was developed in response to low graduation rates of Hispanics in Georgia. The programme has three main aims: *i)* to help local Hispanic students pass the Georgia High School Graduation Tests in order to increase high school completion rates; *ii)* to cultivate an interest in attending college; *iii)* to encourage the target group to contemplate their employment paths from a young age. It was founded by Dalton State College (DSC) and operated in partnership with the State of Georgia. It is co-ordinated by an Associate Professor at DSC. The programme was funded by the State of Georgia as a pilot project in 2001-2002. It has since been funded by the Goizueta Foundation. The programme concentrated its efforts on specifically recruiting Hispanic origin, bilingual students but in recent years has opened enrolment to students of other ethnic backgrounds. Nevertheless, it continues to attract mainly Hispanics, and has an equal number of male and female participants. The programme is a free, one-month summer test-preparation programme offered at DSC. It markets itself as a "college and test prep camp" for bilingual students entering grades 9 to 12 in Dalton city schools and other schools in Whitfield and Murray Counties. The programme structure is oriented towards high school exit exams; it offers academic instruction in the four areas tested in the graduation test (English, mathematics, science and social studies). Participants are also given a tour of the campus and meet college professors. It provides practical information on career paths, educational requirements and salary averages; emphasis is on choosing a "career" rather than a "job". Results indicated that students who participated, even for just one summer, scored 12% higher in testing on average than students who had not participated. There was a 99% retention rate in school among the students who participated in the programme in 2004. Participation peaked at 230-250 between 2003 and 2008 but has declined significantly since. This is believed to be mainly because of reduced funding which has ended the provision of free transport to and from the college, making it more difficult for students to attend regularly.

Strengths of the programme include the fact that it encourages students to think about career paths and the value of attending college from an early age; it creates a positive peer group and mutual support network among students and professors; and it gives students the opportunity to become more familiar with university life. Some weaknesses of the programme include insufficient financial support and buy-in from public and private sectors; the fact that the programme is geared towards encouraging students to attend DSC to the neglect of other college choices; and better tracking of participants is required to assess outcomes.

Source: Froy, F. and L. Pyne (2011), "Ensuring labour market success for ethnic minority and immigrant youth", *OECD Local Economic and Employment Development (LEED) Working Papers*, 2011/09, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8g2l0547b-en*.

post-secondary (Box 3.9). In partnership with governments, social welfare agencies, and volunteers, the programme works alongside the school system, providing after-school tutoring, mentoring and financial assistance, in combination with support to develop the skills and work ethic needed for lifelong learning. From this example, Skåne can learn valuable lessons in terms of factors for successful youth programmes. First, a proactive approach is necessary to raise awareness and earn stakeholder engagement. While participation in the programme is voluntary and open to all students within a defined catchment area, Pathways does not wait for parents or students to approach them but actively recruits across the community to ensure that all eligible families know about the programme and its benefits. Second, it is crucial to cultivate regional collaborative governance at an early stage of the programme. In Toronto, collaborative relationships have been developed with school boards and local schools before the programme was implemented in order to adapt the programme to local needs and to recruit eligible families. Third, monitoring and evaluation are indispensable to bolster progress. From the beginning, the programme rigorously measured and evaluated both implementation and results in order to incorporate a culture of learning and continuous improvement.

The practical component of vocational training needs to be developed locally

Skåne should work to enhance the role of the private sector in vocational training in order to increase the "job readiness" of VET graduates. Sweden's upper-secondary vocational education and training (VET) system has a relatively high status, displays a modest rate of drop-out, and the relatively large autonomy of municipalities allows room for local innovation (Kuczera et al., 2011). At the same time, upper-secondary VET does not attempt to make students "job ready" and the Swedish VET system – which includes only 15 weeks of workplace training – remains much more theoretical than the Danish system. In the autumn of 2011, a reform of upper-secondary education was introduced to make Swedish vocational education and training programmes more relevant to the labour market by increasing the time for vocational subjects as opposed to academic ones.[8] Nevertheless, links with the private sector remain more limited than under the Danish system in which up to 70% of the course is conducted with an employer, and a training agreement signed with an employer represents a necessary pre-requisite for VET (Box 3.10).

Box 3.9. **Example of a programme to help underprivileged youth to pursue education: Pathways to Education, Toronto (Canada)**

The Pathways to Education Program was created by Toronto's Regent Park community in 2001 and is now being delivered in ten other Canadian communities. It aims at tackling the roots of poverty and supporting academic achievement among the community's youth by providing a comprehensive set of academic, financial and social supports.

Background: Canada has one of the highest rates of post-secondary attendance in the world, but national averages mask the fact that one in five teens between the ages of 15 to 19 is no longer pursuing an education. Society pays a high price for low educational achievement since an estimated 85% of income assistance goes to the 34% of Canadians who have not completed secondary school. In 2001, about 56% of Regent Park youth dropped out of secondary school (compared to 29% for Toronto overall). About 80% of residents were visible minorities and Regent Park was home to a considerable number of new Canadians, 58% of whom were born outside of the country and spoke little or no English.

Programme: in partnership with parents, community agencies, volunteers, local school boards and secondary schools, Pathways provided four main types of support: academic, social, advocacy and financial.

- Academic tutoring: tutoring sessions focus on homework and study assignments, as well as prepared exercises and other learning activities to help students develop as competent learners. Tutoring in core subjects is provided by volunteers four nights a week in a safe, social learning environment. Tutoring volunteers are supervised by Pathways staff and come from a range of professional, educational and ethnic backgrounds, although most are university students. Attendance at tutoring is obligatory twice a week if a student's marks fall below certain levels although many attend tutoring sessions even if their marks are above the minimum level.

- Social supports: mentoring staff recruit and train volunteer mentors, who are typically university students, professionals or community residents. Structured group mentoring activities are held on a weekly or biweekly basis. As students progress from Grade 10 to Grade 11, mentoring becomes more specialised through group-based activities, such as community groups, clubs and extra-curricular programming. Career mentoring is designed to support students in pursuing their post-secondary goals and Pathways maintains formal connections with the graduated students for two years after high school.

Box 3.9. **Example of a programme to help underprivileged youth to pursue education: Pathways to Education, Toronto (Canada)** (*cont.*)

- Advocacy: each student is assigned a Student-Parent Support Worker, who monitors school attendance, academic progress and programme participation while helping the student build stable relationships with parents, teachers and other students. The Support Worker advocates on behalf of the student when the parents are unable to do so themselves and keeps parents connected with the Pathways Program and liaises with tutors and mentors. The Support Worker's goal is to facilitate healthy relationships, which research shows help youth to develop the social capital they need to succeed, while connecting them in a positive way to the larger community.

- Financial support: bus tickets were provided to participating students for transport to and from school and vouchers were provided as needed for school lunches. Students who fail to attend classes lose their eligibility for bus tickets and lunch vouchers. Pathways also provides a financial incentive to participating students in the form of a CAD 1 000 bursary for each year during high school to a maximum of CAD 4 000 for post-secondary education or training.

Staff: Pathways depends upon about 300 volunteers who tutor and mentor 920 students. Roughly two-thirds of Pathways volunteers are university students, while the others are professionals and community residents.

Tracking progress: established processes of information gathering tracks satisfaction among participants, the development of staff relationships with students, parents, volunteers and schools. Local school boards also help facilitate monitoring results over time. In Toronto, data provided by the Toronto District School Board on dropout rates for the year prior to the start of the Regent Park Pathways Program provided a baseline for comparing the results of Pathways students to other youth from Regent Park.

Results: from 2001, when the first cohort of Regent Park students entered Grade 9, until 2010, Pathways has helped reduce dropout rates from 56% to less than 11.7% (for the first 5 cohorts in Regent Park). According to the most recent available data from 2008-2009, 80% of Pathway's Regent Park's approximately 600 graduates have enrolled in post-secondary education, compared to 20% of students who entered Grade 9 in the two years before the Pathways Program began. Ninety percent of these graduates are the first in their families to go on to post-secondary education.

Expansion and growth: in 2007, five new communities launched Pathways to Education Programs: two in Toronto and one each in Ottawa, Montreal, and Kitchener. Programmes began in Scarborough and Hamilton, Ontario in 2009, followed by Halifax, Kingston and Winnipeg in 2010. In each of these locations, the Pathways Program is delivered by a local non-profit agency with credibility and a history of working with the community.

Box 3.9. **Example of a programme to help underprivileged youth to pursue education: Pathways to Education, Toronto (Canada)** (*cont.*)

Registration: registration involves a formal meeting of Pathways staff, the student and parent(s) so that parents and students clearly understand the requirements of Pathways before committing to the programme. A formal participation agreement is signed by both parent and student, and renewed annually as the student progresses through high school.

Investment: a cost-benefit analysis conducted by the Boston Consulting Group in 2007 concluded that every dollar spent by Pathways has a CAD 25 return to society. The analysis found that the cumulative lifetime benefit to society was CAD 400 000 per Pathways graduate. Each Pathways Program identifies its own level of financial support and incentives, based on input from parents, school, and community members. Each programme determines the amount of the bursary based on tuition and training costs as well as the amount of funding available.

Source: Pathways to Education Canada (2010), "Pathways to Education program introduction and overview", Pathways to Education Canada, Toronto, ON, Canada, *www.pathwaystoeducation.ca/sites/default/files/pdf/Overview%2021_10_10.pdf*.

Communication between vocational institutions and industry enables programme providers to learn what skills are in demand and to train their students for jobs that change on a regular basis, while concurrently giving employers an opportunity to provide input into the curriculum and a recruiting tool to attract appropriately skilled workers. Various models to target training to business needs exist across OECD countries (Box 3.12). Among them, in Vienna, which like Skåne has a high share of foreign-born population, apprenticeship training is being actively promoted (Box 3.11). In order to involve more disadvantaged youth in apprenticeship training, some local vocational schools also offer preparatory training courses which provide an intensive and sensitive teaching environment to tackle basic skills gaps before young people start their apprenticeships. Öresund Direkt is working to encourage Swedish students to enrol in VET courses on the Danish side of the sound, undertaking the practical component with a company within Skåne. This work may present a fruitful mechanism to increase the practical skills among youth in Skåne whilst at the same time promoting regional integration. However, efforts will also need to be made to supplement the Swedish system with practical experience within regional firms through supplementary apprenticeships.

Box 3.10. **Vocational training in Denmark**

Approximately, 38% of youth obtain a vocational education in Denmark. The programmes, which aim to provide young people with a combination of further education and active participation, are built around three components: the basic course – typically between 20 and 25 weeks; the main course – typically between 3 and 3.5 years, and a training agreement with an approved company which offers training. The training agreement can cover all or part of the basic course, but is compulsory for the main course.

Practical orientation: during the main course students alternate between learning in a company that offers practical training and learning at the college. Generally 50%-70% of the training takes place in a company and is interspersed with school-based periods, organised as blocks of between five and ten weeks. In addition, the colleges have the equipment that enables them to introduce the student to the practical side of the programme and teaching of general subjects, such as mathematics, is tailored to the needs of the vocation in question.

Flexibility: the majority of Danish VET programmes are organised into steps, in order to enable students to stop at well-defined places at which they can gain a recognised professional competence, whilst retaining the option to resume their vocational training at a later date.

Financing: the school-based part of the vocational education and training programmes is financed by the state. However, during the practical component, the student is viewed as a productive asset and receives a wage from the company. The Employers' Reimbursement Fund reimburses the company for the trainee's wages when the student is attending college. All companies, both public and private, contribute a fixed annual amount to this fund for each of their employees.

Source: Danish Ministry of Children and Education.

Apprenticeships and work-based training can be a way to promote up-skilling and allow young people to gain work experience, while at the same time providing a basic income. Alongside work-based vocational training programmes, promoting apprenticeships is a way of reducing financial barriers to staying in education. Beyond the 15 weeks of workplace training on vocational courses, Sweden does not have a well-established apprenticeship system. Following the recommendation of Kuczera et al. (2011), a pilot system of high school apprenticeships was introduced in the autumn of 2008. A total of SEK 492.1 million was distributed in government grants from the National Agency for Education since then. For the academic year 2010-2011, SEK 225.1 million was paid out, among which SEK 80.3 million was given to county councils and

Box 3.11. **Apprenticeship training in Vienna, Austria**

Similar to the Danish system, apprenticeship training in Vienna is an alternative to full-time education at VET schools and colleges. This type of vocational education offers practice-oriented training in over 250 apprenticeship trades and takes place at the training enterprise ("on the job" training which takes up 80% of course time) and at the part-time vocational school.

The share of apprentices in Vienna with foreign citizenship is nearly 13% (2010), significantly higher than the national average, and 29% do not have German as their mother tongue. However, the share of youth with migration backgrounds in apprenticeship training is much lower than their share in pre-vocational schools – a one-year school apprenticeship preparation programme. These figures show that a significant number of young migrants "get lost" at this stage of their education. The public employment service in Vienna has prepared a DVD aimed at the parents of migrant youth to improve their knowledge about the process of accessing apprenticeship training.

Source: Froy, F. and L. Pyne (2011), "Ensuring labour market success for ethnic minority and immigrant youth", *OECD Local Economic and Employment Development (LEED) Working Papers*, 2011/09, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5kg8g2l0547b-en.*

municipal principals and SEK 144.8 million to independent principals. The Swedish National Education Agency planned to publish evaluations in late 2011.

Yet, in addition to improving the supply of skills, ensuring that youth are endowed with the appropriate skills to succeed will necessitate a better match between youth aspirations and labour market opportunities – matching demand for skills among youth with demand for skills from the private sector.

Raising aspirations

Raising outcomes will not be possible without the buy-in of the youth themselves. Region Skåne has a strong record in higher education, producing 15% of the nation's graduates (see Chapter 1, Figure 1.44). However, the strong focus of public policy on high human capital technical skills – in the innovation sector and throughout the economy – may prevent those who do not see themselves at university from appreciating the importance of a full high school education and the basic skills – both cognitive and non-cognitive – that are critical to labour market success. Supply-side mechanisms, including more practical vocational training,

Box 3.12. **International models to target training to business needs**

Private sector involvement in training varies widely from country to country.

The "dual system" of private engagement in technical training, adopted in Austria, Germany and Switzerland, delegates responsibility for curriculum and assessment to a coalition of labour representatives, businesses and educators, and business associations, then manages the system by monitoring the quality of training provided by firms. However, this dual system relies heavily on the ability of business to see it in their best interests to pay for the training of vocational graduates.

A second model of private sector involvement relies on a strong network of relationships between educators and employers. Manufacturing labour in Japan has historically come from high schools with a strong network of relationships with hiring managers in industry, so that high school staff was able to place their most accomplished students preferentially. This system, however, relies on the ability of high school staff to correctly analyse the skills of their graduates and their fit with industry needs. Furthermore, communication remains unidirectional and does not adequately allow for industry input into curriculums.

A third model, "human resource development" (HRD), focuses on encouraging firm-level training through government policies. HRD strategies, pursued for example in Korea, Malaysia and Singapore, involve the taxation firms with the resultant revenues available for use within the firm to train workers within their own companies.

Source: OECD (forthcoming), *OECD Territorial Reviews: The Chicago Tri-State Metropolitan Area, United States 2012*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264170315-en*.

apprenticeships and support to struggling students, will be insufficient in the absence of youth aspirations. Thus, a necessary first step in matching the supply of skills among youth to the demand for skills in the market is to emphasise the importance of basic skills such that those skills demanded by youth themselves are those that are demanded in the labour market.

Engendering aspirations requires the active transmission of labour market information

Youth aspirations are formed on the basis of the information they are given. Experience in OECD countries suggests that more systematic career guidance from competent personnel and informed by up-to-date labour market information, possibly combined with brief workplace experience,

helps reduce the incidence of drop-out from post-compulsory education and later mismatch. Regional labour market information is already available on the Public Employment Service website through the "occupational compass". This portal provides information on approximately 200 occupations in Sweden and employment prospects by occupation over the next year as well as five- and ten-year periods. The one-year occupational forecast is available at the regional level while the five- and ten-year forecasts are only at the national level. However, the active transmission of this valuable information remains limited, and interaction between the Public Employment Service that provides the information, and the municipalities that provide career advice is currently *ad hoc* with PES input sought late in the decision-making process. The region could do more to co-ordinate the active dissemination of this and similar information to municipalities in charge of career advice.

One of the motives behind drop-out is that it can be difficult to see how a low-skilled job may lead to another higher up within the job hierarchy (OECD, 2011d). Initiatives to map job profiles across sectors and clusters, as well as encouraging training that increases workers' mobility within and between sectors over their lifetimes, can help support school-to-work transition and foster lifelong learning. For example, the "career ladder" or "career pathways" approach developed in the United States links different training courses to career transitions, from entry-level to higher level workers, and disseminates career advice according to the needs of working adults. Such initiatives are often jointly funded by the public and private sectors. While career ladders can support vertical progression in individual industries, creating "career clusters" via horizontal links across sectors at a local level also helps workers to visualise how different careers interact and to make connections to future goals. By making explicit the routes and potential rewards associated with moves up the career ladder, the articulation of career pathways can engender enhanced aspirations, ensuring, not only that workers are motivated to make the most of their training, but that they are also able to choose the most appropriate path to achieve these aspirations.

…and monitoring results to enable student demand to respond to labour market realities

Programmes need to be more closely monitored and evaluated in terms of cost and quality control and information on labour market outcomes of VET should be used more systematically to convey labour market requirements to VET providers and potential students. Indicators of labour market performance of vocational graduates such as job placement,

earnings, and duration of employment and unemployment can not only be an important input into the evaluation of programmes but they can also help to inform the decision calculus of potential students, rewarding those institutions with strong placement records and focusing attention on those whose output is less valued on the labour market. However, indicators should not be the sole measure of programme effectiveness on the following grounds: *i)* placement rates do not fully capture the multiple goals of vocational education; *ii)* a narrow focus on placement encourages programmes to admit only those who are likely to be the most successful on the labour market *ex ante*; *iii)* such a focus may encourage institutions to concentrate on coaching in interview skills at the expense of vocational skills.

3.3. Deepening labour markets

Fostering entrepreneurialism

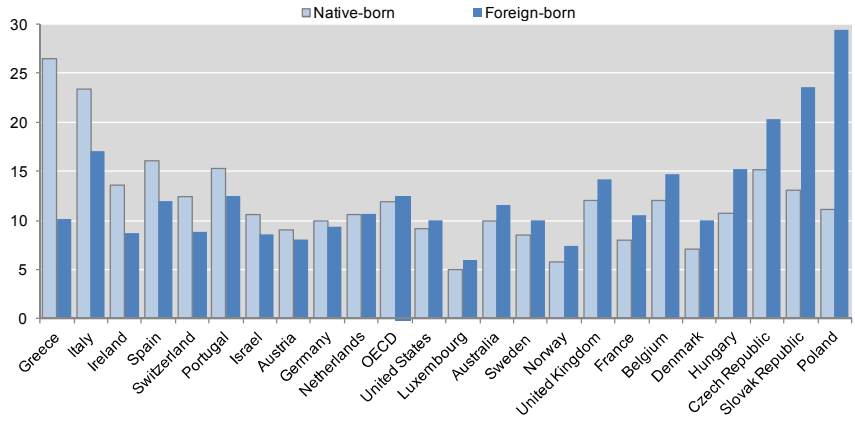
Skåne currently devotes substantial resources to promoting entrepreneurialism, and it is the second-most dynamic region (after Stockholm) in terms of the proportion of newly created enterprises in total enterprises (see Chapter 1). However, there is a heavy focus on the higher end of the skills spectrum – indeed, the region has the smallest proportion of firms created by those holding just a compulsory education.

Migrant entrepreneurialism represents an important source of employment

Encouraging migrant entrepreneurship could be a strategy to help migrants move out of unemployment or low-wage jobs. Migrants in OECD countries are on average only slightly more entrepreneurial than natives in terms of stock (12.6% of migrants of working age were involved in non-agricultural entrepreneurship activities in 2007-2008, compared with 12.0% among natives). At the same time, every self-employed migrant in the OECD creates on average between 1.4 and 2.1 additional jobs. In dynamic terms, the index of entrepreneurial activity in Sweden (i.e. the proportion of **new** migrant entrepreneurs in the active population)[9] is higher than among natives (0.98 for foreign born vs. 0.77 for natives in 2007-2008), though it remains considerably lower than the OECD average.

The sudden rise of entrepreneurial activity in 2007-2008, among foreign born and even more among natives, suggests that the onset of the crisis may have pushed many into self-employment (Table 3.5). These data alone cannot indicate to what extent self-employment is seen as a choice or, more likely, a survival strategy in the absence of paid employment. In 2009, migrants were more likely to be self-employed than natives with equivalent levels of education in Skåne (except for those who only graduated from elementary school). While the survival rates for new migrant businesses are lower than those of natives in almost all OECD countries, persistence in self-employment for both foreign born and natives in Sweden remained higher than OECD average (Table 3.6).

Figure 3.3. **Self-employed persons as a share of all employed persons, native and foreign born, 2007-2008**



Note: The data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: EU Labour Force Survey, 2007-2008; US CPS March Supplement, 2007-08; Australia Labour Force Survey, 2007-08; Israel CBS Labour Force Surveys (analysis by Myers, JDC-Brookdale Institute), 2007-08 as quoted in OECD (2011), *International Migration Outlook 2011: SOPEMI*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/migr_outlook-2011-en*, Figure II.1.

Table 3.5. **Index of entrepreneurial activity, 1998-2008**

%

	Foreign born				Native born			
	1998-2000	2001-03	2004-06	2007-08	1998-2000	2001-03	2004-06	2007-08
Austria	..	0.52	0.62	0.69	..	0.76	0.75	0.69
Belgium	0.51	0.42	0.60	0.72	0.39	0.35	0.42	0.41
Czech Republic	..	0.85	1.16	0.83	..	0.90	0.79	0.71
France	0.66	0.75	0.81	0.72	0.55	0.50	0.53	0.56
Germany	0.73	0.77	1.11	1.23	1.01	1.01	1.16	1.25
Greece	0.78	0.65	-	-	0.69	0.66	0.49	0.40
Italy	2.06	2.45	1.73	1.38	1.39	1.54	1.47	1.41
Netherlands	0.59	..	0.56	0.80	0.73	..	0.97	1.03
Portugal	1.19	1.08	0.93	1.14	1.13	0.72	0.69	0.65
Spain	1.33	1.37	1.18	1.55	0.74	0.72	0.73	0.80
Sweden	0.40	0.36	0.30	0.55	0.27	0.24	0.20	0.52
United Kingdom	1.32	1.46	1.41	1.63	1.06	1.09	1.11	1.30
United States[1]	0.32	0.35	0.38	0.50	0.27	0.27	0.28	0.28
OECD	0.90	0.92	0.90	0.98	0.75	0.73	0.74	0.77

Note: (–) indicates an estimate below the Eurostat reliability threshold. The index of entrepreneurial activity is defined as the percentage of individuals in the labour force who became self-employed in the current year (and who were not self-employed in the past year).

