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Demographic Change in the Netherlands: Strategies for resilient labour markets



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FOREWORD

Together with the provinces of Groningen, Drenthe, Limburg and Zeeland, the Dutch Ministry of the Interior and Kingdom Relations sought the assistance of the Organisation for Economic Co-operation and Development (OECD) regarding the labour market situation in areas affected by population decline. The OECD LEED Programme, in collaboration with local, national and international experts, carried out preliminary studies to this end. Many suggestions and ideas were also obtained during workshops and regional field visits held with local employers, trade unions, educational institutions and other public authorities. This report presents the results of these studies.

Europe is on the verge of major demographic change, and those countries impacted will have to respond to the challenges associated with these changes. The Netherlands is also predicted to undergo extensive population ageing and population decline during the coming decades, with some regions already experiencing population shrinkage. In 2009, this awareness resulted in the creation of an 'Intergovernmental Action Programme on Population Decline'. The central government, provinces and municipalities in areas experiencing population decline are working together as part of this programme to address the consequences of demographic transition. In 2011, 'predicted regions', or areas in which a decline in population is expected within a decade, were also included in the programme.

The effects of population decline are most visible in the housing and facilities sectors and therefore additional attention has been paid to these areas. Urbanisation plans have been reduced, residential development plans have been tailored towards a smaller and older population, and plans have been formulated to adapt facilities such as schools, shopping centres and care services in order to ensure quality services remain readily accessible to all ages. The question, however, is how a regional economy can develop under the influence of an ageing and declining population, and a dwindling working population. There appears to be an unfortunate self-reinforcing effect. Talented young people in particular are moving away from areas affected by population decline, due to the lack of labour market prospects. A large part of the population, however, remains - even though they may be lacking the knowledge and skills needed by local businesses, which puts the viability of these businesses under pressure. Such a situation is referred to as a 'labour market mismatch'.

This report indicates that there is no single solution to this mismatch, but rather that simultaneous attention must be paid to: the needs of older workers in the labour market; provision of knowledge and skills necessary to the labour force; the formation of partnerships between businesses, government and knowledge institutes; and specific regional aspects that can impact on local labour markets.

I am certain that this report, particularly the regional workshops and their resulting initiatives, will contribute to a healthy labour market and a vital economy in areas that are both currently and predicted to be affected by population decline in the Netherlands.

Mark Frequin

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EXECUTIVE SUMMARY

Demographic transition is having a significant impact on the economies of industrialised nations. Decreasing fertility and increasing life expectancy are reshaping the age structure of populations; older age groups are increasing, whilst younger groups are in decline. Demographic transition has consequences for labour markets, with concerns about ageing of the labour force and an increase in old age dependency ratios leading to efforts by national policy makers to make social welfare systems sustainable by pushing out the age limit for final withdrawal of workers from the labour market. As a consequence:

- Labour market issues in declining regions are essentially not different from national issues. Therefore, national strategies should also be utilised in declining regions.
- Nevertheless, declining regions are often frontrunners in the demand for new policies, due to being at a more advanced stage in the ageing process and the relatively higher vulnerability of their populations.
- Moreover, the regional and local context demands tailor-made solutions for each region.
- Therefore, the regional and local policy makers and public and private strategy stakeholders should combine their knowledge and resources for innovative initiatives and solutions across national, European and global perspectives.

Demographic change is a key challenge for local development

Demographic and economic decline is more likely to occur in peripheral regions with a mono-functional economic structure. However, central urban regions with a diverse economic structure and/or regions with large sectors such as business services, industry or logistics, seem less vulnerable to demographic and economic decline. Territorial population decline and population ageing is and will continue to have social and economic consequences for national, regional and local labour markets. Consequences include:

- A decreasing potential labour force, due to declining numbers of youth and a stagnating working age population is leading to a dwindling labour supply, a tight labour market and more competition over workers, or even labour shortages.
- Relocation of companies from shrinking regions to growing regions because of labour market issues.
- A decrease in the population and the number of households implies a smaller local market and may lead to an oversupply of services and housing. Such a surplus in housing may, in turn, result in vacant properties.
- Services (e.g. health care) may become more expensive, as demand in shrinking regions is expected to increase due to the ageing population with a simultaneous decrease in labour supply.

Strategic solutions must encompass both local and regional capacity to attract and generate jobs within the national and economic context. Across Europe, there have been different approaches to public policy aimed at drawing more people into regional workforces and sustainable employment, such as regional economic restructuring; skills and training; inward migration; and workforce mobility.