1. Kauffman Index of Entrepreneurial Activity in Fairlie (2009), Table 3.

Source: EU Labour Force Survey, 1998-2008 as quoted in OECD (2011), *International Migration Outlook 2011: SOPEMI*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/migr_outlook-2011-en*, Table II.3.

Supporting migrant entrepreneurship in Skåne can contribute to trade opportunities for Skåne and Sweden in general. Most migrant entrepreneurs in the OECD area work outside the traditional "ethnic business" sectors. Migrants can lower trade-related transaction costs with their countries of origin, using their networks and knowledge about their countries' markets. In Sweden, 22% of foreign-owned businesses target their goods and services, at least partially, for the international market, compared with 15% of native-owned businesses (Swedish Agency for Economic and Regional Growth, 2007). OECD (2010a) has shown as well that a 10% increase in the migrant stock in Sweden has been associated with a 6% increase in exports and a 9% increase in imports on average. Migrants in Skåne could therefore play an important role as facilitators of foreign trade by reducing implicit trade barriers with their countries of origin.

Table 3.6. **Flows into and out of self-employment, foreign and native born, year-to-year, 1998-2008**

%

	Entry into self-employment		Exit out of self-employment		Self-employment persistence	
	Foreign born	Native born	Foreign born	Native born	Foreign born	Native born
Austria	13.9	10.4	14.4	8.2	85.6	91.8
Belgium	7.4	4.8	6.4	3.5	93.6	96.5
Czech Republic	20.5	16.8	13.6	9.1	86.4	90.9
France	18.0	7.7	9.5	4.9	90.5	95.1
Germany	8.3	4.9	5.4	2.0	94.6	98.0
Greece	12.0	8.6	11.9	7.2	88.1	92.8
Hungary	7.8	3.1	7.5	3.1	92.5	96.9
Ireland	13.3	11.4	7.7	8.9	92.3	91.1
Italy	14.9	11.1	7.0	5.5	93.0	94.5
Luxembourg	7.4	4.2	7.7	4.7	92.3	95.3
Netherlands	12.1	11.0	9.5	6.4	90.5	93.6
Poland	6.6	7.9	7.8	6.2	92.2	93.8
Portugal	10.9	5.7	7.7	4.0	92.3	96.0
Spain	17.0	7.2	8.6	4.3	91.4	95.7
Sweden	11.3	7.7	7.6	5.2	92.4	94.8
Switzerland	7.2	7.9	4.5	4.9	95.5	95.1
United Kingdom	17.3	14.3	10.7	9.3	89.3	90.7
OECD	12.1	8.5	8.7	5.7	91.3	94.3

Source: EU Labour Force Survey 1998-2008 as quoted in OECD (2011), *International Migration Outlook 2011: SOPEMI*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/migr_outlook-2011-en*, Table II.4.

Providing easier access to capital can help overcome a major constraint for migrant entrepreneurs. Sweden has been a pioneer in offering support to immigrant entrepreneurs, for example through the creation of the International Entrepreneur Association (IFS) in 1996. A three-year programme to promote entrepreneurship among people with a foreign background initiated in 2008 by the Ministry of Enterprise, Energy and Communications and implemented by the Swedish Agency for Economic and Regional Growth included specific measures to increase banks' awareness of the needs of migrant business owners in order to facilitate the extension of loans to those clients. However, migrant entrepreneurs often face difficulties with access to finance. Only 29% of foreign-born small business owners applied for and received credit, compared to 40% of natives (Swedish Agency for Economic and Regional Growth, 2007). Foreign-born small business owners in Sweden are also twice as likely as natives to have

their application for loans or credit rejected. This may be because migrants face discrimination or often lack the credit history, collateral, or a co-signer on the loan that natives might have. As a result, migrant entrepreneurs are more likely than natives to rely on fellow nationals, friends or family, rather than their own savings or formal credit providers for start-up capital (OECD, 2010c). While the data depict the national situation, the high share of foreign born in Skåne makes the lack of venture capital for them a particularly important regional issue.

Skåne could develop specific partnerships with financial and non-profit organisations to re-engineer financial services towards better serving the immigrant population's business potential. In this respect, Canada offers several interesting examples. S.U.C.C.E.S.S, a non-profit settlement agency located across British Columbia, along with the regional development agency Western Economic Diversification Canada and Coast Capital Savings, have started the Business Links Programme, which assists immigrants with no Canadian credit history with business start-up loans.[10] In Vancouver, VanCity Credit Union, together with Mosaic, a non-profit settlement agency, also developed a specific Immigrant Loan Programme. More generally, the role of non-profit organisations in supporting innovative projects for immigrants (Box 3.13) and promoting exchanges of experiences across local authorities (Box 3.14) offers a particularly effective complement to country-wide public sector measures.

Box 3.13. **Refugee and immigrant grants by Maytree, Canada**

Maytree is a private Canadian charitable foundation seeking to identify, support and fund not-for-profit, charitable organisations that test new ways of addressing the needs of immigrants and refugees and accelerating their settlement in Canada; enable immigrants and refugees to have more of a voice; and contribute to the research and development of progressive immigration policy. Eligible applicants are registered charities, organisations that have an explicit mandate and a track record of at least three years in advancing the settlement and participation of refugees and immigrants, and projects in large urban centres in Canada with significant populations of refugees and immigrants. Examples of grants include a 2009 project of CAD 100 000 per year for 2 years to the Ontario Employment Education and Research Centre for the Workers' Rights Information and Support initiative, to provide information, education and support to newcomers, women, and immigrant workers about their rights at work and how to address workplace problems.

Source: http://maytree.com/grants/refugee-immigrant-grants.

Box 3.14. **Tools to support policy learning among local policy makers dealing with urban migrants: examples from Canada**

Cities of Migration, another initiative from the charitable organisation Maytree, seeks to improve the integration of foreign-born migrants in cities around the world through the exchange of successful practices and learning activities. Cities of Migration is anchored by an interactive website serving all those with a stake in immigrant integration in cities – settlement workers, agency heads, government, business leaders, planners and more. The Cities of Migration website features a set of integrated online tools to help city-level practitioners, community and funder networks in urban migration and integration become more knowledgeable and effective in their work. The major tools include:

- "100 Good Ideas in Integration". A collection of promising practices organised by city and theme to inspire good thinking and learning exchange; includes "success steps", related resources, tools and media, as well as library research and contact information.
- Conversations in Integration. A monthly e-zine for new ideas about good practice, innovative integration strategies, city updates, interviews, news from the field and discussion and information exchange for practitioners and policy makers working in immigrant-receiving cities worldwide.
- E-library. An easy-to-search e-library of selected resources, tools and links to broaden research into good integration practice in cities.
- Integration Learning Exchange. Virtual seminars (webinars) for city-to-city learning exchange helps practitioners learn about good practice from peer networks.
- Awareness Campaign. Cities of Migration actively promotes efforts to accelerate integration outcomes, inform public opinion and outreach that can increase the effectiveness, impact and sustainability of the initiative.

Another initiative, called ALLIES (Assisting Local Leaders with Immigrant Employment Strategies), also supports local efforts in Canadian cities to successfully adapt and implement programmes that further the suitable employment of skilled immigrants. ALLIES provides resources and funding to immigrant employment councils. These employer-led councils also include community organisations, post-secondary institutions, assessment service providers, labour, immigrant professional associations and all three levels of government.

Source: more information available on *http://maytree.com/wp-content/uploads/2009/04/CitiesOfMigrationHandoutSept2010.pdf.*

Local initiatives could boost youth entrepreneurship

The Young Urban Movement Project represents a bottom-up programme to foster the growth of young entrepreneurs in deprived areas of large cities (YUMP, Box 3.15. Created by the Swedish founder of the Metro newspaper, this initiative initially targeted young second-generation immigrants living around Malmö and Gothenburg. With funding coming from various governmental sources, economics and business courses were offered. A one-day convention called "The Street Is Smart" involved 50 participants, 15 of which were selected for participation in start-ups. The project helped to translate their ideas into businesses. Five companies were set up, with three people in each company. After a contest was organised, the first prize winner received a grant of SEK 50 000. This promising example suggests that initially small-scale initiatives can be a powerful way to re-engage youth "left behind" by targeting without stigmatising and by triggering positive creativity. Information on the positive outcomes of such initiatives could be disseminated more widely and opportunities for similar projects could be exploited in other municipalities.

Entrepreneurialism among women lags behind Sweden's high gender standards

Sweden displays one of the lowest gender gaps in employment rates and one of the highest levels of public expenditure on childcare and pre-primary education among OECD countries (Figures 3.4 and 3.5). Yet only 63% of women in Skåne worked full-time in 2010 compared with almost 90% of men. Only 33% of newly created companies in Skåne in 2009 were run by women. Empowering women to reach their full potential could bring significant talent and innovation to business activity in the region.

Women in Skåne have the opportunity to benefit from a variety of programmes run at the national level. In particular, the objective of engaging women in entrepreneurship has recently gained more political momentum in Sweden. The government has given the Swedish Agency for Economic and Regional Growth (*Tillväxtverket*) the task of co-ordinating and implementing a number of initiatives throughout Sweden to promote women's entrepreneurship (Ministry of Enterprise, Energy and Communications, 2011). The Promoting Women's Entrepreneurship Programme has been endowed with an annual budget of SEK 65 million for the period 2011-2014. Since 2008, more than 900 government ambassadors for women's entrepreneurship (with a yearly budget of about SEK 3.5 million) serve as role models and share their experiences in schools and various networks or associations. The national Programme for Developing Resource Centres for Women (running since 2005) distributes

Box 3.15. **Empowering young immigrant entrepreneurs: the Young Urban Movement Project (YUMP)**

The Young Urban Movement Project (YUMP) is a selective entrepreneur educational programme which is entitled to Swedish financial aid for higher studies (CSN). The target group for the project is individuals aged between 20 and 29, preferably living in the "Million Programme" areas (*Miljonprogrammet*). The Million Programme areas are most often associated with social problems and a lack of growth opportunities. People living in these areas are younger than in the country-wide average. Despite the fact that youth in the Million Programme areas live and work in an environment which in many respects is characterised by resignation and alienation, "business" is a widespread subject of conversation and many dream of achieving success through establishing their own business. The YUMP project aims at developing young entrepreneurial spirits and growth companies in those areas through a structured process.

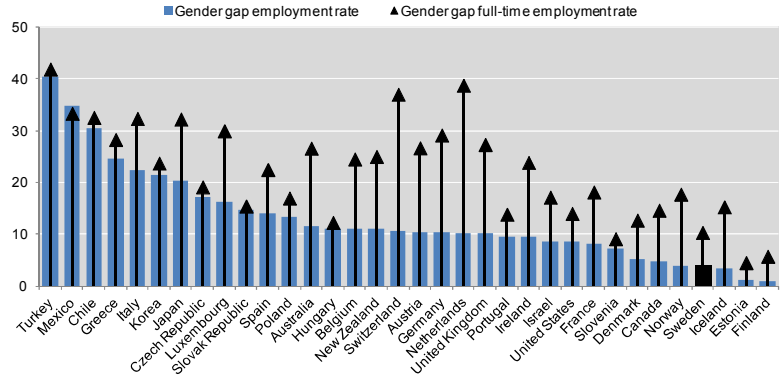
YUMP's long-term objectives are to: *i)* empower youth living in the Million Programme areas; *ii)* build bridges and networks between Swedish industry and the target group; *iii)* build mutual commercial levers for all parties involved; and *iv)* create methods and processes which also attract people from outside the Million Programme areas. The pilot project's short-term objectives are to: *i)* identify channels of communication with the target group to capture their interest and create a dialogue about entrepreneurship; *ii)* verify and develop an attractive process and pedagogy for the target group; and *iii)* point out to Swedish industry the entrepreneurial power to be found within the target group and work for their desire to involve themselves.

IFS operates the YUMP Academy pilot project together with YUMP Holding Inc. (AB), Botkyrka Municipality and a large number of support companies. The project is financed by IFS, NUTEK, YUMP Holding Inc. (AB) and Botkyrka municipality. Once the methods have been implemented, Swedish Industry is expected to finance.

Source: http://yumpnow.com; *http://www.ifs.a.se/en/Olika-sprak/Engelska/Projects*; *http://reworktheworld.com/en/group/yump/summary.*

half of its budget in the form of operating aid to 16 regional and 90 local resource centres and uses the other half to finance projects to improve opportunities for women to take part in activities leading to regional growth. ALMI Företagspartner AB (51% owned by the state and 49% by county councils/regions), with 19 regional subsidiaries, is also running or collaborating on a number of targeted programmes including networking, management skills and coaching (see Chapter 2).

Figure 3.4. **Gender gap in employment rates in OECD countries, 2009**

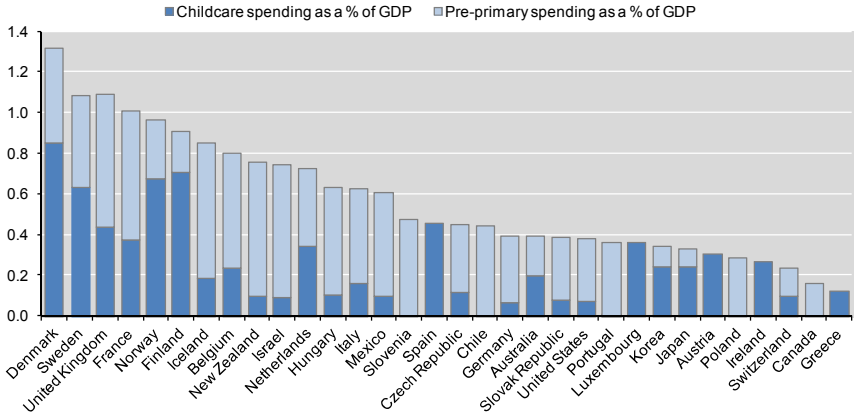


Note: Full-time employment refers to persons who usually work more than 30 hours per week in their main job. Data include only persons declaring usual hours. 2007 data for Israel; 2008 for Chile. The data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2011), *OECD Employment Outlook 2011*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2011-en*.

Figure 3.5. **Public expenditure on childcare and early education services, 2007**

% of GDP



Note: The data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD Family Database.

Enhancing women's entrepreneurship benefits from renewed international impetus, including the ongoing OECD Gender Initiative (Box 3.16). More specifically, experience in some OECD countries has suggested that mentoring programmes from women to women have higher potential to foster female entrepreneurship effectively. Such programmes aim to offer a useful bridge towards role models that are able to transfer successful experiences to potential entrepreneurs and to increase the latter's self-confidence. At the European level, the European Network of Mentors for Women Entrepreneurs was inaugurated in Warsaw, Poland in November 2011. This network complements the actions that started with the creation of the European Network of Female Entrepreneurship Ambassadors (ENFEA) in 2009. It will provide advice and support to women entrepreneurs on the start-up, running and growth of their enterprises in the early phase of their life (from the second to the fourth year of existence of a new woman-run and owned enterprise). The Women Entrepreneurship Portal[11] also offers a list of national and international organisations that provide advice, support, information and contacts regarding existing support measures for female entrepreneurs. In Sweden, ALMI Företagspartner AB will receive SEK 30 million per year to strengthen women entrepreneurship through a variety of mentoring programmes, training and funding instruments. Special efforts will be made to reach women in green industries, the services sector, creative and cultural industries, health and social care, and education.

However, more could be done at the regional level to link such international and national initiatives to local needs. Sub-national authorities have a key role to play in disseminating information on international and national programmes and translating them into practical initiatives at the regional and local level. This can be implemented through targeted partnerships with the private sector. In Ireland, for example, the National Mentoring Programme for Female Entrepreneurs launched in September 2011 was led by a partnership between five local chambers of commerce (Galway, Dublin, Cork, Waterford and Sligo) and a series of "mentoring clinics" will be held in different parts of the country to allow local women entrepreneurs to meet with the panel of mentors.[12] Another key measure to be taken at the regional and local scale is also to facilitate women's access to capital. The example of Finance South East in the United Kingdom suggests that a regionally anchored organisation can reach effectively women entrepreneurs (Box 3.16).

Box 3.16. **Investing in women entrepreneurs in a region: the example of Finance South East, United Kingdom**

Finance South East (FSE) is a non-profit organisation created in June 2002 with the initial support from the South East England Development Agency (SEEDA) and the region's Business Link organisations. FSE aims to provide access to finance and to improve the co-ordination of pre- and post-investment support for ambitious growth companies and entrepreneurs in the South East of England. In 2010, it invested over GBP 9.3 million in high-growth SMEs. It manages a number of funds, including the Accelerator Fund (a GBP 10 million fund to boost high-growth companies), the South East Seed Fund (a GBP 7 million equity fund for SMEs), the Social Impact Co-Investment Fund (providing early stage funding to enterprises that have a primarily social purpose), the Commercialisation Fund (a two-phased fund for concept and commercialisation to facilitate the progress from a business idea to a market product), the South East Sustainability Loan Fund (for businesses operating in ecological sectors or delivering sustainable products and technologies), and others.

FSE has launched a series of programmes and events to increase the sources of funding available to women whilst better equipping female entrepreneurs to access these funds. For example, Incito Ventures invests in and mentors female-led start-ups in technology, media and telecommunications, retail, life sciences and clean-tech, drawing upon the capital and rich industry experience of its mostly female club members. It also provides a series of highly tailored and hands-on training for women who wish to become business angels. FSE also runs a free, six-month intensive assistance programme called "Understanding Finance for Business" focused on female entrepreneurs. Finally, FSE founded the United Kingdom's first investment readiness programme for women "Funding Enterprising Women" (FEW!), which benefited more than 300 female entrepreneurs in its first year with a tailored programme of events, one-to-one support from a funding advisor, and funding strategy advice.

Attracting skills

The region could adopt a proactive stance to attract international skilled workers

Skåne could design a more active policy to attract and retain international knowledge workers. While the nation-wide introduction of university tuition fees for non-EU/EEA students in the autumn of 2011 is

currently testing the attractiveness of Skåne's universities for foreign students, more regional effort could go into attracting high-skilled workers from abroad. Large industrial groups located in Skåne, such as AstraZeneca, have tried to expand their pool of international staff for decades but results have remained disappointing, partly also because of the lack of regional support. Due to the shortage of adequate housing and education support for foreign families in Skåne, many international high-skilled workers choose to commute from Copenhagen to Skåne and send their children to the Copenhagen International School.

This may soon change, however, as the upcoming opening of ESS and MAX IV facilities is expected to attract large numbers of knowledge workers and their families to the region. Getting them to stay in Skåne and embedding the benefits of their presence in the regional economy will require serving this new group through an adequate package of facilities. Examples of such facilities include housing, international schools, networking events, cultural activities, and assistance on next career steps. In this regard, the experience of Southeast Netherlands could be a source of inspiration. The Brainport International Community not only offered an operational set of measures to promote the region internationally, but it was also aligned with the regional development strategy Brainport 2020 vision and bridged regional ambitions with national and European policies (Box 3.17) (also see Chapter 2).

Regional authorities can play a role in fostering collaboration

Fostering collaboration among regional actors represents a clear role for the region. "Partnership Skåne", a collaborative regional initiative, offers a package of social services to newly arrived immigrants and asylum-seekers (Box 3.18). Run collectively by regional authorities, municipalities, social and economic associations, and the scientific community and led by the County Administrative Board, this initiative, attempts to identify and address obstacles to migrant integration, for example, in distributing information on healthcare in the immigrant's native language, to address concerns that poor health was impeding integration. Regional collaborative initiatives in this mould should be extended beyond collaboration to target migrant problems, focusing instead on goal-based collaboration that brings together regional actors – including the private sector, the public sector, and representatives from the migrant community – to think about how migrants can be productively incorporated into the local economy and society.

Box 3.17. Example of an active policy to attract and retain international knowledge workers: the Brainport International Community in Southeast Netherlands

Brainport International Community (BIC) is the networking community for all international-focused organisations and international knowledge workers living and studying or working in Southeast Netherlands. Its main activities consist in promoting the region Southeast Netherlands worldwide, attracting international knowledge workers and students, developing and maintaining international networks. BIC attends career fairs and other recruitment events all over the world and operates an extensive online social media campaign. Expat centres help international knowledge workers and their families to arrange all the formalities and services needed to study or work and live in Southeast Netherlands (*www.expatguideholland.com*). BIC also organises various events for all internationals in the region – such as the yearly Brainport International Weekend in November – and links different social expat clubs and networks.

Brainport International Community is not only an operational programme, but also a strategic one. It endeavours to align its strategy with the Brainport 2020 vision. It focuses on studying various subjects regarding the international labour market, building worldwide collaboration between top technology regions and linking programmes and projects between companies, educational and research institutions and governments. The Brainport offices in The Hague and Brussels link regional actions to national and European policies in order to guarantee the execution of regional ambitions.

Source: Brainport International Community, *www.brainportinternationalcommunity.nl.*

3.4. Widening labour markets

Across the Öresund

Enhancing labour market integration is a key priority in a challenging climate

Cross-border commuting between Skåne and Denmark grew dramatically between 2005 and 2007 as unsatisfied labour demand and rocketing house prices on the Danish side rendered seeking work across the sound an attractive opportunity for residents of Skåne (see Chapter 1). However, integration across the Öresund Bridge has not been isolated from the impact of the financial crisis in 2009, commuter traffic fell for the first time. If momentum on cross-border labour market integration is to be

Box 3.18. **A regional platform to integrate newly arrived immigrants: Partnership Skåne**

Partnership Skåne is a regional platform aiming to provide a comprehensive and inclusive reception of newly arrived immigrants. It is led by the County Administrative Board of Skåne, in collaboration with Region Skåne, municipalities, universities, social and economic associations, and the health scientific community to offer a co-ordinated package of economic and social services to newly arrived immigrants and asylum-seekers. Partnership Skåne is part of the Regional Agreement (RÖK) for developing the reception of asylum-seekers, newly arrived immigrants and refugees. It is financed by the different partners with the endorsement of the European Refugee Fund.

Partnership Skåne offers several kinds of services to propose different gateways into the Skåne society. For example, based on the observation that many newly arrived immigrants carry with them war memories, psychosomatic trauma and other ailments, community and health communicators are trained to convey both physical and psychological health-related information to newly arrived immigrants in their own language and to help them. The communicators have usually been newly arrived immigrants themselves and know from their personal experience that without the use of their own language immigrants often cannot ask the right questions about how the Swedish society functions. Individual dialogue in the immigrant's native language provides the tools needed to explain the differences between country systems as well as Sweden's rules and routines. A Somali Information and Business Centre was set up to focus specifically on integrating Somalis. It offers counselling and training for Somalis who wish to settle and start their own business in Skåne.

Partnership Skåne also strives to support co-operation between the Public Employment Service, municipalities, local businesses and the social economy to offer new teaching methods for better focused vocational language courses. In particular, the "integration via associations" model has been put in place to inform newly arrived immigrants about existing community associations and facilitate contact between them. The goal is to enhance the immigrants' understanding of Swedish social codes (which are often implicit) and to help them establish social networks.

Source: based on materials from the Partnership Skåne available on *www.lansstyrelsen.se/skane/SiteCollectionDocuments/Sv/manniska-och-samhalle/integration/partnerskap-skane/PSengelskaPDF.pdf*.

maintained in the face of a more challenging economic climate, efforts to reduce the remaining barriers will need to be enhanced.

Since the opening of the Öresund Bridge, various evaluations have suggested the positive impact of cross-border flows on Skåne's regional and local economy. For example, according to a 2011 study (Andersson, 2011),

during 2000-2009, employment growth in the Malmö region for basic services was 7 percentage points higher and for advanced services it was 14 percentage points higher compared to the Stockholm region. The rate of growth of new jobs in the Malmö region between 2000 and 2009 exceeded both the Stockholm and Gothenburg regions and Sweden as a whole. And increases in exports per employee – particularly in the wholesale and retail trades – and wage per person employed in advanced services, were particularly high in the Malmö region in 2000-2009, compared to both Stockholm and the rest of Sweden. This may result, at least in part, from an expansion of knowledge-intensive service industries in the Malmö region through the creation of new businesses stimulated by the Öresund Bridge. Furthermore, it is estimated that overall net savings in Swedish unemployment insurance payments reached SEK 9.5 billion in the period 2000-2010 as a result of Swedish cross-border commuting to Denmark.

In view of the large number of major infrastructure projects planned for East Denmark over the next ten years, further labour market integration across the Öresund could represent a major opportunity for Skåne. Projects include the construction of the Fehmarn belt fixed link; a new 15.5-kilometre long Metro Cityring under central Copenhagen and Frederiksberg; the expansion and modernisation of the railway network in the Greater Copenhagen Area and in Zealand; the expansion and modernisation of the motorway network in the Greater Copenhagen Area and in Zealand; the construction of new hospitals and modernisation and expansion of a number of existing hospitals in the Greater Copenhagen Area and in Zealand; and the construction of a new state prison in North Falster. According to a consulting group's report released in April 2011,[13] the total direct and indirect effect of such infrastructure projects on employment is expected to reach 6 400 jobs per year over the period 2010-2020 for the whole of East Denmark. However, there is a risk of a substantial shortage of skilled engineers (with experience in railway construction, high-voltage installations in metros and railways), electricians, bricklayers, painters, as well as machine operators, crane operators, and other technicians.[14]

The demographic disparities across the Öresund Sound also represent a potential driver of further integration. As the population ages on the Danish side of the border and the gap between those leaving the labour market and those entering it widens, the younger working population on the Skåne side may find a welcoming labour market. These emerging market realities are likely to help maintain momentum towards deeper integration; however, overcoming existing barriers will enable the wider region to take full advantage of these emerging market realities as they materialise.

Box 3.19. **National initiatives to promote Öresund co-operation**

The Öresund Committee is a forum for voluntary political co-operation established in 1993 on the initiative of Swedish and Danish politicians on both sides of the Öresund border. It is a political interest organisation that promotes co-operation across the sound at all levels and safeguards the interest of the Öresund Region before the national Parliaments of Sweden and Denmark, the *Riksdag* and the *Folketing* respectively. The Öresund Committee is financed through contributions from its members, the size of the contribution being calculated according to the number of inhabitants in the respective municipality or region. Additional funding is provided by the Nordic Council of Ministers and certain other external sources. The members of the Öresund Committee are, in Denmark: the Capital Region of Denmark, Region Zealand, the City of Copenhagen, the City of Frederiksberg, Bornholm Regional Municipality, the Local Government Regional Council for the Capital Region of Denmark and the Local Government Regional Council for Zealand; and, in Sweden: Region Skåne, the City of Malmö, the City of Helsingborg, Lund Municipality and Landskrona Municipality.

On 10 May 2007, the Swedish Minister for Employment at the time, Sven Otto Littorin, and his Danish colleague, Claus Hjort Frederiksen, signed the "Two Nations – One Labour Market" declaration of intent to work more resolutely towards an integrated labour market in the Öresund Region.

In 2008, the Freedom of Movement Forum was created under the auspices of the Nordic Council of Ministers to propose solutions to problems that arise in the border regions of the Nordic countries. Each of the Nordic governments has appointed a representative to work on these issues. As far as the Öresund Region is concerned, this has paved the way for closer and more frequent contacts with the Nordic Council of Ministers and the governments in Denmark and Sweden, and led to positive collaboration between the Öresund Committee and stakeholders at national level. During the Danish presidency of the Nordic Council of Ministers in 2010, there was a particular focus on the labour market and cross-border obstacles in the Nordic countries.

Since June 2011, representatives for the Swedish and Danish Governments have been co-opted onto the Öresund Committee's Cross-Border Obstacles Group. When representatives of the two governments met on 15 June 2011 to celebrate the tenth anniversary of the opening of the Öresund Bridge, they agreed to intensify the work of removing cross-border obstacles.

Many constraints to further labour market integration are tied to the differences between Sweden and Denmark's legal, fiscal and regulatory frameworks (see detailed explanation in Table 3.A.1 in Annex 3.A). However, numerous initiatives have been put forward at the national level to promote political collaboration and overcome some of these constraints (Box 3.19). And, through the work of Öresunddirekt in collaboration with the authorities on both sides of the border, much progress has been made

towards closing loopholes as a pragmatic first step towards harmonising the system.[15] Research on the region's future common needs is also underway, including a project called "Jobs and Competences in the Öresund Region", financed by INTERREG IV A and aiming to identify the needs of jobs and gaps of competence in the Öresund Region in the short and long term (five to ten years).[16]

Regional co-operation focuses on promoting bottom-up labour market integration by facilitating the flow of information between the two sides. While cross-border regional co-operation is strongly supported by the EU as a bottom-up tool for reinforcing integration among member countries, the experience of OECD countries suggests that specific programmes have not automatically resulted in the establishment of new public-private alliances to address cross-border regional development issues. One example of a cross-border region divided by sea (albeit without a bridge) is found in the Pan-Yellow Sea Region in Asia between China, Japan and Korea. Although the region's economic growth is supported by well-performing logistics and transport infrastructure, efforts to build effective trans-border governance at the local level need to be strengthened. Collaboration appears to work best where it was oriented towards a few pragmatic purposes and driven by the private sector and local governments. To this end, Öresund Direkt is encouraging labour market integration through facilitating the flow of information to private sector employers, potential commuters and the private sector, across both sides of the Öresund. Öresund Direkt provides information to potential commuters on everything from how to apply to a job across the sound, to demystifying the differences in tax and benefits systems. In addition, Öresund Direkt is also now working to provide the Danish PES with labour market analysis and to promote co-operation and understanding regarding the disparate vocational training systems. As discussed in Chapter 2, co-operation around innovation and R&D projects offers promising potential in the Öresund Region, given the strong and specialised resources on both sides of the straight, notably in life science.

Across Southern Sweden

Analysing the benefits of inter-regional collaboration

Debates currently underway across Sweden about regionalisation reforms need to be based on a careful analysis of the likely evolution of Skåne's labour market over the long term. The 2007 report of the Committee on Public Sector Responsibilities had recommended that criteria for enlarging regions (merging counties) should mostly be linked to functional labour market areas as they are expected to look in 2030, according to the analysis performed by the Swedish Agency for Economic and Regional Growth. Under this scenario, Skåne was expected to form a

single labour market in 2030. Currently, Skåne and Blekinge belong to the same Södra Götaland market area in the Public Employment Service map. Yet although data on inflows of commuters show significant influxes from Skåne into Blekinge, it would be an exaggeration to see Blekinge as part of a functional labour market with Skåne (OECD, 2012a). A functional labour market is usually defined as a situation in which net commuting from one region to another exceeds 10% of employment in the sending region. In the case of Blekinge, gross outward commuting is only a little above 10% (with around half of it to Skåne), and net outward commuting is just 2.7%. On the conventional definition, Blekinge is not readily considered a part of a functional labour market extending beyond its borders; indeed, the five municipalities of Blekinge themselves appear to belong to three different functional labour markets.

Deeper inter-regional collaboration on labour market issues should be objective driven. Following recent political discussions between Skåne, Blekinge, Kronoberg and Kalmar, it has been suggested that the four counties would submit a common proposal to the government. In addition to the preliminary self-analysis performed by Region Skåne on a larger Southern Sweden region, in-depth analysis regarding potential benefits and obstacles remain to be examined in the area of labour markets but also in innovation, spatial planning, infrastructure, environment, and healthcare. The approach would not necessarily require complex institutional reforms that could be both costly and time-consuming, but would consist in identifying concrete objectives, policy issues to be solved and practical projects that would drive collective progress. Keeping in mind that real problems are rarely shaped along the boundaries of administrative units, policy focus should look for the scale where a critical mass of issues converge and together act there.

Conclusion

Social cohesion and economic development are deeply intertwined and cannot be considered in isolation from one another. Integrating Skåne's newly arrived population into the work force must be seen as a long-term investment rather than a short-term cost. As populations elsewhere across the OECD are ageing, Skåne is in a strong position to take advantage of these changes; the region's large migrant and youth populations have the potential to represent its strongest asset. Whether these populations become a burden or an asset depends, to a large extent, on public policy. Public policy will determine whether they are endowed with the aspirations and opportunities to develop and utilise their skills. Public policy will, to a large degree, determine the extent to which the private sector can identify and harness these skills. Lastly, public policy will play a critical role in ensuring

that those workers possessing appropriate skills are able to match with those private sector employers who seek them.

Skåne has made the first important steps to a recovery from the current recession and the region has the potential to be a dynamic growth hub over the coming years. However, time is a fundamental factor for Skåne. The economic downturn has highlighted structural problems on the labour market and provided an opportunity to conduct critical reforms whose effect will last well into the future. Building a more efficient and cohesive labour market may well determine whether this potential is achievable for Skåne. Either way, the region's labour market challenges have become an urgent question, the solution to which government, the private sector, and civil society will all have to play their role in unearthing.

Table 3.7. **Summary of key challenges and recommendations on policies for building a more efficient and cohesive labour market in Skåne**

Key challenges	Key recommendations
High levels of unemployment among immigrants, even sometimes among the high-skilled	Harness the diversity of backgrounds, languages and cultures as a key asset for the region's international attractiveness Recognise the skills and credentials of immigrant workers and facilitate the acquisition of their first Swedish work experience; offer industry-oriented language training
Stronger barriers to migrant entrepreneurship	Open new trade opportunities for the region by promoting specific programmes for migrant entrepreneurship and facilitating migrant entrepreneurs' access to capital
Educational and professional disadvantage passing from one generation of immigrants to the next	Involving foreign parents in their children's learning at an early stage; hire teacher aids specifically trained in foreign languages to facilitate proactive dialogue with foreign-born parents of students
Lack of concerted efforts to attract and retain high-skilled workers and their families	Adopt a proactive regional branding strategy through better structured communication on networks, events, etc.
High levels of youth unemployment	Better tailor national measures for youth unemployment to local needs by involving municipalities
Concerns about school drop-outs	Raise educational aspirations and outcomes through partnerships with local schools and organisations to show career ladders and pathways Further develop vocational training and apprenticeship in closer collaboration with local businesses Build partnerships with local associations to boost youth entrepreneurship
Low levels of unemployment among women despite relatively high levels of education	Promote women entrepreneurship and women mentoring, in line with national and international programmes
Unfulfilled potential for Öresund market integration	Work with employers, employees and training institutions to continue to identify and work to solve remaining obstacles to integration

Notes

1. For example, a dispersal policy was implemented in 1985 to avoid excessive concentration of immigrants in Stockholm, Gothenburg and Malmö and to allocate immigrants to other municipalities that could offer housing.
2. The analysis was restricted to recent arrivals to reduce the effect of naturalisation, as it takes about four to five years for immigrants in Sweden to request naturalisation.
3. Labour migration is generally defined as a cross-border movement for purposes of employment in a foreign country.
4. The country is divided into 11 market areas further subdivided into 69 geographic labour market areas and a total of 325 local offices. Skåne (excluding the municipality of Osby) together with Blekinge belongs to the Södra Götaland market area**.**
5. The control group of minority applicants consisted of native-born young adults (20-24 years), both male and female, with a Middle East background. Immigrants from the Middle East – Iran, Iraq, Syria – comprise one of the largest immigrant-origin groups in Sweden. As in other countries where testing was done, the target group is the largest or among the largest immigrant/immigrant origin nationality group. All testers spoke Swedish fluently and assumed testing profiles with the only differentiation being names for the minority testers that indicated Middle East origins.
6. A caveat applies here: the age group concerned (15-24 years) is subject to considerably high sample variance. The number of young people holding a university degree at that age might vary considerably across countries due to different typical graduation ages, resulting in small cell size and high sample errors.
7. Official statistics in Sweden on NEET youth can be misleading as they do not take cross-border commuting to Denmark into consideration.
8. The reform also established more stringent requirements to access upper-secondary education and vocational programmes will no longer automatically give the students basic eligibility for higher education.

However, students in some vocational programmes are able to take the required courses as part of their regular programme, while others can also take them as part of an "expanded programme" or later on, in adult education programmes.

9. The index of entrepreneurial activity is defined as the percentage of individuals in the labour force who became self-employed in the current year and who were not self-employed in the past year.

10. See more information on *www.atlantic.metropolis.net/workingpapers/recognition%20of%20credit%20history%20for%20new%20immigrants.pdf*.

11. See more information on the Women Entrepreneurship Portal: *http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/women/portal/index_en.htm*.

12. See more information on *www.mentoringforfemaleentrepreneurs.com*.

13. See *www.cowi.com*.

14. This anticipated reservoir of job opportunities also mirrors the labour force needs of the forthcoming ESS and MAX IV research facilities, which are expected to attract thousands of international (including Danish) high-skilled workers to Skåne.

15. For example, Swedes who take part in vocational training courses in Denmark now qualify for student travel reductions; Swedes who seek jobs on the other side of the sound are now eligible for their travel expenses, and parental leave entitlements are now available, irrespective of the location of the parent's work.

16. See more information on *www.jobkompetence.net/english*.

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Annex 3.A

Table 3.A.1. **Obstacles to Öresund cross-border integration**

	Sweden	Denmark
Extra jobs[1]	Living in Sweden and working in Denmark can lead to social insurance problems when taking on an extra job in Sweden. A resident of Sweden who works in Denmark is affiliated to the Danish social insurance system. However, if this person also has a job in Sweden, the social insurance cover reverts to Sweden. In such instances, the Danish employer must pay Swedish payroll tax because the worker's social insurance affiliation has been transferred to Sweden. This involves an extra expense for the Danish employer of approximately 25% on the total salary paid to the worker in Denmark.	Living in Denmark and working in Sweden can lead to tax problems when taking on an extra job in Denmark. A resident of Denmark who works in Sweden but also has a job in Denmark is penalised with a so-called "special income tax". In practice, this means that someone who has already paid 25% tax on their income in Sweden, while the tax levied in Denmark is 40%, must pay 15% in tax on their income earned in Sweden to the Danish Tax and Customs Administration. On top of this he/she looses his/her payment to the Swedish pension fund, 18% on top of the wages.
Taxes		The so-called "Fitters' Rule" does not apply in Denmark. Swedish staff recruitment agencies whose registered offices are in Sweden are not able to make use of Sweden's so called *Montörsregel*, or "Fitters' Rule" (which allows people to work for a short period abroad, while continuing to be taxed at home) when supplying workers to Danish companies on the Danish side of the border. This is because Denmark has a special tax (a gross tax rate of 30%) that applies to labour supplied via staffing agencies and in Denmark, the company that uses such labour is responsible for the administration of tax payments for workers employed under these conditions.

Table 3.A.1. **Obstacles to Öresund cross-border integration** (*cont.*)

	Sweden	Denmark
Political assignments	There is no leave of absence for political assignments. Cross-border commuters who live in Sweden and work in Denmark do not have the right to take leave of absence for political assignments in their country of residence. This makes it more difficult for Danish companies to recruit workers who are politically active in Sweden. It also inhibits the democratic process as cross-border commuters are denied the same privileges to participate in political activity.	
Company cars	The "Twelve-Month Rule" for Danish company cars in Sweden leads to severe complications. A Danish-registered company car may only be used in Sweden for a maximum of one year if it is used by an individual who is resident in Sweden. After that, the vehicle must either be replaced or reregistered with Swedish number plates.	The Danish solution for dealing with Swedish company cars has not been publicised. If a worker uses a Swedish-registered company car predominantly in the country in which he/she works (based on the number of days of use or the number of kilometres driven), it is possible to apply to the Danish Tax and Customs Administration for an exemption certificate. If the application is approved, the user of the vehicle receives a certificate that entitles him/her to drive the Swedish company car for private purposes in Denmark.
Transport costs	Transport costs are high across the Öresund border. Companies in the Öresund Region that have chosen to establish a presence on both sides of the border and those who wish to use the entire Öresund Region as a single market are faced with transport costs that are higher than those for companies that are established on one side of the border only.	
Transport delays	Train delays lead to huge costs. Employers on both sides of the Öresund border incur huge expenses as a result of delays to trains carrying employees who live on one side of the border and work on the other.	

Table 3.A.1. **Obstacles to Öresund cross-border integration** (*cont.*)

	Sweden	Denmark
Student co-workers	Region Skåne has recently introduced student co-workers in Skåne.	Denmark's system of "student co-workers" did not previously exist in Sweden. Under this system students are able to work – at rates stipulated by collective bargaining agreements – on tasks that are relevant to their education.
Apprenticeships	The differing vocational systems across Sweden and Denmark greatly reduce the opportunities to benefit from the skills and competence that young people on the other side of the Öresund border can offer. It's been done in some vocations – such as hairdressers, opticians, and plumbers – Swedish companies have employed trainees in a vocational training scheme. *Öresunddirekt* is working to promote this on a wider scale through collective agreements between employer's organisations and unions.	
Job-seeker trips	It had previously been the case in Sweden that job-seekers were entitled to travel grants for jobs anywhere in Sweden, but on the other side of the border in the Öresund Region. PES at *Öresunddirekt* launched a programme "The Jobtrain of Öresunddirekt" for three months, giving train tickets for free to youngsters who wanted to look for a job in Copenhagen, but who couldn't afford the fare. This was done in an attempt to show that with a little incitement it was possible to reach a good result in placing young people in jobs. Partly because of the good results, the rules in Sweden were changed in February 2011, so now it is possible to get transport to a job interview paid for by the Swedish PES also outside Sweden.	
Unemployment benefits	Swedes who are members of a Swedish unemployment benefit fund and take a job on the Danish side of the border, but who do not join a Danish unemployment benefit fund from the first day of the employment, can experience problems in claiming unemployment benefit if, at some later stage, they lose their job. This is because they are considered to have a gap in the time during which they were covered by unemployment benefit insurance. This problem has recently been ameliorated via a ruling of the Swedish Court making it possible to remain insured in Sweden when working in Denmark.	
Work placement	Unemployed workers cannot get work placement across the border. People who are unemployed in the Öresund Region cannot apply for work placement opportunities on the other side of the border. National labour market legislation is based on the assumption that work placement takes place in the home country or, for a Swedish juridical person abroad.	
Qualifications	Educational qualifications/accreditations/authorisations, etc. are valued differently on opposite sides of the border. Practitioners within a number of trades and professions experience problems relating to the validation of their educational qualifications, which is necessary for them to be able to carry out a certain profession or do a certain job. This problem occurs primarily in the construction industry. And though a resolution to the problem has been found between Sweden and Norway through a bilateral agreement, and piecemeal solutions have been found with Denmark (for example the recent change of rules allowing Swedish health care assistants to work in Denmark), there remains no holistic solution.	

Table 3.A.1. **Obstacles to Öresund cross-border integration** (*cont.*)

Pension rights	It is expensive to earn pension rights on both sides of the border. A resident of Sweden who has contributed to an occupational pension in Denmark of the type classified as a capital pension and who chooses to have this paid out in the form of a one-off payment risks having to pay not only the fee that applies for this in Denmark, but also Swedish income tax on the sum received. This problem was solved in June 2011 through co-operation between *Öresunddirekt* and the central tax authorities
Pension funds	It is expensive – or even impossible – to transfer pension capital. Transferring occupational pension funds between Sweden and Denmark incurs fees for the individual. It is not possible to transfer Swedish occupational pension funds that have been financed by employer contributions in Sweden. Pension rights across the border can be lost if not actively claimed. There are cases where workers do not receive the pension rights to which they are entitled, either because workers are unaware of their pension rights or because they do not know where to turn to claim their rights.
Health rehabilitation	No rehabilitation at home for cross-border commuters. Cross-border commuters who become ill and require rehabilitation are not entitled to rehabilitation in their country of residence, but only in the country in which they work.
Non-EU citizens	Non-EU citizens can work on only one side of the border. A person from a country outside the EU who has a residence permit and work permit for Sweden cannot work on the Danish side of the border. Moreover, a non-EU citizen who has the same permits in Denmark is not allowed to move to the Swedish side of the border. In doing so, a non-EU citizen forfeits his/her Danish residence and work permits and, in consequence, also loses his/her job in Denmark. There are, however, possibilities for most academics, and also for persons earning more than DKK 375 000/year.

Note: 1. Part of this problem will be solved when the EU Parliament decides this spring about the possibility to work up to 25% in your resident country, and still be socially insured in your country of work.

Source: Various sources including Öresund Committee and Nordic Council of Ministers (2010), "33 obstacles, challenges and opportunities".

Chapter 4

Nurturing a high-quality living environment in Skåne

Maximising Skåne's growth potential requires integrated policies to build a high-quality living environment. Skåne's current population of 1.2 million is forecast to rise to more than 1.3 million by 2020. This increase – over 12 000 people per year – will put additional pressure on public services and regional resources. Upcoming investments, including the opening of high level research facilities and new transport corridors, have the potential to draw additional inflows of people who, if fully productively integrated into the regional economy, could generate considerable spill-over effects. Such growth, however, will not come automatically. Preparations for the next regional development programme open a unique window of opportunity for Skåne; an opportunity to cultivate a holistic vision, to ensure that potential complementarities are exhausted and investments are mutually reinforcing. Creating an attractive environment to achieve its aim of becoming a vibrant and innovative regional hub, Skåne must build on its existing strengths: enhancing accessibility; protecting the environment; and promoting attractiveness through improved housing, spatial planning and branding.