Territorial differences require strategic co-ordinated policy responses

Although the Netherlands' population is increasing, the population growth rate, although fluctuating considerably, has been declining since the 1960s. The Netherlands' age structure since the 1960s has also experienced change - declining numbers of youth (younger than 20 years); growth and then decline in the 20 to 50 age cohort; significant increase in the 40 to 65 age cohort; and gradual increases in the 65 to 80+ cohorts. As a result of the changing demography, the workforce will be older and this will impact upon the labour market, increasing the number of older workers and reducing the number of new entrants into the labour market.

The Netherlands case study revealed the complexity of the demographic challenges occurring within the regions, with each region (Groningen/Drenthe, Limburg and Zeeland) experiencing different issues associated with their socio-economic situations, including localised population shrinkage, population ageing, migration, and labour force shortages and skill gaps. The northern areas of the Groningen and Drenthe provinces are experiencing population decline as a consequence of economic-geographic concentrations in production and employment towards urban and economic core regions resulting in out-migration. Consequently the less mobile, low-skilled and inactive¹ job seekers remain behind, resulting in high unemployment levels and/or a high percentage of disabled persons within these areas. The ageing of the population is a region-wide labour market challenge, with expected labour shortages in the future and job-skills mismatching. In Limburg, population growth has stagnated due to low fertility and migration, along with rapid population ageing. Employment growth is below the Dutch average, while the unemployment rate is proportionally higher and in some occupations there are severe labour shortages. Zeeland is experiencing territorial population decline within the Zeeuwsch-Vlaanderen area as a result of migration due to lack of educational infrastructure for the younger generations. Zeeland is also experiencing population ageing and a declining labour market.

Demographic changes such as localised population decline, population ageing and migration are key changes in the demography of the Netherlands and particularly within the study regions. A negative economic situation and a restrictive spatial planning policy may increase the outward migration rate. A decrease in the labour force may also lead to a decrease in job growth which, together with an ageing population, could prompt firms to leave shrinking areas and relocate to growing regions. These differences in demographic situations require a territorial analysis so that regional and local perspectives on policy preparation, development and implementation are co-ordinated with national policy efforts. The need for holistic but individualised solutions, which respond to the specific needs of the local labour market, individual company or person, based on national/regional/local partnerships. The national-local axis requires systematic considerations for policy delivery. Due to socio-economic differences, regional systemic and sustainable strategies should firstly be explored, developed, implemented and reviewed, focusing on the key aspects that make the region unique.

Essential measures for a strategy that provides a starting point and guidance for future projects and initiatives for each region include:

- Develop clear national and regional provincial policy support for demographic transition by raising the awareness of local authorities and businesses in regard to demographic transition and its impact on the labour market and economy.

¹ Retired, disabled or elderly population

- Strategies should be place-based and highly contingent on context (instead of place neutral). They should consider economic, social, political and institutional diversity in order to maximise both the local and the aggregate potential for economic development.
- A territorial approach is needed to take into the account the demographic diversity of shrinkages and anticipating shrinking municipalities . Policies should anticipate demographic decline rather than focus on combating it. Municipalities, as well as the business community, should learn how to manage with less people; support people and families to stay in the area; and devise ways to attract more residents, in particular those in the 20 to 65 age group (in a bid to increase their potential labour force).

There are three interconnected policy themes, which are:

1. Develop inter-generational responses to labour market challenges.

There is a tendency for older workers to retire early, either due to attainment of retirement age or a preference to stop working. The Dutch government is in the process of raising the retirement age to 66 by 2018 and to 67 by 2021. Although this will increase labour participation among the older age cohorts, it will not fully compensate for the expected decline in the potential labour force. Nevertheless, the raising of the retirement age will place less pressure on national old age entitlements and encourage longer and active working lifestyles. Another reason that older workers leave the workplace environment is the increasing competition from younger and better educated people, the wide use of technology, and work culture and behaviour. Encouraging companies to implement age management practices, such as flexible working hours, opportunities for older workers to update skills and better health and/or safety programmes would encourage older workers to stay within the working environment.