Introduction

Although Skåne enjoys a strong innovation capacity and a growing labour market, maximising its growth potential requires integrated policies to maintain a high-quality living environment. Skåne's current population of 1.2 million is forecast to rise to more than 1.3 million by 2020, i.e. an increase of more than 12 000 people per year that will put additional pressure on public services and regional resources. The upcoming opening of top-scale research facilities (such as the ESS and MAX IV) and new transport corridors (such as the Fehmarnbelt fixed link) are also expected to draw additional inflows that could generate considerable spill-over effects if their benefits are embedded in the regional economy. Attractiveness could serve as a powerful engine of growth as long as Skåne is able to tap economies of agglomeration by supporting productivity, inclusion and sustainability over the long term. Preparations for the next Regional Development Programme are opening a unique window of opportunity for Skåne to shape mutually reinforcing measures for offering good living and working conditions.

While Skåne has a fine understanding of its own objectives and challenges, further progress could be achieved in terms of setting priorities and concrete implementation mechanisms. Skåne has stated a clear ambition to gear its next regional development programme towards the EU 2020 targets of "smart, sustainable and inclusive growth". In 2010, Region Skåne performed its own self-analysis on four targets for growth, attractiveness, sustainability and balance, which were updated into five main challenges to be addressed in the regional development programme in 2009 and further developed into seven prioritised areas for growth and development in 2011 (Table 4.1). There are currently more than 20 regional strategies or strategic documents, ranging from overall regional development to specific sectors. A solid vision of how the different policy tools interact in practice can help avoid co-ordination failures and a dilution of scarce public resources in an increasingly tight fiscal context.

Following Chapter 2 which examined ways to boost growth-oriented innovation and Chapter 3 which assessed ways to build an efficient and cohesive labour market, this chapter focuses on policies to cultivate an enabling environment based on a selection of three inter-related priorities: enhancing accessibility; protecting the environment; and promoting attractiveness through improved housing, spatial planning and branding.

Table 4.1. **Objectives and challenges for regional development identified by Region Skåne**

		Identified by Region Skåne		
		"TABB" targets (growth, attractiveness, sustainability, balance)	Challenges identified in Regional Development Programme 2009-2016	Prioritised areas for growth and development reported to the government in December 2011
EU 2020 targets	High employment: 75% of 20-64 year-olds Strong R&D and innovation: 3% of EU GDP	*Tillväxt* (growth) Patents per inhabitant Construction of dwellings GRP per employed Creation of new businesses	Knowledge region	Innovation and entrepreneurship
	Climate change mitigation: reducing greenhouse gas emissions by 20% compared to 1990, 20% of energy from renewables and increasing energy efficiency by 20%	*Bärkraft* (sustainability) Average income Health Emissions of carbon dioxide Merit points in year 9	Environment and climate	Pleasant environment and mitigating climate change
	Improved education: reducing school drop-out rates below 10% and having at least 40% of 30-34 year-olds with complete tertiary education			Education, training and research
	Reduced poverty: curbing the number of people in or at risk of poverty and social exclusion by at least 20 million	*Attraktionskraft* (attractiveness) Creative class Net migration per inhabitant Cultural investment Safety	Participation and integration	Good living conditions Attractiveness and quality of life
		Balans (balance) Employment Living segregation Gender equality Population balance		Healthcare and social work
			Accessibility	High levels of accessibility
			Öresund integration	

4.1. Enhancing regional accessibility and connectivity

As a major regional, national and European gateway, Skåne is increasingly challenged to adjust its infrastructure network to changing needs. Recent reforms in the Swedish governance of transport investment have given regional actors a stronger role that Skåne was well-prepared to play. However, financing remains an important challenge. There is also a need to anticipate and exploit the impact of future developments on cross-border corridors.

Skåne needs to adjust its infrastructure network to changing regional needs

Skåne's location at the crossroads of major freight corridors makes the region a strategic hub of national and European relevance. With more than 70% of incoming goods that are in transit to other parts of the country, Skåne serves as a pivotal platform for Sweden to export industrial goods and to import commodities. The ports and terminals of the region are therefore expected to increase at a similar pace as the expansion of Sweden's trade with continental Europe. Ports in Skåne are relatively well-developed and complementary with each other. Trelleborg and Malmö, Sweden's second and third largest ports (in terms of tonnage) respectively, convey extensive ferry traffic to Germany and Poland. Helsingborg is Sweden's second largest container port and Sweden's busiest port for passenger traffic. Ystad is an important ferry port towards Poland and the main transport route for passenger traffic between Bornholm and Copenhagen. However, connections between the region's ports and hinterlands need to be improved. The four major ports are surrounded by urban conurbations and have only limited space for expansion yet the growth of freight transport will entail an increased need for land for freight handling, as is already visible in Helsingborg. As a result, plans for expansion will need to take careful stock of how the efficiency in the use of land can be enhanced.

Maintaining Skåne's position as a key transit region for cross-border passenger traffic requires further investment. One of Skåne's most vital transport facilities is, in fact, Copenhagen Airport, the largest and busiest airport in Scandinavia, with almost 23 million passengers in 2011. The number of travellers across the bridge increased from 19 million to 35 million between 2000 and 2010, with a 10% average annual traffic growth between 2001 and 2007 until the financial crisis (Öresundsbro Konsortiet, 2010). However, a concern with capacity has been highlighted in several studies over the last few years. According to the latest investigation (Swedish Transport Administration, 2011) some capacity remains for passenger transport but, over the medium to long term, the ability of the fixed link to accommodate growth in both freight and passenger transport at

the same time may be limited, and result in bottlenecks over the bridge. West of Copenhagen Airport, the railway line is already at full capacity for the 2011 timetable according to a statement from Railnet (Denmark's network operator). A new permanent link over Öresund may well be necessary to meet both increased demand, when it comes to freight transport on trains, and to better connect north-western Skåne with Copenhagen (see following section on cross-border corridors).

Significant intra-regional disparities in terms of capacity and quality of transport infrastructure call for locally differentiated responses. While commuting to and from Skåne suggests a relatively self-contained labour market that expands towards Denmark, inter-municipal commuting within Skåne is highly polarised around Malmö, Lund and Helsingborg (as well as Kristianstad, albeit to a lesser degree) (Figure 4.1). The comprehensive report on the capacity of the Swedish railway system published by Swedish Transport Administration (2011) concluded that the south-west of Skåne suffers from congestion in transport **capacity** while the north-east needs improvements in the **quality** of infrastructure. For example, the rise of traffic on the E6 and E4 – the main motorways from Skåne to Göteborg and from southern Skåne towards Stockholm – is expected to continue, with potential implications for the service to the ports of Trelleborg, Malmö and Helsingborg. In addition, stretches of the E22 – a key connection between north-eastern Skåne-Blekinge and Malmö-Copenhagen – are plagued with bends and hills that cause traffic safety issues. Nevertheless, congestion along these routes is largely confined to rush hour, and to the areas surrounding Lund and Malmö. Lack of capacity on the railway lines – particularly the Southern mainline and the West Coast line – also present a problem, one that is likely to be further enhanced with attempts to double the number of passengers utilising public transport by 2020.

It is, however, important to temper expectations that transport investments alone will generate immediate and high-profile regional economic development benefits. In practice, several OECD countries have seen the risk of well-intentioned infrastructure projects eventually generating "leakages" rather than "linkages". Some new transport connections facilitated more brain drain than they attracted new workers because policies failed to enhance the overall business and living environment. The lack of anticipation and monitoring of cross-sectoral interaction is likely to result in conflicts among policies at the regional scale, which convey contradictory signals to economic agents, waste scarce resources and dilute the overall impact of the policy mix. For example, expanding road networks in the hopes of enlarging regional labour markets requires considering the potential environmental impact of increasing private vehicle use. Systematic use of cost-benefit analysis, taking dynamic

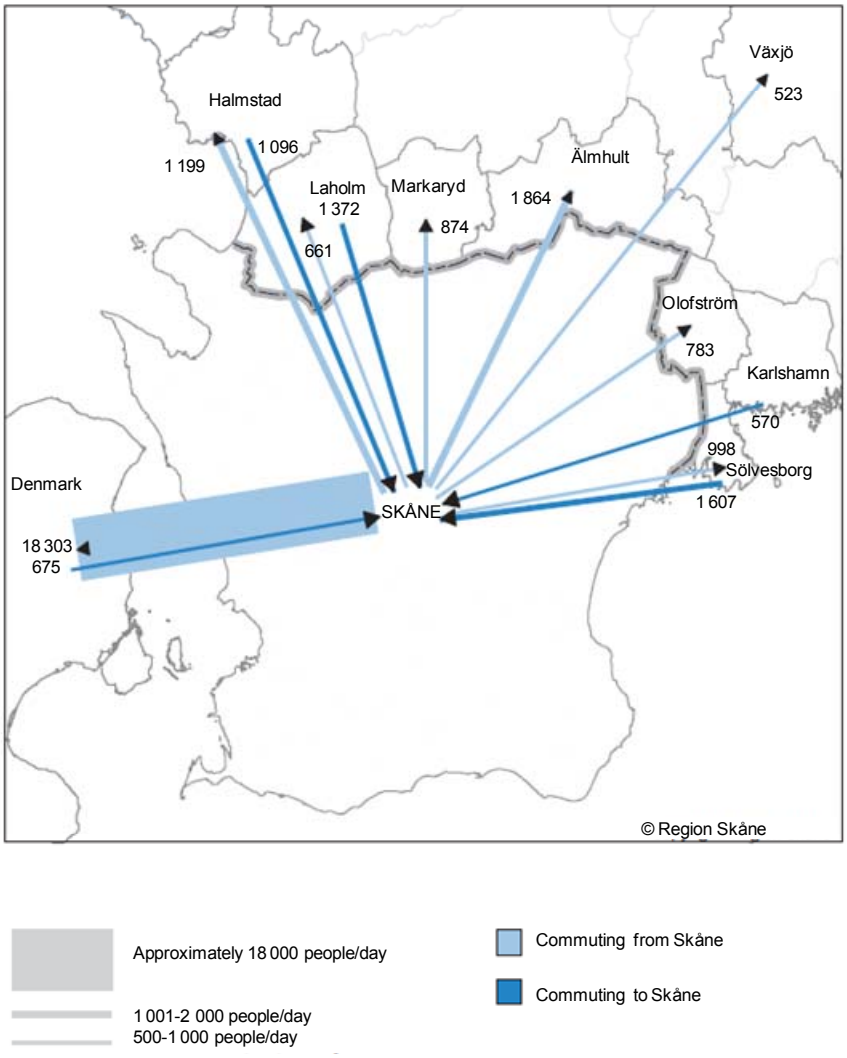
regional effects into account, and strategic environmental analysis can help better inform and prioritise investment decisions. Along these lines Vägverket developed a "four-step principle": a preference ordering around which to structure the consideration of new infrastructure projects. Under the "four-step principle", priority should be given to actions that influence transport needs and individuals' choice of means of transport; failing appropriate investments along these lines, priority goes to actions that give a more efficient usage of existing infrastructure; if this is not possible, consideration turns to limited rebuilding of existing infrastructure and lastly new investments and major rebuilding efforts are considered in the absence of any alternative.

Responding to future demand for more efficient, safer and more sustainable transport will require the authorities to rethink the intermodal balance between road and rail. As Skåne grows, the region's transport concerns will present an increasingly pressing question. Any solution must work with the region's environmental assets, utilising available land more efficiently and protecting the environment and climate. Rail transport must play a key role in addressing these sometimes contradictory objectives, yet current capacity issues present a concern on existing rail links in the region, particularly in the case of the Southern link (Malmö-Lund-Hässleholm-Stockholm) and the West Coast link (Malmö-Helsingborg-Gothenburg). Capacity deficiencies on these two critical lines have dynamic implications on the commuting behaviour of the region's workers and hence for inter- and intra-regional traffic and goods transport.

Introducing high-speed trains may represent a potential opportunity to improve inter-regional accessibility, higher capacity and environmental sustainability. The connection of immediate interest concerns primarily the northward Malmö-Stockholm link (which currently takes about four to five hours by rail and six to seven hours by road), but connections to Gothenburg/Oslo as well as with northern Germany and the rest of the continent are also considered to be of strategic importance for Skåne. Given the potential dynamic implications of such investments, and the dependence of their potential impact on complementary investments into regional productivity and attractiveness, substantial analysis is required before prioritisation for resource allocation can be determined and, though investigations are being carried out by traffic authorities, no decision has been made yet. Region Skåne and the three largest municipalities are also collaborating on developing a light rail transit project. Joint work is underway to determine technical and physical design rules, financing, and the operational management of a light rail transit system in Skåne with the goal to start operation in 2015 with Lund as the first city.

Figure 4.1. **Commuting to, from and within Skåne, 2008**

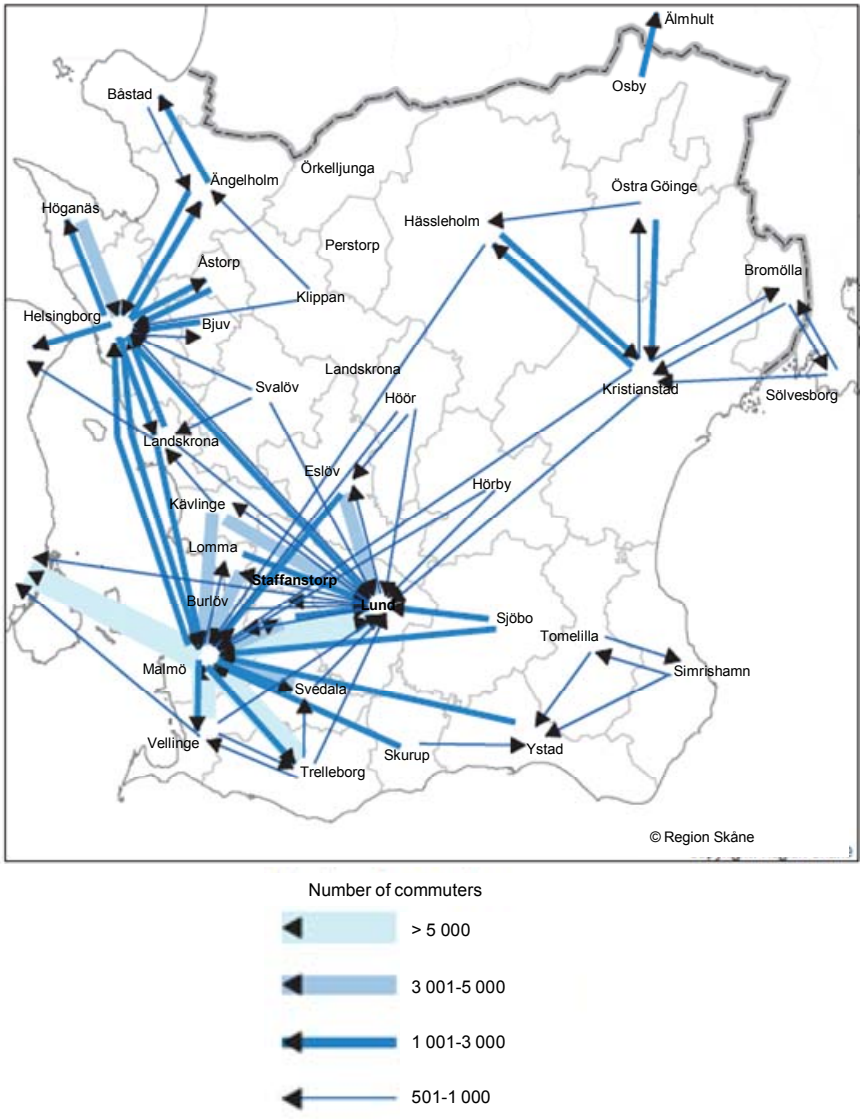
Commuting flows to and from Skåne, 2008



Note: Commuting to/from municipalities bordering Skåne and to/from Denmark. Exact numbers are given in the map.

Figure 4.1. **Commuting to, from and within Skåne, 2008** (*cont.*)

Inter-municipal commuting, 2008

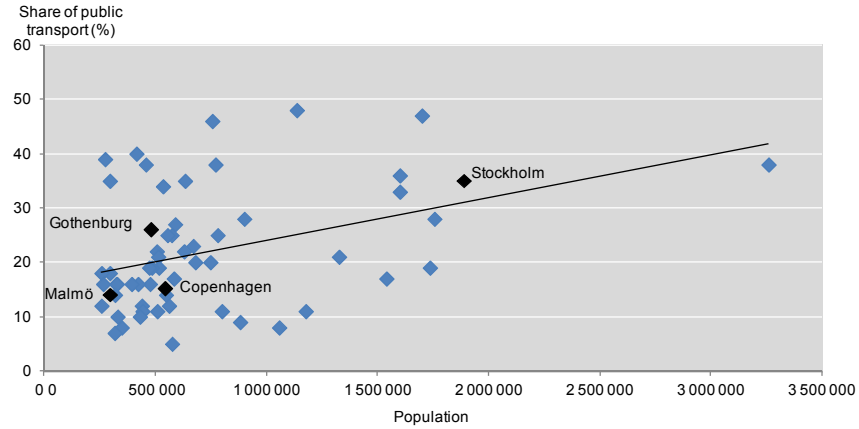


Note: Commuting flows that exceed 500 people per day. Commuting flows from Skåne municipalities across the Öresund are to all parts of Denmark.

Source: Region Skåne.

There are expectations that expanding public transport could help further improve intra-regional mobility. According to city rankings conducted by the European Platform on Mobility Management (EPOMM)[1], Malmö has a relatively small share of public transport relative to its population compared to Stockholm and Göteborg (Figure 4.2). Demand for public transport in Skåne is strong and has been rising. In 2009, almost 130 million trips were made with *Skånetrafiken* (the regional public transport authority), which represents an increase for the tenth consecutive year and an increase of over 80% since 1999. More intensive use of public transport could contribute significantly to reducing GHG emissions and pollution (OECD, 2010a). Yet, a large difference remains between users of cars and public transport in terms of access to jobs. While three out of four employed people in Skåne can reach at least 100 000 potential workplaces within 30 minutes from their home by car, by public transport they can only reach 10 000 potential workplaces within 30 minutes, 20 000 workplaces within 45 minutes and 50 000 workplaces within 60 minutes (according to calculations made by Region Skåne based on data from Statistics Sweden). Considering that about 60% of the working population lives less than 10 minutes by car from their workplace and cars actually represent around 60% of all private trips in Skåne, an increased supply of infrastructure in itself will likely not ensure long-term effective transport management. The cost of expanding the public transport system needs to be carefully assessed along with effective incentives to make the latter more attractive to commuters.

Figure 4.2. **Population and modal share of public transport in European cities**



Source: OECD calculations based on data from European Platform on Mobility Management, *http://epomm.eu*.

Public transport investment in Skåne needs to be designed in the light of several factors, including not only the region's population but also its density and urban sprawl. A significant amount of economic literature and empirical evidence tend to point towards a positive correlation between population density and the modal share of public transport: more densely populated areas tend to make more heavy use of public transport. And, as can be seen from Figure 4.2, Malmö shows up below the trend line, indicating that the share of public transport in the city is below the level that would be expected given the population density of the city. Nevertheless, recent research on Australian, Canadian, English and US metropolitan areas suggests that much can be done to improve public transport even given existing urban residential densities (Box 4.1). And, while recent comparative data are not available for Malmö, Stockholm, Göteborg or Copenhagen, the association of European Metropolitan Transport Authorities (EMTA)'s Barometer 2008[2] shows a substantial difference in the rural urban disparity regarding public transport use across several European urban agglomerations (e.g. 64% in the inner city vs. 38% in the whole metropolitan area of Helsinki, 47.1% vs. 17.2% in Amsterdam) (EMTA, 2010). Network planning of the frequency of bus links, their co-ordination with rail services and the ease of transfer between modes of public transport – both in terms of location and fares that allow free transfers between modes – can do much to reduce effective distances without increasing density. And an in-depth review of public transport networks across polycentric regions that are similar to Skåne in density and urban form could therefore provide a useful complement to traffic forecast and cost-benefit analysis.

Skåne should not lose its lead in promoting a green transport system

Skåne is increasingly challenged to devise green transport solutions. A large part of the goods leaving and arriving at the ports of Skåne are transported by road (from Trelleborg, for example, 90% of trailer goods continue their journey by road), which generates considerable pressure on infrastructure and creates environmental challenges. In line with the relative decline of heavy industries and manufacturing in the regional economy, total greenhouse gas emissions in Skåne declined by 30% between 1990 and 2008 compared with 11.7% in Sweden, despite demographic and economic growth. However, greenhouse gas emissions caused by **transport** in Skåne increased by 3.8% over the same period and currently account for 40% of total emissions. Air pollution from traffic poses a threat to public

Box 4.1. **Is public transport effective only in densely populated regions?**

A recent study in Australia – part of a collection being prepared for the Council of Australian Governments (COAG) on the dangers of relying on diminishing supplies of oil (Stone and Mees, 2010) – suggests that more effective approaches to public transport service design could offer a way to break the stand-off between supporters of urban consolidation and residents who choose to live in low-density suburbs. Although the petrol rationing era introduced during World War II was a boom time for public transport in Australian cities, public transport declined dramatically once petrol rationing was lifted and rising incomes made cars more affordable. Even though population grew rapidly and density increased during that period, the use of public transport still fell behind the use of the car. The paper argues that massive changes in urban densities are not the key to getting more people on public transport. Recent data on urban density and the modal share of public transport in some North American, Australian and European metropolitan areas find that higher densities do not always mean better public transport. While a compact and connected urban form enhances the potential for oil-free mobility through walking, cycling, and greater use of public transport, the key to increasing public transport use in outer suburbs seems to be service-based network planning: more frequent buses (not just during peak hours); better co-ordination with rail services; more convenient transfers; and fares that allow free transfers between modes.

health in the main population centres. Despite some recent progress, emissions are rising in terms of ground-level ozone and particles. Road traffic is one of the largest sources of both of these emissions. Both Malmö and Helsingborg underperform national quality standards for nitrogen dioxide despite an overall regional positive trend. Transport noise is also perceived and reported as a health and environmental problem, as reflected in the large number of complaints received by the relevant authorities and by research that highlights the relationship between noise and stress. Between 160 000 and 300 000 people in Skåne are exposed to road traffic noise. According to a study by the European Environmental Agency (2009), whilst the **perception** of noise as a problem is more or less the same among surveyed citizens in Malmö, Stockholm and Munich, for example, in reality a much higher percentage of people are exposed to high-noise levels in Malmö[3] (Figure 4.3). In the future, a large part of freight should be transported by rail. However, as the capacity of the rail system is already limited, there is a strong need to expand the regional network (see previous section). When the Fehmarnbelt fixed link will be completed in 2020, the competitive edge of freight transport by rail will be radically enhanced,

which in turn will increase pressure on the railway system in Skåne, and the Öresund Region in general. Strategies to cope with this change need to be developed in advance, also linked with EU and national initiatives such as the Green Corridors (Box 4.2).

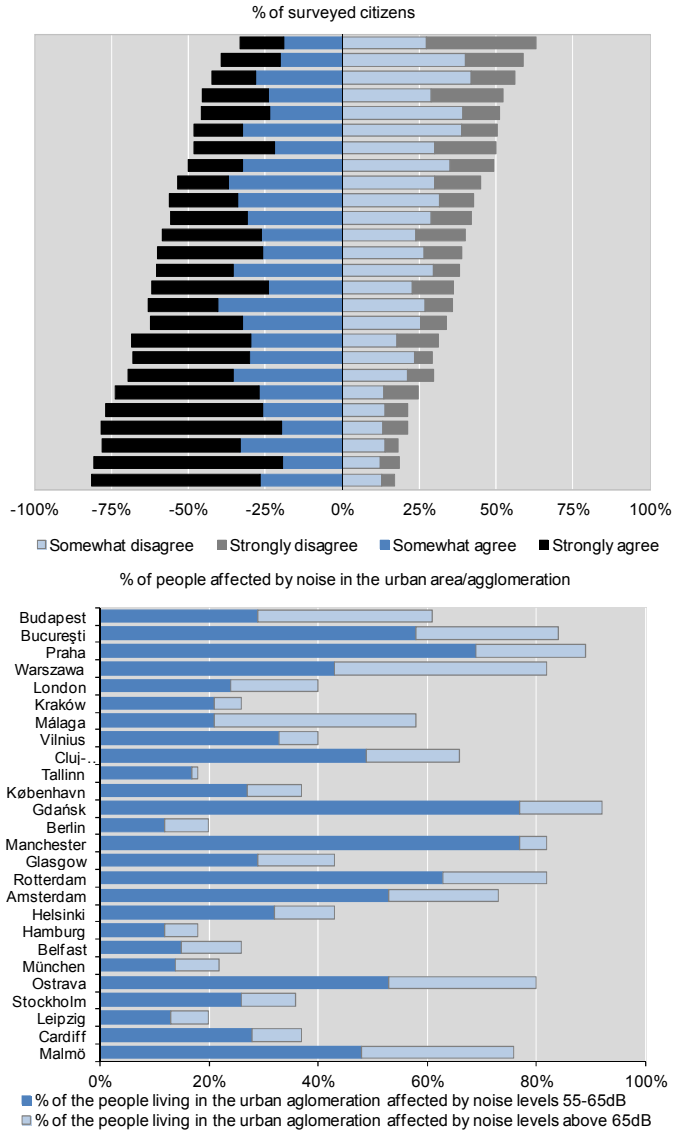
Collaboration between the three levels of government is essential to take the sustainable transport agenda forward. Some major transport investment projects have generated critical debates on their impact on the environment. One example is the Hallandsås railway tunnel project, part of a larger project to rebuild the West Coast line which was initially scheduled to be completed in 1995 and has been rescheduled to 2015. Avoiding similar delays in the future will require rigorous planning and control mechanisms based on close collaboration between all relevant actors, including Region Skåne and the CAB. Municipalities have also long played a leading role, and an Association of Municipalities for Sustainable Development was created as early as 1999. The Sustainable Mobility Skåne platform is working to intensify collaboration for a sustainable transport system. Within this platform, Region Skåne, the CAB, the Swedish Transport Administration and the municipalities in Skåne work together to promote and encourage sustainable travel in the region in collaboration with local authorities.

Green public procurement should be further pursued to bolster the development of green transport. The public sector has been a driving force to promote more sustainable transport solutions in Skåne. Under the "Skåne Buys Smart" package of Skåne's Environmental Action Programme 2004-2010, training programmes for buyers and procurement groups have been initiated. According to Skåne's Climate and Energy Strategy, the objective is that all city buses in Skåne become fossil fuel-free by 2015, regional buses by 2018 and all vehicles in the public transport fleet by 2020. *Skånetrafiken* is very much aware of the green transport objective and the Sustainable Business Hub cluster (see below) is eager to promote green companies.

Cross-border development could gain new impetus

The upcoming Fehmarnbelt fixed link is expected to have a major impact on Skåne and the evolution of the Öresund region. The Fehmarnbelt region currently includes parts of eastern Denmark and northern Germany. The Fehmarnbelt fixed link will close a gap between the Scandinavian and European rail networks and is supported by the EU as part of one of the 30 prioritised Trans-European Networks (TEN-T). Creating a strong

Figure 4.3. **Perceived and reported noise pollution in European cities**



Note: European Commission, 2007 and data reported under the Directive on Environmental Noise (EEA, 2008). The noise exposure data are that which has been reported by EU member countries in accordance with the END until 31 October 2008. At the time of writing, some of this data may not have been subject to a full quality assurance check.

Source: European Environmental Agency (2009), *Ensuring Quality of Life in Europe's Cities and Towns*, EEA Report No 5/2009, Figure 1.3, p.16.

Box 4.2. **Sweden: a leader in the EC Green Corridors initiative**

Green Corridors is a European Commission initiative aiming at strengthening the logistics industry's competitiveness and creating sustainable solutions. Green corridors will enable large-scale and long-term transport solutions through sufficient and attractive infrastructure and supportive regulatory framework. The concept is neither mode-specific nor devoted only to intermodal solutions. The basic idea is to provide a more sustainable transport solution based on economies of scale in infrastructure as well as operations.

The Swedish Green Corridors initiative began as a response to the European Commission's idea presented in the Freight Logistic Action Plan in 2007. In 2008, the Swedish initiative started more operative working groups of people representing the Ministry of Enterprise, Energy and Communications, industry/shippers, academics, and the transport industry including terminal owners. The broad collaboration between different types of actors involved in the logistic chain (and the presumptions for the function of the logistic chain) has been, and still is, one of the strengths in the initiative. After discussing different alternatives, it was decided that a green corridor is characterised by: sustainable logistics solutions with documented reductions of environmental and climate impact, high safety, high quality and strong efficiency; integrated logistics concepts with optimal utilisation of all transport modes, so called co-modality; harmonised regulations with openness for all actors; a concentration of national and international freight traffic on relatively long transport routes; efficient and strategically placed trans-shipment pointes, as well as an adapted, supportive infrastructure; a platform for development and demonstration of innovative logistics solutions, including information systems, collaborative models and technology.

In 2010, the Swedish Government decided to take the initiative one step further by giving *Trafikverket* (Swedish Transport Administration), the Swedish Maritime Administration, and VINNOVA (Swedish Governmental Agency for Innovation Systems) the task to form a commission, running until 2012, to provide administrative support for the development of green corridors. The administrations are also supposed to be actively participate in working groups; interact with stakeholders, organisations, businesses and others in strengthening the work of green corridors. Furthermore, the administrations should assist the Ministry of Enterprise, Energy and Communications in developing green corridors in a national as well as an international context.

Source: Based on information provided by Swedish Transport Administration, *www.trafikverket.se*.

transport corridor between the Öresund Region and Hamburg will allow freight trains to avoid the 160-kilometre detour via the Zealand-Funen Great Belt. Whilst ferry transit currently takes 45 minutes (not including waiting

time), cars will require around 10 minutes and trains about 7 minutes. The duration of a train journey between Hamburg and Copenhagen will be cut from about 4.5 hours to approximately 3 hours. Construction is set to begin in 2014 and be completed at the end of 2020.

Reaping the full benefits of the project will require Skåne to make adequate corresponding investment. There are high expectations that the new fixed link will not only benefit the centres of Hamburg and Copenhagen/Malmö but also boost development in the regions located in between – although such expectations have not always been fully met in similar projects elsewhere. In addition to supporting the traffic of the region, the project would increase employment levels during the construction phase of the project, as well as after the fixed link has opened. Consumers should also benefit, as prices are expected to fall due to reduced transport expenses and greater competition. Experts also predict an increase in tourism. However, lessons from the experience of the Öresund Bridge suggest that constructing infrastructure alone does not automatically generate the expected benefits, and the full benefits of the project will only be realised with corresponding complementary investments across Skåne, Denmark and Germany.

Moving forward with the project of building the permanent Helsingborg-Helsingör (HH) link will require a substantial financial investment and sound cost-benefit analysis. HH is expected to shorten the travel distance between Helsingborg and Copenhagen by around 50 kilometres, and absorb much of the freight traffic that now crosses the Öresund. The estimated cost of EUR 4 500 million (IBU-Öresund project 2010) for a fixed link serving road and rail passenger and freight transport is intended to be financed through user fees. In order to meet the anticipated increase in freight and passenger traffic, further investments will also need to be made to improve the connection between Helsingborg and Hässleholm and to expand the rail network between Helsingör and Höje-Taastrup in Denmark on Ring 5. While the regions of Skåne, Zealand and the Huvudstad area, as well as Copenhagen's Civic Authority, are in agreement about the necessity of building HH and Ring 5, the Swedish and Danish Governments remain to be convinced and a Swedish/Danish joint investigation is currently underway.

Recent reforms in transport governance have given a stronger role to regional actors

Sweden is moving towards more strategic oversight of national infrastructure investment frameworks and greater influence for regional

stakeholders. Within a new planning method introduced in 2008, nine regional system analyses were carried out during which regions were asked to establish their own priorities in terms of objectives and modes of transport. They served as a basis for a national system analysis to define national priorities and a series of consultations allowed for dialogue among traffic agencies, counties and municipalities. After proposals for 2010-2021 were presented in autumn 2009, the government decided on the measures to be included in the national plan and approved the financial frameworks for the regional infrastructure plans. In March 2010, the government adopted the National Transport Plan 2010-2021.

At the national level, the creation of a new joint traffic agency has created an opportunity to promote long-term planning of transport infrastructure. In spring 2009, a government report reviewed working methods in the Swedish transport sector as well as climate and environmental issues, demands for the growth of transport systems, congestion in metropolitan areas and regional development, co-operation between different modes of transport. The report proposed the creation of a new joint traffic agency in charge of the long-term planning of road, rail, maritime and air transport infrastructure from a holistic perspective. The new Swedish Transport Administration (*Trafikverket*) came into operation in April 2010. It overtook all operations of the Swedish Road Administration and the Swedish Rail Administration, as well as parts of the Swedish Maritime Administration, Air Navigation Services of Sweden and the Swedish Institute for Communications Analysis (except for some operations transferred to new commercial companies for road and railway building and maintenance, and airport operations).

The new Public Transport Act, which came into effect on 1 January 2012, introduced three main changes in the role of regional actors. First, the monopoly for regional public transport was abolished and private actors are now able to offer traffic services (under non-discriminatory conditions).[4] Second, a public transport authority is to be created in each county, with the mandate to prepare regional traffic provision plans from a comprehensive regional perspective. Third, greater importance was given to dialogue with municipalities and the private sector. Due to its experience as a pilot region, Skåne had prior experience in elaborating traffic provision plans. The regional assembly of Skåne adopted the Regional Transport Infrastructure Plan for Skåne 2010-2021 in June 2010.

Financing of transport infrastructure remains a challenge

Due to Skåne's strategic location, many transport infrastructures in the region are of national importance and are financed as such. The Regional Transport Plan of Skåne has a budget of SEK 4 billion, which represents around 12% of the SEK 33.1 billion that were earmarked in the national plan for all county transport infrastructure plans in Sweden (Table 4.2). This is the third largest allocation in Sweden after Stockholm and Västra Götaland, and broadly comparable to its share of national population (Table 4.3). However, the regional plan accounts for only 8% of the total budget: 92% of infrastructure in Skåne relies on funding from the national plan.[5] If only investments are considered, the figure is 16% in the regional plan and 84% in the national plan. When funding from the national and regional plans is added, the total budget for transport infrastructure in Skåne amounts to approximately SEK 49 billion, almost evenly distributed between SEK 25 billion for investments and SEK 24 billion for operations and maintenance (Figure 4.4).

There have been concerns in Skåne – as in some other regions – that the allocated budget has been disappointing in relation to the increasing magnitude of perceived needs. According to the needs assessment carried out during the regional consultation process, the cost of investment needed in Skåne had been estimated at SEK 50 billion for the 2010-2021 planning period. New negotiations will take place according to the revision of the long-term plans which is expected to take place once every election period. The criteria used by the national government to allocate financing to the different projects across the country are extremely complex and not necessarily as transparent as ideally expected. Choices are based on quantified facts (such as population, passenger and freight traffic) but also on political and strategic considerations that are much more sensitive and difficult to evaluate in a rigorous, impartial and transparent fashion. It has sometimes been argued that regions with powerful lobbying capacity *vis-à-vis* the central government tend to receive more resources. In this respect, a larger Southern Sweden region (comprising Skåne and one or more neighbouring counties) could mean a stronger voice for Skåne in the capital, but if objectives are not aligned among regional partners it might also result in a dilution of priorities.

In a long-term strategic perspective, however, Skåne will increasingly need to focus less on receiving a greater share of traditional national funding than on designing more viable new funding frameworks for its own infrastructure. To what extent Skåne's capacity to effectively fulfil its responsibility for regional development requires reforms in transport

planning and financing is a key question to be solved through extensive inter-governmental dialogue in view of rising demand and fiscal constraints. There is a growing recognition that transport investment needs might soon outstrip the existing primary sources of national public funding, which calls for new solutions to bridge this financial gap before it stretches too far.

Table 4.2. **Budget of national and regional transport plans, 2010-2021**

National Infrastructure Plan 2010-2021	SEK billion	%
	417	**100.00**
State budget for transport (including interest and repayments)	183.9	44.10
Operation and maintenance of state roads	136	32.61
Operation and maintenance of state railways	64	15.35
Earmarked funds for county plans for regional transport infrastructure	33.1	7.94
Regional Transport Plan of Skåne 2010-2021	**4 033**	**100.00**
Major regional road projects	1 661	41.19
State financing for public transport measures (for high-quality bus routes, accessibility measures for bus stops and terminals, commuter parking)	475	11.78
Government co-funding for road safety and environment (on municipal roads and streets)	475	11.78
Public transport on state roads	350	8.68
Safe accessibility to the road system	275	6.82
Cycle paths (outside municipal road maintenance areas, long-distance touring routes)	275	6.82
Investment in national infrastructure	270	6.69
Market adjustments (scope for actions that cannot be foreseen when the plan is agreed)	115	2.85
Urban action (improvements in road safety and comfort)	100	2.48
Other (including grants for investments in private roads)	37	0.92

Source: Region Skåne.

Regional and municipal co-financing, direct user fees, loans, bonds and public-private partnerships are likely to come to the forefront and will deserve both in-depth technical and multi-disciplinary research. Performance measurement and accountability will continue to be critical to

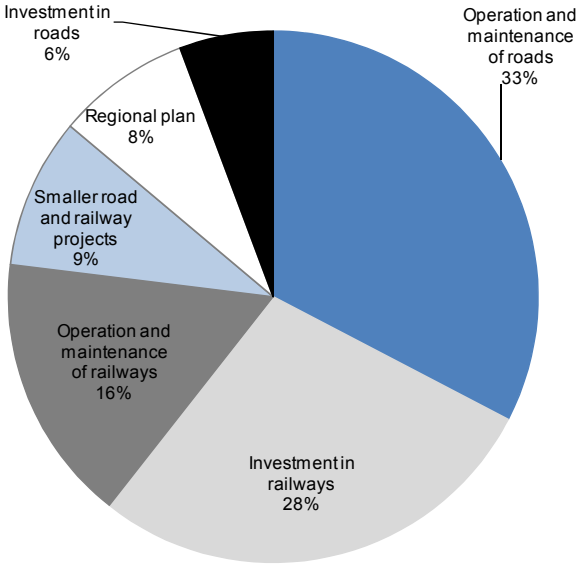
gaining public trust and support for projects, hence the need to develop progress-tracking techniques and transparent reporting tools. When considering different funding mechanisms, Skåne might wish to weigh them up against a carefully assessed list of principles, such as the one elaborated for the US Council of State Governments (Box 4.3).

Table 4.3. **Regional allocation of funds from the National Infrastructure Plan 2010-2021 to county plans for transport infrastructure**

	SEK millions (in 2009 prices)	% of total allocation	% of national population (as of 31 December 2011)
Stockholm	7 851	23.7	22.1
Västra Götaland	5 835	17.6	16.8
Skåne	**4 033**	**12.2**	**13.2**
Uppsala	1 518	4.6	3.6
Östergötland	1 342	4.1	4.5
Jönköping	1 236	3.7	3.6
Halland	1 060	3.2	3.2
Dalarna	983	3.0	2.9
Örebro	944	2.9	3.0
Södermanland	917	2.8	2.9
Värmland	877	2.6	2.9
Gävleborg	873	2.6	2.9
Västerbotten	794	2.4	2.7
Kalmar	793	2.4	2.5
Västmanland	758	2.3	2.7
Norrbotten	743	2.2	2.6
Västernorrland	696	2.1	2.6
Kronoberg	678	2.0	1.9
Blekinge	487	1.5	1.6
Jämtland	477	1.4	1.3
Gotland	205	0.6	0.6
Total	SEK 33.1 billion	100.0	100.0

Source: OECD calculations based on data from Ministry of Industry, Attachment 1 to Government Decision II 1, 29 March 2010, and Statistics Sweden.

Figure 4.4. **Total budget for transport infrastructure in Skåne from national and regional plans, 2010-2012**



Source: Region Skåne.

Box 4.3. **Checklist for assessing transport financing options: an example from the United States**

The interim report of the National Surface Transportation Infrastructure Financing Commission created by US Congress listed 19 potential transport funding mechanisms, along with a preliminary list of 15 criteria for evaluating them. These criteria are:

- **Revenue potential.** How does the mechanism's revenue potential at various politically acceptable rates match investment needs?
- **Sustainability.** Can the mechanism be adjusted easily by system operators or policy makers to meet needs?
- **Political viability.** How easy is it to gain political acceptance of the mechanism compared to other mechanisms?
- **Ease/cost of implementation.** How easy and costly is it to implement and administer compared to other mechanisms?

Box 4.3. **Checklist for assessing transport financing options: an example from the United States** (*cont.*)

- **Ease of compliance.** To what extent does the mechanism minimise evasion compared to others?
- **Ease/cost of administration.** To what extent is the mechanism a cost-effective means of raising revenue?
- **Level of government.** Which level of government is appropriate for the mechanism?
- **Promotes efficient use.** To what extent will the mechanism incentivise efficient use of the system?
- **Promotes efficient investment.** To what extent does the mechanism incentivise infrastructure investments based on transparent and performance-based criteria?
- **Promotes safe and effective system operations/management.** To what extent does the mechanism incentivise owners and operators of transport infrastructure to more effectively and efficiently operate and manage?
- **Address externalities.** To what extent does the mechanism improve the way the funding system takes into account beneficial and harmful side effects, including pollution, noise and economic development?
- **Minimise distortions.** To what extent does the mechanism affect other markets or public policies, such as energy independence?
- **Promotes spatial equity.** To what extent does the mechanism help fund system improvements in places that are economically or geographically disadvantaged or that suffer disproportionate use?
- **Promotes social equity.** To what extent does the mechanism limit costs for those who face the most difficulty in paying?
- **Promotes generational equity.** To what extent does the mechanism charge current and future users for current and future benefits?

The commission points out that any funding mechanism is unlikely to score well on all the criteria, so the choice of an optimal approach will require value judgments to be made by policy makers on the goals they most want to advance.

Source: Adapted from Slone, Sean (2008), "Transport infrastructure finance", Council of State Governments, available at *www.csg.org/knowledgecenter/docs/TransportationInfrastructureFinance.pdf*.

4.2. Protecting the regional environment

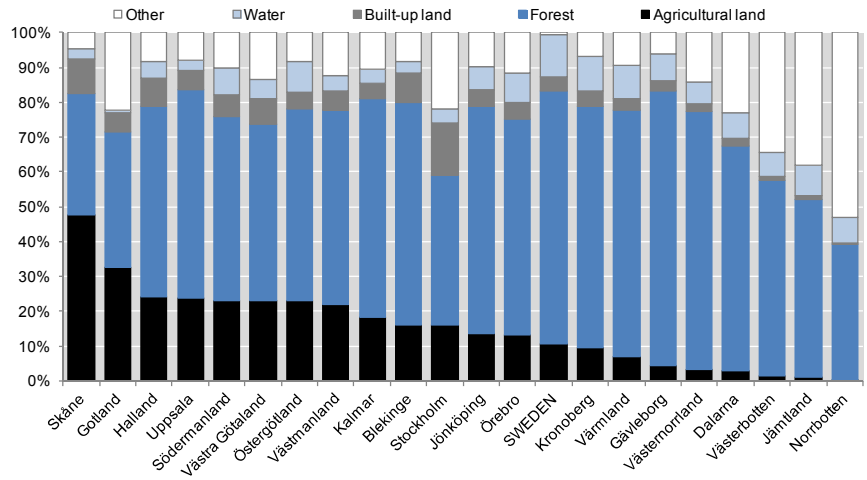
While both Sweden and Skåne perform relatively well on most environmental indicators, fast demographic and economic expansion is increasingly testing Skåne's ability to balance development pressure and environmental sustainability. This section turns to combining environmental and agricultural development objectives; and encouraging further sustainable energy use.

Combining environmental and agricultural objectives sometimes leads to tensions

Given that Skåne is a leading agricultural region, management of agricultural issues is a key responsibility in relation to regional development. Agriculture accounts for almost half of Skåne's land, which is by far the highest share in Sweden (Figure 4.5), and the region boasts Sweden's most fertile farmlands. Skåne also concentrates around half of Sweden's food production and food processing industries. This asset differentiates Skåne not only from Stockholm and Västra Götaland but also from other OECD metropolitan regions and offers a strong selling point for Skåne's branding. Agricultural policy thus constitutes an essential component of Skåne's regional development policy and requires close co-ordination between the different authorities in charge. The County Administrative Board (CAB) is authorised by the Swedish Board of Agriculture to administer EU agricultural support at the county level and makes decisions in accordance with the EU Common Agricultural Policy. The various forms of support can be used within areas such as agriculture, horticulture and operations that supplement agriculture.

Beyond purely agricultural issues, the CAB plays a prominent role in broader rural development. For the programming period 2007-2013, the Rural Development Programme for Sweden has a budget of around SEK 36 billion, of which Skåne receives approximately 10% across the different axes (Table 4.4). Starting from the Rural Development Programme for Sweden, the CAB prepared the Strategy for Implementation in Skåne that defines priorities on where to allocate funds, in collaboration with Region Skåne, associations of farmers, universities, and other stakeholders. In terms of human resources, the Department of Rural Affairs and Environmental Affairs is the largest department within the CAB (250 out of 450 employees).

Figure 4.5. **Land use in Sweden by county, 2005**



Source: OECD calculations based on data from Statistics Sweden.

The CAB and Region Skåne share responsibility for environmental issues. The CAB's Environmental Action Programme 2004-2010 outlined 15 goals for the whole region and all regional actors, whereas Region Skåne's Environmental Programme 2010-2020 provides details on what environmental measures Region Skåne is taking and the link with regional development. Region Skåne also prepared the Environmental Strategic Programme of Skåne 2011-2016 which outlined work along seven dimensions.[6] In January 2011, a revised version of Swedish environmental quality objectives entered into force. The CAB is responsible for determining regional objectives and has been given clearer responsibilities to ensure that these objectives are achieved.

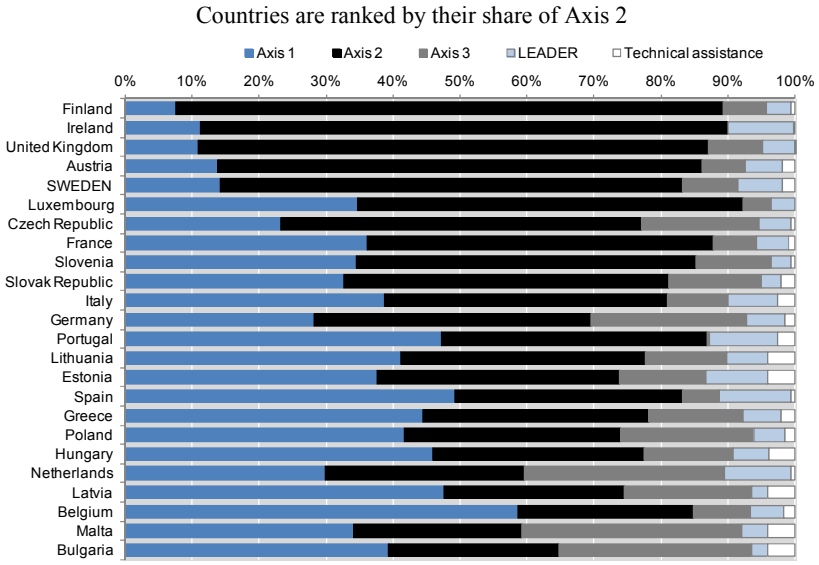
In practice, tension can arise between conflicting goals of agricultural policy and environmental policy. Sweden is among the EU countries that devoted the highest share of their Rural Development Programme funds to environmental objectives (69% for Axis 2) (Figure 4.6). However, examples exist of cases in which farmers have been caught between direct agricultural support and the Environmental Code.[7] The current complexity of the agri-environmental payment system results in one piece of land often receiving several payments for different purposes. The CAB cannot solve the conflict itself but it can report about it to the relevant bodies in the government and act as an intermediary.

Table 4.4. **Rural Development Programme in Skåne, 2007-2013**

	Objectives	Budget for Sweden in SEK millions			Skåne
		EU	Sweden	Total	
Axis 1: Improved competitiveness in the agricultural and forestry sector	To improve the capacity of companies to develop and compete through direct investment support and support for capacity building in the sectors of agriculture, forestry, reindeer husbandry, food production and processing of food products and forest raw materials	3 010	2 760	5 770 (14%)	About 12% of total budget
Axis 2: Management of natural resources	To preserve and strengthen attractive landscapes of great natural and cultural value through compensatory allowance, payments for environmentally friendly farming, forestry environmental payments	11 380	12 300	23 680 (69%)	No earmarked regional budget, depends on applications from individual farmers (estimate of SEK 2 billion for farmers in Skåne)
Axis 3: Diversification and quality of life	To promote the diversification of business in rural areas, improve the opportunities for employment and better quality of life and encourage sustainable use of resources in rural areas	1 710	1 775	3 485 (8%)	About 10% (SEK 310 million)
Axis 4: LEADER	– To use local commitment and local know-how – Eight local action groups (LAG) in Skåne – 49% financed by the Rural Development Programme, 21% by regional public co-financing, and 30% by private financing or non-profit organisations	950	1 425	2 375 (7%)	Public financing in Skåne: SEK 250 million
Technical assistance		535	535	1 070 (2%)	

Source: Ministry of Rural Affairs of Sweden and County Administrative Board of Skåne.

Figure 4.6. **Breakdown of Rural Development Programme 2007-2013 funding in EU countries**



Source: OECD calculations based on data from the European Commission.

Confusion resulting from the fragmentation of policy could be reduced by placing greater focus on the actual results to be achieved rather than the regulations themselves. As suggested in an evaluation carried out by the Swedish University of Natural Sciences (2010), payments could target a whole landscape of contiguous areas rather than individual farms and a new system of contracts between farmers and the Swedish Board of Agriculture or CABs could be envisaged. Concrete experiences have also suggested that investment in the environment can be economically profitable for the region when it benefits from active involvement from local actors. An interesting example in Skåne is the Tullstorp Stream Project (Box 4.4). The objective of this landowner-driven renovation pilot project was to achieve environmental objectives from the EC Water Framework Directive while maintaining high agricultural production. The project consisted in creating wetlands around a highly polluted stream flowing into the Baltic Sea and implementing cultivations to absorb nitrogen and phosphorus, which in turn would be processed in a biogas factory (to be built on an old factory site rather than arable land). It would therefore become sustainable without excessive dependence on public support. This initiative offers an inspiring example for many other OECD regions, especially those located in the Baltic Sea. It stemmed from a proactive approach (as opposed to a regulatory approach)

and promoted social innovation (as opposed to a narrow view of technical innovation). Farmers were able to broaden their activity from the food market to the energy market. The project built on bottom-up collaboration, motivation and engagement from local landowners, NGOs, researchers and the municipality, with a holistic view of environment, agriculture and local history.

Regional collaboration for sustainable energy use should be continued

Skåne consumes and produces less energy than national average. Consumption of energy per capita is lower in Skåne than in Sweden. This is due to a relatively lower share of energy-intensive industries, a higher population density (which leads to shorter transport distances), and warmer climate. The use of energy in Skåne has been relatively constant over the last 20 years, with a decline during later years. The potential for more efficient energy usage is nevertheless somewhat higher in Skåne than in the rest of the country, as a large share of the energy in Skåne is used in public areas and homes, two sectors with significant savings potential.

As one of three "pilot counties" for green development in Sweden, Skåne has good potential to show the way forward in energy conversion. In order to improve the quality of energy and climate change initiatives at regional and local levels, the government has decided to ask the most successful counties to share their experiences and practices. In August 2010, the government designated the CABs of Skåne, Norrbotten and Dalarna as pilot counties to strengthen regional efforts to mitigate climate change and accelerate energy transition. Each county has been awarded SEK 6 million for the 2010-2013 period. The counties are expected to present their final report to the Ministry of Environment and the Ministry of Enterprise by 30 June 2013. The CAB is co-ordinating this "pilot" experience, but all of Skåne needs to be involved. In particular, a useful platform in fulfilling these tasks is Climate Co-operation Skåne. Climate Co-operation Skåne was formed in the spring of 2010 as a collaborative group composed of Region Skåne, the Federation of Municipalities of Skåne, and the CAB. The purpose is to increase collaboration and make Skåne's climate work more efficient, with an extra focus on transport, energy efficiency and climate adaptation. The Federation of Municipalities of Skåne's Energy Office also plays an important role in promoting inter-municipal collaboration for energy efficiency and renewable energy (e.g. the Energy Office runs a network for energy advice, and projects such as Biogas Syd and Solar City Malmö). It prepares an annual roadmap that outlines concrete measures such as gas stations and operates a website.

Box 4.4. An environmental restoration project: the case of the Tullstorp Stream Project

The Tullstorp Stream Project covers a length of 30 kilometres and a catchment area of around 5 740 hectares, of which more than 85% is arable land. This landowner-driven project aims to minimise the leaching of nitrogen and phosphorus from cultivated lands into the Baltic Sea without reducing the economical and agricultural yield. The project fits in the context of the EU Strategy for the Baltic Sea and Sweden's Strategy for the Baltic Sea, as well as the municipality of Trelleborg's Kretsloppet sustainability project. It started in 2008 as a five-year project but was slightly delayed due to contradictions between the objectives of different types of legislation. With a budget of EUR 12 million, the project is operated by an association of all landowners along the stream. Goals are to make the Baltic Sea cleaner (by reducing nitrogen by 30% per year and phosphorus by 52% per year); mitigate erosion and flooding; reduce the need for clearing out the stream; re-create a valuable fish community; promote biodiversity; promote co-operation between land owners and others; and achieve good water status (according to the Water Framework Directive).

The project consisted of different measures: *i*) levelling the banks and planting trees: digging out the banks allows water to flow more freely and reduces the risk of flooding and erosion; *ii*) caring for natural habitats and fish: some of the areas of fast-flowing water that were destroyed when clearing out the ditches in the watercourse can be re-created by placing stones and gravel in the stream and provide a positive environment for the insect life and the sea trout which wander up the stream; *iii*) re-meandering: by re-constructing a meandering watercourse, many valuable micro-habitats once destroyed to enhance agricultural production can be re-created and help reduce the flow of nutrients; *iv*) many watercourses in farming landscapes can be allowed to flood low-lying, surrounding areas, which then can become productive grazing areas and harbour valuable flora and fauna; *v*) creating wetlands: many animals and plants that have become rare in today's landscape thrive near the remaining healthy, natural wetlands that are drained for agriculture and valuable for recreation and outdoor activities; and *vi*) disseminating information: information about concrete actions of the project to improve the environment in and along the watercourse is presented along a two-kilometre long stretch of the Tullstorp Stream, west of Jordberga Castle.

Source: More information at *www.tullstorpsan.se.*

Skåne can also build on the strength of its business community and its clean-tech cluster by further encouraging sustainable public procurement in municipalities. In 2007, following close collaboration between the planning, environmental and business development departments within Region Skåne,

the Regional Growth Group identified clean-tech as a growth area and developed a strategy for clean-tech growth in five steps: increasing clean tech start-ups; raising awareness about the clean-tech market potential (e.g. following the crisis of large automobile groups in Sweden, opportunity to diversify for small companies); increasing competitiveness in existing clean-tech companies (seminars on business opportunities, platforms on the Baltic Sea region); boosting the growth of clean-tech companies growth in the Swedish market; and increasing exports. As noted in Chapter 2, the Sustainable Business Hub was established at the initiative of Region Skåne, the City of Malmö and regional companies. It focuses on clean-tech applications for smart and sustainable cities, such as district heating and cooling, recycling and waste and waste water management. The cluster operates on a triple helix model of collaboration between companies, research institutions and the public sector (e.g. the City of Malmo is actively promoting green buildings and biogas). Its core clients include municipalities and hospitals and help develop public procurement opportunities as a way of boosting the sector's competitiveness.

Skåne's strong commitment to increasing the share of renewable energy needs to maintain its momentum. Skåne aims to become a leading biogas region with a production of 3 terawatt hours (TWh) by 2020 compared with 0.3 TWh in the year 2008. While the region holds promising potential with its agriculture industry, a challenge will be to make new biogas installations profitable and to build an efficient distribution system to make biogas easily accessible to the gas market and meet the demands of individual consumers. Wind power has also been prioritised in national energy policies. The majority of all electricity produced from wind power plants in Sweden comes from Skåne. In 2009, Skåne hosted 283 wind power plants in possession of electricity certificates, of which 235 were on land and 48 at sea. There are currently wind power plants in 25 of Skåne's 33 municipalities and it is planned to introduce more in the other municipalities. However, opponents are voicing objections about damage to the landscape, the capacity of the electrical grid supply and the effective impact on local employment.

Maximising Skåne's potential to draw new income opportunities from renewable energy depends on a number of factors. Ongoing OECD work on the impact of renewable energy on job creation in rural economies (OECD, 2011a; 2011b) points to the following findings that could be particularly informative for policy makers in Skåne:

- **The number and the unit cost of new jobs created vary according to the activity in which the regional economy specialises.** While at the macro level the issue is net new jobs as evidenced by a rise in the participation rate or a fall in the structural

unemployment rate, at the local level the key question is how many jobs are associated with each specific project and how durable they are likely to be. Certain long-term jobs will be created in energy generation and operation and maintenance, whereas shorter term jobs will be created in construction, which can typically generate up to 30 jobs for each USD 1 million invested. Manufacturing is a long-term activity and has high job multipliers. Regions that are able to increase their specialisation in manufacturing activities related to renewable energy are thus likely to benefit from a large and lasting increase in employment. However, most OECD regions will find it very hard to establish and maintain competitiveness in this field, as a number of major players, including China, already have very strong positions.

- **The impact of renewable energy on rural development could be amplified by taking into account firms' backward and forward linkages rather than focusing solely on energy production.** Power generation is a capital-intensive activity and has few links to the local economy in itself. This is especially true for the forms of renewable generation that rely on free energy inputs, such as wind and sun. In direct terms of rural job creation, biomass and biofuels may well offer the best opportunities. Due to lock-in dynamics that may occur at the national level, some regions will be home to core high-value activities in the renewable energy supply chain, while others will host the low value-added parts, with less impact on employment creation and regional development.

- **The time scale over which national and local specialisation takes place is crucial.** The long-term goal of many governments is to use renewables to displace existing power generation from conventional sources, but the faster the displacement takes place, the greater the industry's annual installations and economic impact in terms of jobs and output, and thus the shorter the window of displacement becomes. Once displacement has taken place, there is only replacement, so the industry shrinks unless it can export.

- **An effective place-based approach to renewable energy policy requires a mix of co-ordinated top-down interventions and bottom-up initiatives integrated in a flexible policy framework.** Evaluation-based consultation among the different levels of government will generate information about the impact of renewable energy policy. Unintended distortion caused by renewable energy in rural economies could also be buffered by

mainstreaming rural issues across a broad policy framework encompassing sectoral interventions, including renewable energy.

- **Inclusive governance could improve citizen participation and social acceptance of renewable energy.** If local actors participate in policy making and contribute to policy evaluation with their feedback about the actual impact of interventions, it will be easier to correct distortions and identify local economic opportunities embedded within the supply chain. Intermediate institutions active in rural areas (some created by rural policy) can facilitate the deployment of small-scale, labour-intensive installations by facilitating collective action.

4.3. Improving the region's attractiveness

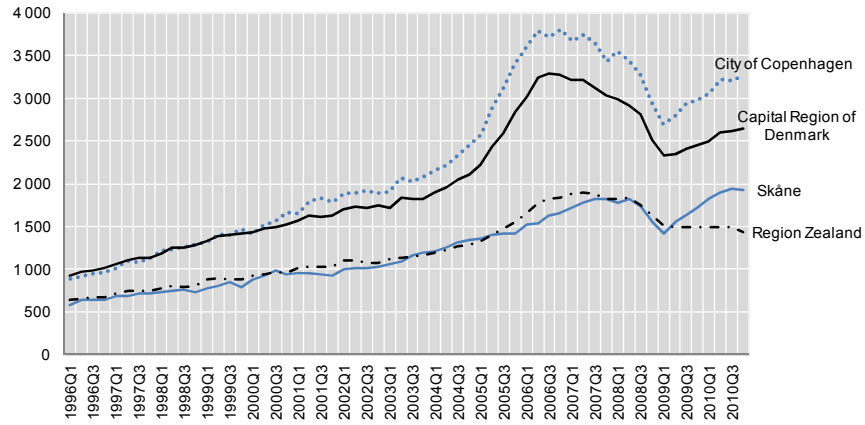
Skåne enjoys a wealth of natural assets – including geographic proximity to Copenhagen, a mix of urban and rural landscapes, etc. – but has further potential to improve quality of life and promote its attractiveness in a more proactive approach. There is a clear need to offer a well-integrated package of services and amenities to attract and retain skilled workers and their families. The following section focuses more specifically on housing, spatial planning, tourism, and health issues.

Procedures for planning housing and land use could be streamlined

Maintaining a well-functioning housing market in Skåne constitutes an important factor for the region's attractiveness, particularly in the context of the Öresund Region. Lower housing costs and the availability of better quality dwellings have long contributed to inflows from Denmark to Skåne. From 1997 to the end of 2003, there was generally an even price trend in Denmark and Sweden. But price increases accelerated sharply in Denmark from 2003 to 2006 (Figure 4.7). A main factor was the introduction in 2003 of interest-only mortgages with flexible interest rate adjustment at a time when short-term interest rates were historically low. Housing construction underwent a boom in 2004-2008 (Figure 4.8). From 2006 to 2009, prices fell in and around Copenhagen by up to 35%. Since then, prices and construction have stabilised. Housing prices in Skåne have become somewhat less attractive to Danish families. While a family would have paid a single-family house in Skåne only 47% of the price for an equivalent house in the Capital Region of Denmark in the second quarter of 2006, they had to pay 73% of the price in the fourth quarter of 2010.

Figure 4.7. **Price of single-family houses, 1991-2010**

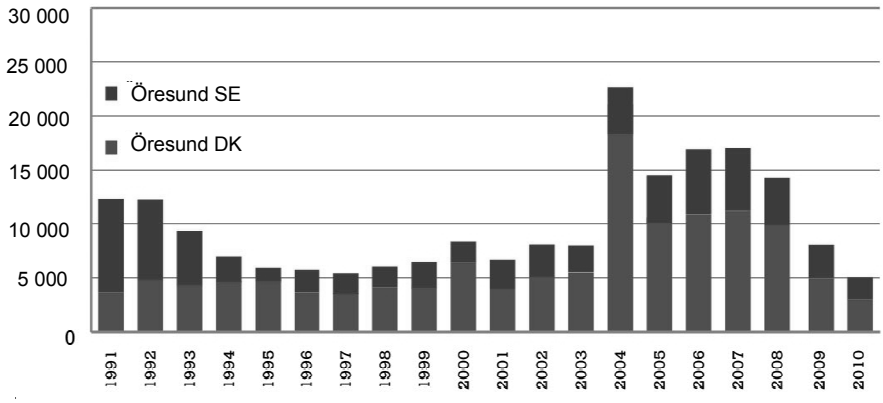
Average price per square metre in EUR



Source: TendensØresund.

Figure 4.8. **Construction of new housing in the Danish and Swedish sides of Öresund, 1991-2010**

Number of new dwellings



Source: TendensØresund.

While the structure of the housing market in Skåne is broadly similar to the national pattern (Table 4.5), housing construction has not kept pace with the population increase. Compared with other large Swedish municipalities, Malmö's rental market is most similar to that of Stockholm in terms of average rent and floor space (Figure 4.9). In the owner-occupied segment,

house prices in Greater Malmö remain lower than in Greater Stockholm and Greater Göteborg in absolute terms; they registered the strongest overall increase in the period 2000-2010 but were more severely hit by the crisis[8] (Figure 4.10). The increase of building permits relative to the increase of prices appears to have been slower in Greater Malmö than in the other large metropolitan regions (Figure 4.11). Population has increased faster than housing construction (Figure 4.12). In fact, in 2009 for example, only one apartment was built for every ten new people in Skåne (data from Structural Picture of Skåne). According to the CAB, 25 of Skåne's 33 municipalities indicated that they had a housing shortage. In more recent years, however, there have been signs of a renewed pick-up and the majority of new construction is taking place in the largest municipalities. According to the National Housing Board's indicators, housing construction soared significantly during the first half of 2010 in Greater Malmö (Burlöv, Eslöv, Höör, Kävlinge, Lomma, Lund, Malmö, Skurup, Staffanstorp, Svedala, Trelleborg, Vellinge), even though population growth abated during the same period.

Table 4.5. **Structure of the housing stock in Skåne**

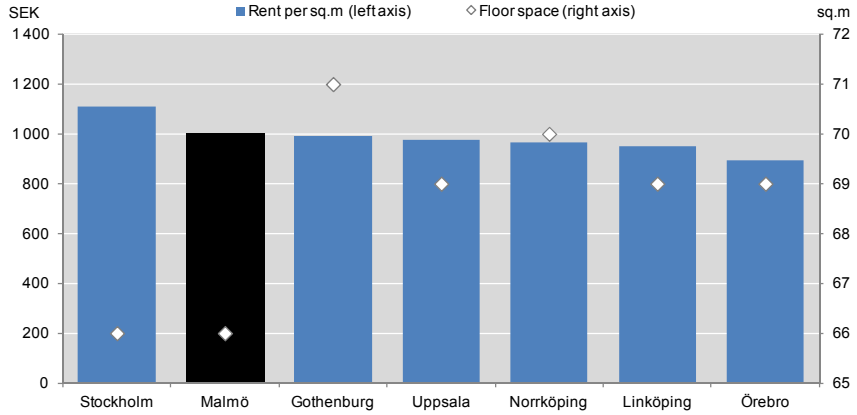
		Skåne	Sweden
Type of tenure	Rentals	43%	36%
	Tenant-owned (housing co-operatives or *bostadsrätter*)	19%	22%
	Owner-occupied (primarily in single-family houses)	38%	41%
Type of housing	Multi-dwelling buildings	54%	56%
	Single-family houses	46%	44%

Note: Data are the projected dwelling stock on 31 December 2010 as provided by Statistics Sweden on 30 May 2011, *www.scb.se/Pages/PressRelease_315236.aspx*.

Source: Based on data from Region Skåne and Statistics Sweden.

The restricted supply response in Skåne's housing market is closely linked with three main constraints at the national level: the rigidity of the rent regulation framework, the lack of fiscal incentives for municipalities to release new land for housing construction, and the complexity of land-use procedures.

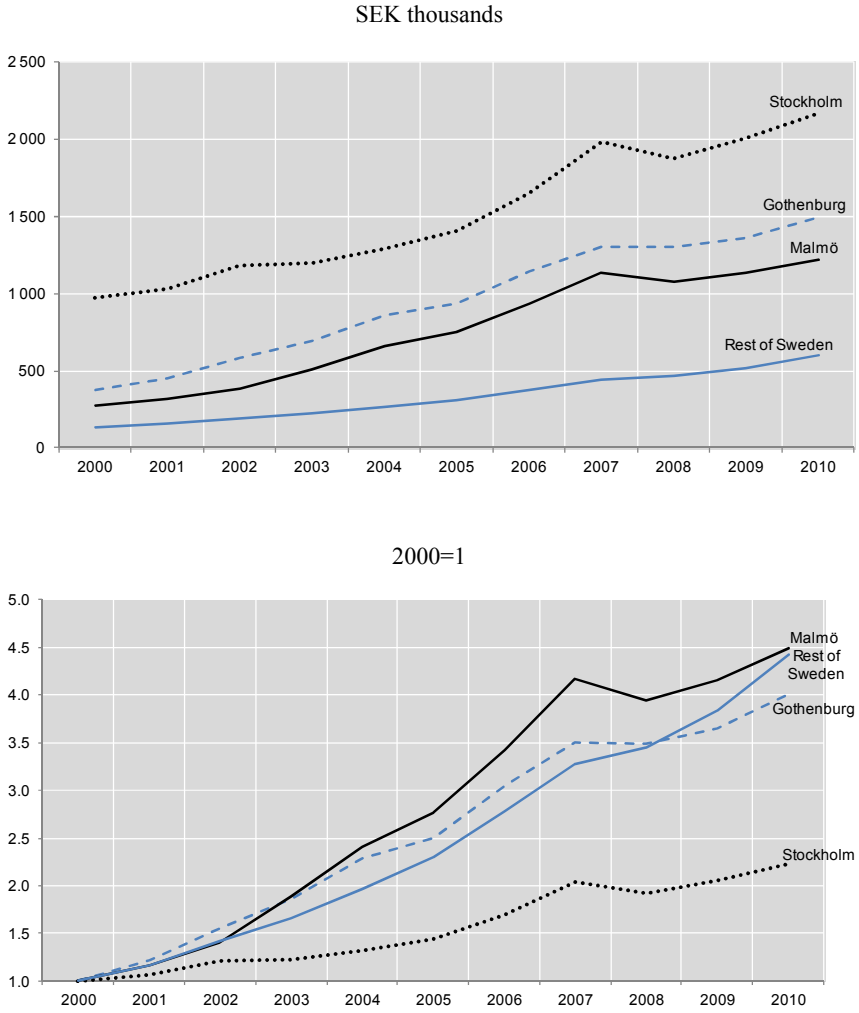
Figure 4.9. **Average rent and floor space in Sweden's largest municipalities, 2011**



Source: Based on data from Statistics Sweden.

First, rent setting remains highly regulated – although recent reforms have started adjusting rents closer to market levels. Rents are set by negotiations between non-profit municipal housing companies (Box 4.5) and local tenants' unions based on historical costs, taking into account the age composition of the housing stock in each individual housing company. Rents in the private rental sector used to be tied to those in the public sector as tenants had the right to let the appropriateness of their rent be determined by a public rent tribunal (rent committee), which decided on the basis of comparable public rent levels in the same municipality. Although rental regulations are in theory aimed at correcting market imperfections, conclusive empirical evidence that rent levels are lower in countries with stricter rent controls seems scarce among OECD countries reviewed (OECD, 2011c). Since 2006, private rents have been exempted from the public review process for newly constructed dwellings. In line with the recommendation of the OECD (2007), outright ownership of owner-occupied apartments was introduced for new apartment buildings in 2009, which is expected to enlarge the rental market.[9] New regulations, which entered into force in 2011, have also introduced market principles for municipal housing companies.

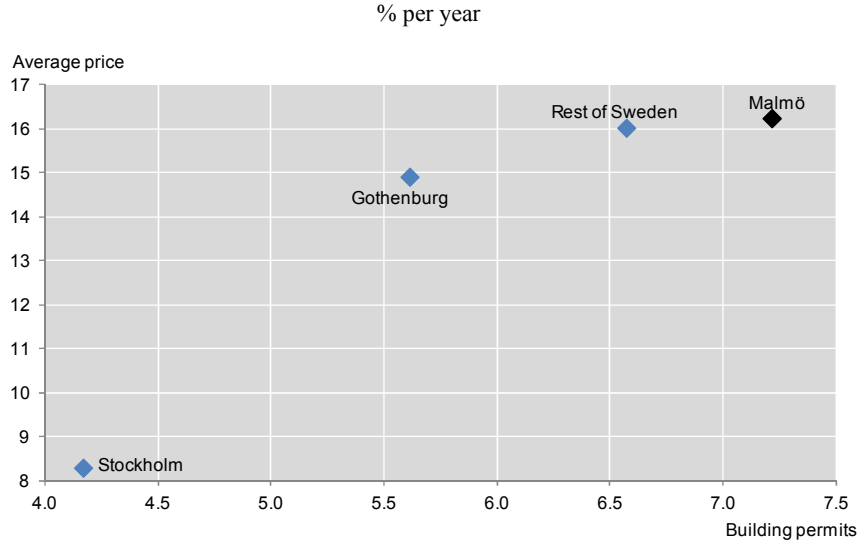
Figure 4.10. **Average purchase price, 2000-2010**



Note: Data refer to Greater Stockholm, Greater Göteborg, Greater Malmö, and Sweden excluding these three metropolitan regions.

Source: OECD calculations based on data from Statistics Sweden.

Figure 4.11. **Average annual growth rate of average price and building permits for new construction, 2000-2010**



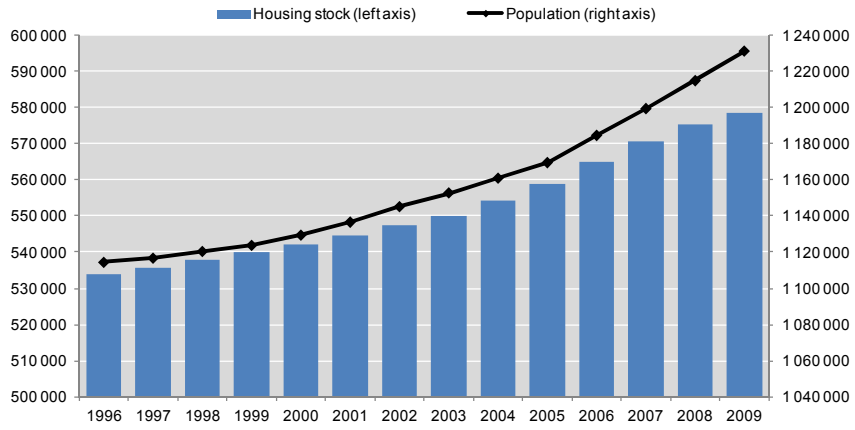
Note: Data refer to Greater Stockholm, Greater Göteborg, Greater Malmö, and Sweden excluding these three metropolitan regions.

Source: OECD calculations based on data from Statistics Sweden.

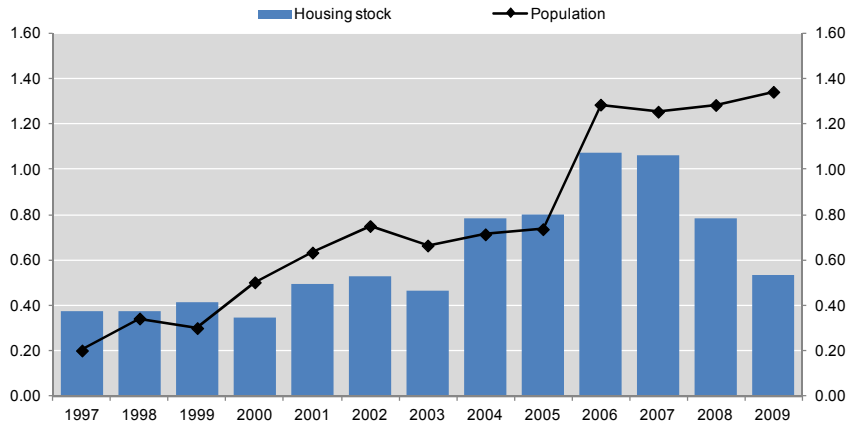
Second, municipalities have little incentive to release new land for housing construction. According to the Housing Provision Act (2000: 1 383), guidelines for housing supply must be ratified by the municipal council on at least one occasion during each term of office. According to the responses to the housing market questionnaire, only one-third of the municipalities in Skåne adopted guidelines in 2006-2010. Sweden is unusual in not having a municipal real estate tax which could strengthen incentives to parcel out land sites, and while Sweden used to levy a national real estate tax until the end of 2006, it was abolished in 2008 and replaced by a fixed municipal fee with a relatively low cap per dwelling (SEK 6 000 for single-family houses and SEK 1 200 per dwelling in multi-dwelling houses).[10] The impact of this reform was first felt by municipalities in 2011, as tax assessment of real estate lags by two years, and implied substantial tax cuts for owners of large and well-located houses – benefiting first and foremost those living in the Stockholm region. In this respect, OECD (2007; 2008) has suggested the introduction of a local property tax to be levied in proportion to home value, together with financial reforms (such as reverse mortgages).

Figure 4.12. **Housing stock and population in Skåne, 1996-2009**

In absolute terms



Year on year growth rate in %



Source: OECD calculations based on data from Statistics Sweden.

Third, complex procedures for land use hamper housing investment. As a large majority of new apartment construction requires changing the local development plan before building can commence, municipalities play an essential role in the building process. Prior to granting the building license, the municipality must set up a general plan (designating residential, commercial and industrial areas) and a detailed plan (defining the type of building). The process of developing or changing a detailed plan can be long

Box 4.5. **Municipal housing companies in Sweden**

In the post-war period, Sweden decided against the creation of a "poor-housing" sector and instead established public not-for-profit competitors on the rental market providing housing to a wide range of households. These public institutions were expected to make up for any construction shortfalls by private competitors and eventually were aimed at competing on the open market. The specific tenure of municipally owned housing was intended to play an important role in achieving the goals of housing policy after the war, namely to raise the average housing standard, to equalise the distribution of housing consumption, to restrict wealth transfers to private property owners and to counter housing segregation. While in the 1970s and 1980s, public construction was responsible for more than 75% of new rental dwellings, its importance has declined somewhat but still remains at around one half.

The public rental housing sector today consists of around 300 municipal housing companies (MHCs) which are owned by their respective municipalities. The rent level they aim to set is used to cover direct costs, but they are not managed on a strict non-profit-making objective as they provide a return for the capital invested by the municipalities (the share of the initial municipal equity capital, though, has declined significantly over time since many MHCs were created in the 1960s and have grown since then). There is a cap on what dividends a MHC should pay to the owner and the government decides what an appropriate rate of dividend is. Until further notice, this has been defined as the average interest on government bonds during the preceding year, plus 1%, calculated on the part of the owner's equity. MHCs aim for cost-covering for the company as a whole and thus they can set varying rents in different dwellings within their municipality. If an MHC has a rental income in excess of costs and dividends, these funds are reinvested in new construction. In addition, mortgage loans are taken up for which the municipality may provide a guarantee (against a fee).

Source: OECD (2007), *OECD Economic Surveys: Sweden 2007*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/eco_surveys-swe-2007-en*.

and the difficulty in navigating the process is often enhanced by a lack of procedural knowledge among developers. In addition, appealing against detailed building plans can take up to three years and thus makes a swift supply response to changes in demand quite difficult (McKinsey Global Institute, 2006). Potential conflicts between different sets of regulation also raise an issue. A developer is often squeezed between two very coercive laws: the Planning and Building Act and the Environmental Code. The time required for land-use planning is also estimated to be very long, especially

for small companies. However, a review of the Planning Law in 2011 has simplified and shortened the planning process.

While these constraints are mostly to be dealt with at the national level, concerns about farmland conversion and ethnic housing segregation may require specific attention at the regional level.

First, due to the high share and quality of its farmlands, Skåne faces some worries about losing valuable farmlands to construction. In most OECD countries, concerns with farmland conversion are five-fold: *i)* adverse environmental impacts on landscape provision, wildlife habitat and the preservation of ecosystems, stemming from the abandonment of farmland in some rural areas of high nature-value; *ii)* knock-on economic effects of the abandonment or long-term retirement of farmland influencing the socio-economic viability of such rural areas; *iii)* risks to the provision of farmland-based rural amenities, particularly in those rural areas where such amenities are instrumental for their sustainable development; *iv)* concern with the alternative uses of farmland and water in the encouragement of environmentally sustainable rural development and alternative sources of income and employment in rural areas; and *v)* urban sprawl in cases where farmland is lost to urban uses. One role of policies is therefore to narrow the divergence between privately and socially desirable outcomes (OECD, 2009a). Farmland conversion to non-agricultural uses is primarily an issue at the urban fringe or peri-urban zone, which faces pressure to convert farmland to higher value uses and where conversion is largely irreversible. As the opportunity costs of farmland can be high in this zone, policy tools to prevent conversion to urban use, spatially non-targeted agricultural policy and those forms of land-use policy that use payments, will be either inefficient or exceedingly expensive instruments (Table 4.6). Regulatory restrictions can obstruct farmland conversion, but they do not remove the pressure for it – they only impede it. Where there are strong economic incentives for conversion, there are also strong pressures to find ways to bend the intent of restrictions. It is therefore critical to consider housing supply in a strategic regional context, how can supply be strengthened without compromising the, sometimes conflicting, environmental goals and labour market realities. Considering that Skåne still has a relatively low population density compared to other OECD TL3 intermediate regions (113 vs. 200 inhabitants per square kilometre respectively), alternative ways to release land for housing construction (such as facilitating brownfield development) could also be considered.

Second, an ethnically segregated housing pattern is raising socio-economic concerns in Skåne as in many other metropolitan regions in Sweden and elsewhere. About 46% of Skåne's population live in neighbourhoods that have a homogeneous or very homogeneous Swedish population. At the same time, about 18% of the population lives in neighbourhoods with a high concentration of people born outside the OECD. And, in these areas, population is not only experiencing less marked increases but there is also a trend of substantial decline in the share of Swedish-born people and a growing concentration of people born outside the OECD area, enhancing this segregation. Ethnically segregated housing can affect how children grow up and their potential for development, as can be illustrated by data on unemployment among the children's parents in different residential districts. In neighbourhoods with a homogeneous Swedish population, just under 4% of the children had a parent who had been unemployed at some time during 2008. The equivalent proportion among children in areas with a very high concentration of visible minorities was just below 18%. Recent OECD data on 2009 PISA scores have also shown that the father's employment status has an important impact on children's reading ability (see Figure 1.42). Research suggests, however, that housing policies alone are often ineffective in solving ethnic housing segregation issues (Phillips and Harrison, 2010). Segregation must be tackled through co-ordinated policies on all fronts; it represents the result of a vicious circle of interaction between education outcomes, employment outcomes and housing opportunities. While residential segregation falls largely within the remit of municipalities, the region must provide a structural view to ensure that disparities in opportunities – in health, education, the labour market and housing – do not combine to compound one another.

Finally, promoting inter-municipal collaboration on housing construction could contribute to better matching supply and demand. Currently, 31 of Skåne's 33 municipalities have their own municipal housing company and these operate independently from each other. OECD (2007) has suggested that allowing municipal housing companies to operate beyond the limits of their own municipality could help put them on a more equal footing with private investors and introduce more rent differentiation to better reflect different levels of housing demand. However, such a reform is also likely to require a legislative overhaul at the national level. In a broader perspective, a way for Skåne to enact some degree of change within the current national legal framework is to devise concrete mechanisms to support strategic planning at the regional scale, as will be discussed in the following section.

Table 4.6. **Summary of the potential ability of policy to influence farmland conversion in OECD countries**

	Type of agricultural land		
	Urban fringe	Agricultural core zone	Far or extensive margin
Dimensions of agricultural policy and their spatial effects			
Traditional commodity programmes	Weak influence due to high land values and presence of other policies that are more powerful	Dominant influence on land use and farmers' decisions	Critical factor in setting the spatial location of the boundary, but high cost of production weakens benefits
Agri-environmental programmes to address environmental problems	Strongest effect because externalities are most visible	Weak effect in general, but can be important in some locations	Can be important in either maintaining or discouraging agriculture, depending on programme specifics
Programmes for the provision of farmland-based environmental services	Environmental services from agriculture may be more important than commodities, with direct experience more important than option value	Limited importance due to stronger role of commodity programmes	Environmental services from agriculture may be more important than commodities, with option value more important than direct experience
Rural development programmes	Generally not applicable because development is driven by urban proximity	May be important in areas where full-time farming is not common	Potentially important but difficult to implement, due to the remote nature of these regions
Dimensions of land-use policy and their spatial effects			
Restrictions on land conversion	Strong effects if enforced because land uses can be effectively frozen	No real impact because there is no pressure for major changes in use	Ineffective because land cannot be held in a loss-making activity
Financial incentives	In general, limited impact because the compensation cost for holding land in its current use is high	Little value in using this type of programme because land uses do not change	Can be effective on a local basis for specific high-value parcels

Source: OECD (2009), "Farmland conversion: the spatial dimension of agricultural and land-use policies", OECD, Paris, *www.oecd.org/dataoecd/34/30/44111720.pdf*.

Long-term strategic planning needs to be enhanced at the regional scale

To manage future growth, the municipalities of Skåne, Region Skåne and the County Administrative Board, need to develop and work within a common framework of long-term strategic planning at the regional scale bringing together the infrastructure, environment and housing goals. In the absence of a regional spatial plan in practice in Sweden, an innovative initiative called the Structural Picture of Skåne (*Strukturbild för Skåne*) has been put in place. This initiative offers an excellent example of collaborative planning between the region and municipalities. In 2005, Region Skåne started to develop a database for physical planning as a joint knowledge bank comprising data and maps on individual municipalities and Skåne as a whole. The characteristics that contributed to the success of this initiative, which could offer a source of inspiration for other OECD regions, include the following:

- **Take the time to build a progressive process of inclusive dialogue.** The process began with small steps with the primary objective of launching and promoting inclusive dialogue between the region and municipalities. Various forms of dialogue such as workshops, roundtables and conferences were used to engage all municipalities. The meetings involved a mix of different stakeholders (e.g. civil servants and politicians) or sometimes deliberately separated them into groups to promote straightforward discussions. A political committee composed of the Regional Growth Committee (three people) and representatives from municipalities oversees the process. The Federation of Municipalities of Skåne has also been involved and supportive, and will now be part of the committee.
- **Convey clear evidence-based policy messages with the collected data.** For example, maps on population growth were used to reinforce the positive message that Skåne was an attractive region where people were eager to live. A deliberate choice was made not to delineate municipal boundaries too clearly and to focus on the bigger regional picture instead. Other figures highlighted the lack of new housing construction compared with the needs, and served as a basis to identify potential reasons (including conflicts between different sets of regulations and an unclear distribution of responsibilities).

- **Implement a continuous stream of feedback.** During consultations, feedback from municipalities suggested that the project offered a useful arena of information not available anywhere else, but there had been too many reports and materials as opposed to concrete changes in working methods and tangible outcomes. Throughout the process, Region Skåne has asked municipalities what their primary needs are and what kind of focus they would like, keeping in mind that the most important value of the project is to work together with municipalities. This step-by-step process has been fruitful. According to the political dialogue conducted from May to November 2011, all stakeholders agreed to take the process further.

- **Move from common knowledge to common strategies.** After starting with a common knowledge base, the project is now moving towards elaborating common strategies. Region Skåne will continue to produce facts and figures reports but also more materials for common strategies in May 2012, and results in 2013 will be included in the new regional development programme. Based on the feedback from municipalities, Region Skåne has gained more confidence about asserting an evidence-based opinion.

- **Bridge the gap between municipal plans and the regional development programme.** Municipalities in Sweden have a planning monopoly and are required by law to prepare a municipal comprehensive plan, which is not legally binding but specifies land use in terms of housing areas, infrastructure, recreational areas, areas of national interest, etc. The new Planning and Building Act from 2 May 2011 includes provisions to better link municipal comprehensive plans with regional development programmes, but its binding power remains limited in practice. Moreover, the regional development programme offers an umbrella structure but tends to lack the physical planning perspective. Structural Picture is trying to bridge this gap step by step. Municipalities use Structural Picture in their comprehensive municipal plans.

- **Break inter-municipal competition and highlight areas for collaboration.** A main advantage of Structural Picture was to help curb competition among municipalities by clarifying the image and benefits of a common larger region. For example, some materials suggested that the amount of funding received from the central government for infrastructure might have been disappointing because municipalities had not managed to prioritise their needs whereas the outcome might have been better if a Skåne "package"

had been put forward (as it was done in Stockholm and Västra Götaland for example). The interpretation of some data remains controversial and sometimes triggered intense discussions among municipalities, such as the scenario of seven regional centres in Skåne. According to the three criteria selected (a population of more than 14 000 inhabitants; an economic base of more than 200 industrial categories; and a positive commuting balance), Skåne would have seven regional centres in Skåne (Malmö, Lund, Helsingborg, Landskrona, Kristianstad, Hässleholm and Ystad). Region Skåne has focused on identifying potential scenarios for the future (e.g. sprawl, polycentric, monocentric, higher education).

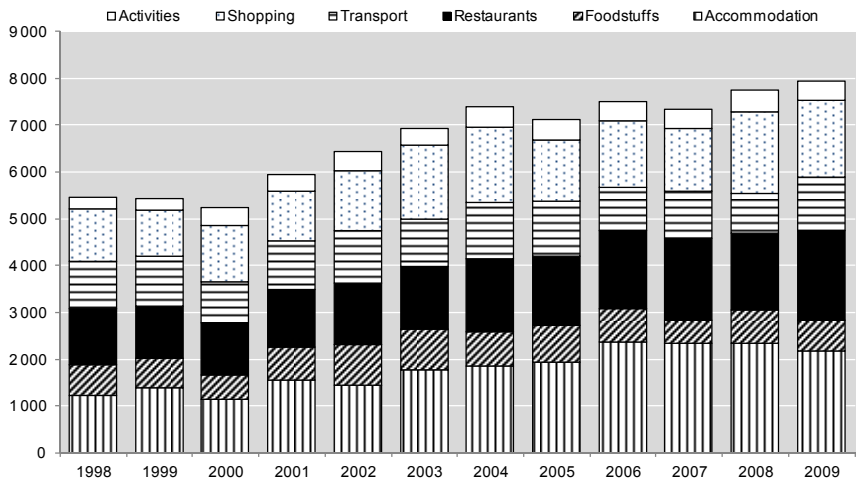
Building on this positive experience, further forms of regional governance partnerships could be developed by strengthening the content and enforcement tools of the regional development programme (RUP). Region Skåne is currently not a regional planning authority, and as such it has no decision-making power. However, there has been progress in the direction of co-ordinated regional planning and under the aegis of the Planning and Building Act an important link between the comprehensive plans of the municipalities and the regional development programme has developed. Through the dialogue that has taken place in Skåne over the last years between the municipalities and Region Skåne about physical planning, there is an important link established and this link will be expanded. Currently, the RUP remains a broad strategic document without clear visibility on related financing, no direct connection with EU Structural Funds programmes and no enforcement mechanisms, as underlined previously by OECD (2010b; 2012a). Defining more concrete and measurable objectives by theme, both at a regional scale and broken down by municipality, together with a set of evaluation indicators and a timeline defined collectively, could help Skåne promote regional development in a more effective way. The CAB could also play an important role in steering inter-municipal dialogue. For example, although physical planning is the responsibility of the municipalities, municipal plans must be submitted to the CAB for advice, supervision, oversight (and also, potentially, rejection).[11] The CAB organised dialogues with all municipalities in 2009 and 2010 to address housing responsibility, social planning, and public health in a more holistic manner. Tapping this experience could contribute to making the RUP a more pragmatic instrument for regional development. It is, furthermore, important that concrete and measurable objectives are well connected to the activities of, and financing from, EU funds, government agencies, Region Skåne, municipalities, businesses and NGOs.

While some niches of tourism might offer an opportunity to improve Skåne's attractiveness…

Tourism represents a relatively minor sector of specialisation in Skåne. Skåne has generally enjoyed over 9% of total inbound tourism in Sweden during the past decade (up to around 10% in 1998-2001). In 2009, however, turnover increased less in Skåne (2.3%) than the national average (4.1%), linked to a fall in accommodation turnover (Figure 4.13). Average turnover per employee for all sectors related to tourism is low, with just under SEK 1.2 million or lower in particularly labour-intensive sectors (SEK 981 000 for accommodation and SEK 861 000 for restaurants in 2009) (Figure 4.14).

Figure 4.13. **Skåne's turnover in tourism by category, 1998-2009**

SEK millions



Source: SCR/SCB as quoted in the "Background report" by the Skåne local team.

Tourism also constitutes a source of tax revenues for municipalities and the region. Tax revenues can be divided into two parts (Figure 4.15). Direct tax revenues correspond to the tax revenue that comes from employment in the companies directly affected by the visitor's spending. Indirect tax revenues relate to other businesses affected (such as the laundry business that washes hotel linen). An increase in tax revenue for municipalities, however, entails a corresponding reduction in tax equalisation contributions. That said, it is important to note that increased employment in tourism not only generates more municipal tax revenues, it can also contribute to

reducing expenditures in labour market measures and various forms of assistance programmes and allowances. Increased employment can also encourage inward migration or impede outward migration, thereby increasing the tax base and reducing the pressure on municipal budgets.

Figure 4.14. **Turnover and employment in tourism in Skåne, 2009**

Turnover in SEK millions and employment in number of full-year employees

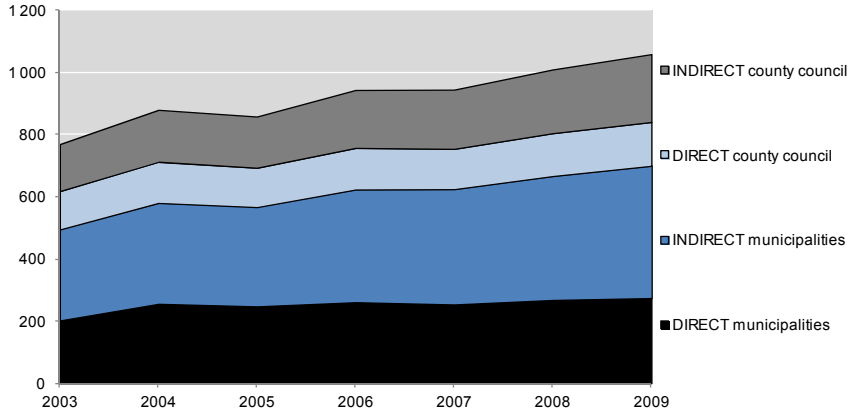
Source: Statistics Sweden and Resurs AB as quoted in the "Background report" by the Skåne local team.

Building on its natural and cultural assets, Skåne could exploit a few well-chosen opportunities for eco-tourism, which should not rely heavily on limited public funds but can contribute to raising Skåne's attractiveness as a place to live and work. Skåne offers some successful examples of organic farm tourism that have a regional and sometimes national reach (Box 4.6). This is in line with the trend in many regions in OECD countries that have developed rural amenity markets. At the same time, such projects have also benefited from public support under the Rural Development Programme and will increasingly need to enhance their capacity to remain sustainable without (or with less) public funds over the long run. Most importantly, both the return on investment of public support to tourism and the potential contribution of tourism expansion to Skåne's economy are expected to remain relatively marginal considering the region's lack of absolute advantage and the dominance of seasonal, low-skilled and low-wage jobs in the industry. While tourism is unlikely to become a major strength of Skåne's regional economy, the following section suggests that a pragmatic

approach could be to focus public support on exploiting Skåne's exportable local assets (such as food) to improve the region's brand and thereby its trade capacity.

Figure 4.15. **Tax revenues from tourism in Skåne, 2003-2009**

SEK millions



Source: Statistics Sweden as quoted in the "Background report" by the Skåne local team.

…Skåne could capitalise more strongly on its brand as a "healthy region"

A promising avenue would be to brand Skåne as a "healthy region", particularly by more fully exploiting its strength in food. Skåne has a long tradition of farming and food production. Today, the region accounts for almost half the annual turnover of the Swedish food industry. In 2007, the Skåne food sector's core industries employed approximately 25 000 people, i.e. about 21% of the Swedish total; broadly defined, it employs about 100 000 people (Jönsson et al., 2012). Skåne's local cuisine and beverages constitute a distinctive local asset. For example, Skåne is known for its many variants of pickled herring, special eel feasts along the coast in September, and flavoured schnapps. The world-renowned vodka Absolut is produced at the distillery in Åhus in eastern Skåne, and Kivik in eastern Skåne produces high-quality apple juice and cider in its famous apple orchards. Another characteristic of Skåne is the structure of food distribution. While most of the inns in northern Sweden were forced out of business at the end of the 19th century, in Skåne they have maintained their

Box 4.6. An example of organic farm tourism and cultural tourism in Skåne: the Wanås Foundation

Wanås is located in Östra Göinge, in Skåne's north-eastern green corner, approximately 20 kilometres north of Kristianstad. The Wanås estate consists of a medieval castle, an organic farm, and a sculpture park as well as indoor exhibition spaces. Wanås Konst is run by the Wanås Foundation which is a non-profit foundation located in the south of Sweden. There are currently 725 hectares of arable land and 250 hectares of pasture. With an annual production of more than 3 million litres, Wanås is Skåne's largest producer of organic milk, much of which is supplied to schools throughout the region. In 2000, the Wanås farm was KRAV-certified for organic production. The Wanås Foundation has also decided to become a member of Svanenklubben, the environmental certification available to Swedish cultural institutions. As a member, the foundation commits to ecologically sustainable purchases and habits. The Wanås park is open all year and offers guided tours, workshops and visits to the farm. From May to October, special educational programmes are offered, with a focus on the annual exhibition. Throughout the year many children and teenagers visit Wanås and several Creative School projects have been carried out. Since 1987, Wanås presents international contemporary art with a focus on sculpture and installations, most of which are made by the artists specifically for the foundation. The permanent art collection consists of nearly 50 works.

Wanås illustrates the following measures from the Rural Development Programme 2007-2013:

- Axis 1: discussion around biogas initiatives, guidance for organic farming;
- Axis 2: compensation for organic management, compensation for pasture management and wetland management;
- Axis 3: investment support for the art gallery (in the previous programming period 2000-2006);
- Axis 4: LEADER project for developing tourism in Wanås and its surroundings. (Since 2009, the Wanås Foundation is the project manager of "Stay in ESS", a rural development project within the EU's LEADER initiative. The project aims to build networks between local participants and encourage visitors to discover the potential of the region. The LEADER district consists of Östra Göinge, Bromölla, Osby and Kristianstad municipalities.)

Source: Adapted from *www.wanas.se/lang/en*.

status as culinary havens (e.g. Skanör and Vellinge in the south of Malmö, Hammenhög and Brösarp in eastern Skåne, Spången in Röstånga in the centre). There are also many food markets in Skåne, including the herring market in Skanör, the asparagus festival in Skillinge, Potato Day in Båstad and the apple market in Kivik. A final characteristic of Skåne could also be the fact that the region's multiculturalism is visible in the cosmopolitanism of its food industry. Grocery stores are well stocked with spices from all over the world, and cook books publish recipes from many different countries. One of Malmö's tourist attractions is Matkaravan, a food caravan tour where food fans are guided around grocery shops owned by Greeks, Libyans, Persians, Chinese and people of other nationalities, in order to encourage Swedes to taste international cuisine. Taking stock of those features unique to Skåne's food market could be the first step towards establishing a regional food branding strategy.

A major building block for Skåne's healthy region strategy is its innovative governance of the food community. Initially established in 1994 by the food business community as a flexible triple helix organisation and funded in 2003 as part of Sweden's regional innovation programme VINNVÄXT, the Skåne Food Innovation Network (SFIN) aims to disseminate knowledge and promote new types of co-operation in the region's food culture (see Chapter 2 for more detailed discussion of innovation aspects). Through extensive communication, public opinion surveys, theme days and seminars aimed at both specialists and a wider audience, SFIN shows how positive food experiences can contribute to health and social well-being. In 2010, the Skåne Food Innovation Network took over a project entitled Taste Skåne. With a budget of SEK 20 million from the EU Rural Development Programme and Region Skåne, the objective of Taste Skåne is to develop culinary entrepreneurship and tourism, create more sales outlets and improve transport logistics for locally produced food, both in Sweden and abroad. Taste Skåne is based on the vision that people should not need to drive long distances to find locally produced high-quality ingredients and foods. The Retailers Network of the SFIN is currently working on developing sales of local produce in ordinary food stores, notably by training shop personnel.

Existing successful examples that target specific parts of the Skåne population suggest promising potential for further development. At the crossroads of food, health, and the silver economy, an interesting project called "Joy of Food for the Elderly" has focused on improving the mealtimes of the elderly through simple ways without increasing costs (Box 4.7). The following factors of success in this project could offer a valuable source of inspiration for many other OECD countries and regions interested in developing similar initiatives:

- **Harness the holistic concept of food and its impact on personal and social well-being.** Food is linked to powerful personal feelings about health, life expectancy and quality of life. The concept of mealtime conveys a completely innovative signal which reaches far beyond nutrition itself and extends to social networking, mutual trust and a feeling of belonging to the local community.

- **Voluntarily create time and space for interdisciplinary knowledge sharing.** The Skåne Food Innovation Network is creating arenas for meetings between people who would not normally have an opportunity to work together. In the case of the Joy of Food for the Elderly project, one such meeting allowed care providers to meet researchers and product developers from different food companies, and resulted over time in roughly a dozen concrete projects in care services.

- **Find the relevant personality who will stir change and motivation.** Contrary to what could have been expected, the main problem was not funding but the lack of time, knowledge and commitment. It took a passionate individual to make both the managerial staff and the workforce enthusiastic about the idea of better quality mealtimes and to spread it among the rest of the personnel.

- **Encourage spill-over effects from the project.** A quick guide based on the experience from the Joy of Food for the Elderly project is in the process of being produced. The objective of the guide is to demonstrate the gains to be made, make it a simple matter to create better mealtimes and to work as a source of inspiration. This is a key step to maintain the dynamics of knowledge and commitment especially after the specific project and related funding are over.

Another axis to be integrated in Skåne's healthy region strategy could be the development of bicycle use. Region Skåne's Environmental Strategic Programme 2011-2016 already includes the objective of working with the municipalities on producing a plan for how Skåne can become a leading bicycle region. The idea is to build more and safer bicycle routes and bicycle parking sites adjoining commuter train stations in order to improve public health by reducing air contaminants and noise disturbances due to road traffic. A regional bicycle development strategy could also contribute to further cross-border integration, taking advantage of the clearly marked national, regional and local bicycle paths on both sides of the Öresund. Bicycles are allowed on commuter trains, although safe, covered bicycle parking needs to be expanded. The City of Copenhagen is also actively

Box 4.7. **Using local food to improve health and well-being in Skåne: the Joy of Food for the Elderly project**

The Skåne Food Innovation Network project "Joy of Food for the Elderly" aims at improving mealtimes in elderly care centres in three test municipalities, Malmö, Sjöbo and Vellinge. For many elderly, mealtimes are the highlight of the day and provide a unique possibility for social get-togethers. For care providers, mealtimes offer a possibility to improve both health and well-being. In order to improve the quality and impact of mealtimes, greater knowledge and new thinking are required on the part of both the cooks and those who meet the elderly every day. The project began by plotting the mealtime situation in ten municipalities in Skåne. It looked at how the food was cooked, the environment in which it was served, the skills of the personnel, the raw materials employed, etc. Based on this, areas with room for improvement were identified and local authorities were invited for a round of discussions. Over a three-month period, the project leader spent five days with personnel responsible for the mealtimes. Following a holistic approach, a wide range of changes was introduced, ranging from using more fresh raw materials, new recipes and skilful table laying, to adjusting timetables so that the staff would have more time than before to join the elderly during mealtimes.

Source: Skåne Food Innovation Network (2010), *Annual Report 2010*, Skåne Food Innovation Network, *www.livsmedelsakademin.se*.

working on additional cycling tracks, bicycle parking, and safety improvements, which transcend the commitments of even the most ambitious cycle-friendly cities. Private developers could be encouraged to help improve cycling infrastructure by evidence illustrating how the latter influence property appreciation, as a growing amount of research shows that homes located near or adjacent to bike trails command high selling prices (OECD, 2009b). Promoting cycling could also be coupled with obesity prevention campaigns, which would help tackle the two policy objectives of bicycle tourism and public health at the same time. According to the 2008 Public Health Survey, the share of severely overweight population in Skåne (57% among men and 41% among women) is higher than the national average and increased during the entire period 2000-2008. Public health professionals should be more systematically engaged in urban planning through serving on urban planning boards, participating in zoning decisions, and incorporating health into urban planning decision making. The example of cross-border bicycling in Prague-Vienna also shows the importance of building concrete collaboration among local authorities, civic groups, cultural associations, and small business owners (Box 4.8).

Box 4.8. An example of cross border bicycling: the Prague-Vienna Greenways

The Prague-Vienna Greenways consist of an extensive hiking and bicycling network of about 400 kilometres between the two capital cities of Prague and Vienna. In 2001, local civic groups, cultural associations, small business owners and town and village governments formed the Prague-Vienna Greenways Association. More than 30 members now co-operate on local projects, organising events and developing sustainable tourism. The rich flora and fauna along the greenways is as attractive as its cultural sites. The ponds in Ledenice are famous for their rare water birds; the mountains around Palava offer rare alpine flora; and the National Park Podyji displays rare landscapes of forest, arid grasslands along the steep slopes of the Dyje River, and heath. The main conservation goal of the project is to maintain the rich natural and cultural heritage of the region, and to develop sustainable tourism. Towards that goal, opportunities for nature experiences are promoted in travel guides and maps designed to set positive stimuli for regional development. The factors of success have been the efficient use of already existing structures; the promotion of an "active" lifestyle, not only for tourism but also for recreation in general; the use of trans-boundary greenways as a special attraction for tourists.

Source: www.pragueviennagreenways.org.

While many elements that are already in place could be brought together within a comprehensive healthy region strategy, the following lines of action could also help Skåne move forward:

- **Further develop public procurement in health.** As in the case of green public procurement, the public sector can play a key role as the driving force in health. A project called "Food for the Elderly – Innovative Procurement" was funded by the national innovation agency VINNOVA to improve procurement management strategy skills within the framework of the Swedish Public Procurement Act. In particular, public procurement rules in food currently seem to favour price and quantity factors rather than quality factors. Rules could be reviewed in order to allow greater freedom to choose from smaller local suppliers. A certain share of raw materials could then be purchased individually by the catering facilities themselves.

- **Explore and disseminate knowledge on the "win-win" benefits to be gained from multi-disciplinary collaboration.** In the case of food for the elderly, care providers have healthier and livelier "clients", the food industry finds more outlets for value-added products, and the elderly enjoy dignified mealtime experiences. A book entitled *Skåne, Food and the Media* has recently been published as the result of inter-disciplinary food research aimed at increasing knowledge about the representation by the media of food and drink and their links between food and place. The Skåne Food Researchers Network today involves more than 140 researchers, ranging from the liberal arts and business administration to food chemistry and medicine. Similar cross-fertilisation of knowledge across different sets of sectors could help trigger "unexpected combinations" and entrepreneurial discovery processes in line with Skåne's smart specialisation strategy (discussed earlier in Chapter 2).

- **Pool together financial and institutional capacity linked with health and regional development.** Region Skåne has committed to working on establishing a closer link between public health and regional development in its next regional development programme. Health needs to be considered as a cross-cutting area interlinked with other key aspects of the region's sustainability. For example, keeping a healthy labour force is a major investment in the region's competitiveness, and tackling health challenges among immigrants provides a key tool for improving participation and productivity in the regional labour market. Ongoing work on regional growth could capitalise on the work of the department of public health, which was endowed with a relatively modest budget of around SEK 39 million for 2011 but enjoys strong collaboration with the network of social economy (e.g. about one-third of the budget is paid directly to other organisations and NGOs for reports and surveys). The Public Health Strategy for Skåne 2010-2013 focuses on four core themes: health promotion, psycho-social health, risk behaviour, empowerment and participation. A major step forward has also been taken with the International Innovation Strategy for Skåne 2012-2020, which focuses on personal health along with sustainable cities as key innovation arenas (see Chapter 2).

Conclusion

Building an attractive, vibrant and innovative environment for workers and families in Skåne certainly requires a multi-dimensional development strategy, but it might sometimes mislead policy makers into dispersing scarce public resources across an excessive range of well-intentioned projects that are not founded on the region's comparative advantages and are thus likely to yield only little economic return. Defining a clear overarching vision of what Skåne aims to achieve in its "league" of competing regions can help keep objectives of different programmes aligned. In particular, a "smart and healthy" region strategy draws on Skåne's various types of place-based assets – ranging from natural amenities (such as farmlands) to accumulated knowledge (such as innovation in the food sector). Further investment in developing this regional brand based on Skåne's core strengths while tackling its challenges as discussed in the various chapters of the present review could contribute to clearly differentiating Skåne from other regions (Figure 0.1). In meeting this goal, Skåne faces two immediate tasks. First, it needs to shift from problem-oriented, broad strategic documents towards positive, concrete action plans endowed with a measurable outcomes, financial resources, and progress tracking tools. Second, it needs to bolster the collective ownership of the regional development strategy by reinforcing inter-municipal collaboration, co-ordination with the CAB, and involving more systematically the private sector and the social economy. By exploiting its pool of innovative ideas, experience in inclusive policy making and trust among actors to make reforms happen, Skåne will optimise its capacity to remain among the OECD's best-performing regions over the long term.

Table 4.7. **Summary of key challenges and recommendations on policies for building a high-quality living environment in Skåne**

Key challenges	Key recommendations
Lack of transport infrastructure capacity in the south-west, lack of quality in the north-west	To rethink the intermodal balance by reducing congestion on the road network, expanding the railway network and possibly further developing public transport after well-informed comparative analysis
Bottlenecks possibly due to combined use of the Öresund Bridge for freight and passenger traffic	To anticipate the impact of the opening of Fehmarnbelt fixed link
Tensions between agricultural/rural and environmental policy objectives	– To improve inter-governmental collaboration with a clearer view of concrete overall objectives for contiguous areas rather than regulations on individual farms – To disseminate information about and promote bottom-up initiatives on economically profitable environmental investment projects
Need to reduce pollution linked with road traffic	To continue promoting green transport solutions through green public procurement and building on the strengths of the clean-tech cluster
Need to promote sustainable energy use	To consider conditions to maximise the positive impact of renewable energy on job creation and local economy
Housing shortage and segregation in some areas due to the rigidities of the housing market, lack of incentives for municipalities to issue new land for construction and complex planning process	To densify urban areas and encourage municipal housing companies to collaborate across boundaries
Lack of coherent strategic planning at the regional scale	To use knowledge accumulated through Structural Picture as a basis to build common strategies and concrete action plans
Need to find a distinctive approach to promote Skåne's attractiveness	– To capitalise on Skåne's brand as a "healthy region", using specific local assets (e.g. food) – To develop public procurement in health to allow even smaller local producers to compete – To encourage and explore multi-disciplinary research – To pool together financial and institutional resources linked with health and regional development

Notes

1. The European Platform on Mobility Management (EPOMM) is an international non-profit network of European ministries that are responsible for promoting sustainable transport and managing the demand for car use by changing travellers' attitudes and behaviour.
2. The association of European Metropolitan Transport Authorities (EMTA) brings together the public authorities responsible for planning, co-ordinating and funding the public transport systems of 30 of the largest European metropolitan areas and Montreal (Canada).
3. Part of these apparent differences may, of course, be attributed to differences in noise modelling or survey methods.
4. Today, *Skånetrafikens'* more popular routes (i.e. Malmö-Lund, etc.) "subsidise" the traffic in more remote areas. The Transport Act has prompted concern in some quarters that free competition might prevent such cross-subsidisation that enables the provision of these more expensive routes.
5. However, a caveat applies here: Region Skåne and municipalities also contribute to national infrastructure, which makes a precise estimate difficult. For example, Region Skåne and municipalities will contribute a total of SEK 3.31 billion to the government infrastructure fund.
6. Sustainable transport, sustainable city development, attractive and accessible nature, sustainable energy systems, sea and water, climate neutrality, sustainable agriculture, forestry and production of provisions.
7. For example, under the "water protective zone" a farmer may receive financial support by refraining from cultivating land adjacent to water (to protect the water from pesticides, etc.). Yet, in order to obtain the financial support (from the agricultural side), the farmer is obliged to clear the zone of any bushes and trees that may provide shade critical to the protection of the ecosystem.
8. The most recent data available (November 2011-January 2012), however, show that house prices are falling in 17 out of 21 counties compared with the previous 3-month period, and Greater Malmö has registered the

largest decrease in Sweden (-8%) after Blekinge (-9%) compared with the previous year. See Statistics Sweden (2012).

9. Prior to that time, buyers in the market for an apartment could only purchase shares in a co-operative association, which then gave them the right to live in a particular dwelling. The association maintained actual ownership of the apartment, as well as the building's common spaces, grounds, and physical structure. This form of ownership allows the housing association to restrict the rights of the tenant-owners to modify or sublet their dwelling.

10. With the restriction that the fee cannot exceed what the national real estate tax would have been under the previous system.

11. The CAB has the mandate to cancel a municipal comprehensive plan if it believes the plan risks endangering the national interests of health, safety and security, infrastructure, environment, or the environmental or cultural assets.

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(04 2012 08 1 P) ISBN 978-92-64-17750-5 – No. 60147 2012