- a. Encourage a new work continuum ranging from full-time to part-time within employment options for companies, governments and other sectors to extend the length and variety of and engagement in working-life; leading to longer employment and increased productivity for people across all sectors. This will extend the working age while allowing people to meet the requirements of family, community and other engagements that in turn improve personal, family and community health. Inter-generational engagement in changing working conditions needs to also be taken into account.
- b. Identify and implement programmes to re-position workers (older and younger) who are un-(or under) employed, especially lower skilled workers, in a concerted effort to encourage their engagement and integration into the workplace (job carving²) and to connect older and younger workers in the workplace. Incentives for staying in work after age 60, as well as social security systems designed to promote working late in life need to be developed, including creating new roles within companies for workers in their later life.
- c. Foster life-long learning to stimulate competitiveness, because economies now depend on value that is added from the entire workforce. Regional firms need to invest in and improve their learning culture, with flexible and tailor-made training and skills development programmes, not only for new employees, but also for the older workforce. These programmes will promote intergenerational workforce skill linkages, such as master-apprentice relationships. To increase entrepreneurship or self-employment, educational programmes and business coaching should be promoted whereby the skills of older people can be transferred into new opportunities.

² Job carving is a term for customising job duties, such as creating specialist job roles thereby freeing up the time of specialist staff, or swapping job duties to make the most of individual skills (<http://base-uk.org/employers-recruitment-jobcarving>)

2. *Strengthen national-local alignment and co-operative frameworks towards a dynamic and responsive labour market.*

Labour market policies should be implemented at the regional level, in the context of the national policy framework, but so that municipalities can develop additional policies when required. The municipalities have a vital role to play in labour market policies and collaboration between municipalities is therefore required. Population decline does not stop at the municipal border and market areas for many public services have a much larger spatial scale than the municipal scale, meaning that regional collaboration is important. Sector-based labour market policies are developed at the national level and may conflict with local interests; integrating horizontal and vertical policies is thus a major challenge for municipalities. Encouraging local or regional projects that are designed to foster innovative solutions to region-specific problems is recommended. However, individual municipalities in declining regions are generally not capable of designing and implementing such experiments, therefore, the role of the province as a facilitator of these initiatives and to assist regional networking is required.

- a. Encourage horizontal integration and vertical alignment of policies by promoting co-operative frameworks and regional co-ordinated approaches, such as territorial employment pacts, which are innovative networks that provide an institutional framework and commitment to regional networks targeting employment strategies.

Inactivity of older age groups will increase the strain on social security and pension systems. However, there is a trend that points to a healthier older population with the skills, financial resources and time to contribute to the economic activity of regions. There will be opportunities for older people to extend their working lives through entrepreneurship, and thereby share their knowledge and skills with the younger generation.

- b. Promote entrepreneurship and workplace flexibility by designing strategies for new work-ecology incubators, entrepreneurship education, skill development in SMEs and the development of senior entrepreneurs.

Regional labour markets require a skilled workforce. A decrease in the potential labour force does not automatically result in lower unemployment, but a mismatch between labour supply and demand. Labour shortages for any particular sector are not only the result of demographic changes, but also of educational and career choices made by young people. Education should be aimed at encouraging student participation and linkages within the regional economy. There is a need to stimulate businesses and knowledge institutes to develop joint educational programmes, so that the competencies of the available labour force will better match current and future labour requirements. Develop widely available valid and reliable information and career counselling, to guide occupational choices. To enable this free flow of information there is a need for better co-operation between employers, educational institutes, trade unions and local authorities. Universities must adjust their learning programmes to meet the regional needs of the economy, increase international student attendance and encourage a family friendly environment.

- c. Promote targeted and better connections between education and skills development and regional labour markets (local skills ecosystems) for job preparation and creation. Re-orient Vocational Education and Training organisations towards new skills ecologies.

3. *Invest in place-based development and foster resilient communities.*

Demographic changes at national, regional and local scales have important impacts on the labour market. These changes include an ageing workforce, labour shortages and skill gaps, but also provide opportunities within the ‘silver economy’ (the ecosystem of services for the older customer). There is difficulty in supplying adequate labour to meet the increasing demands for labour intensive personal services at the national level, but even more so at the regional market level. The relatively large increases in demand for personal and health services in declining and ageing regions must be met by adjustments in the local and regional labour markets. Promoting workforce mobility, flexibility and cross border collaboration will help support local economies and businesses and stimulate key economic sectors and encourage entrepreneurship and business opportunities.

- a. Develop new opportunities and innovation in regional/local labour markets, targeting new sources of growth such as cross border programmes, workforce mobility, clustering³, new economic growth areas in health and silver work ecologies, entrepreneurship and business opportunities.

Another reason for people leaving the workplace is the state of their health. The need for new services in areas such as education, entertainment/leisure, information technology, financial services and transportation can encourage longer, healthier and more active lifestyles, by creating family friendly environments and active policies to improve lifestyle and health opportunities for the elderly. The ageing of the population structure will increase demand on new social services and the health sector. The issue becomes even greater within territorial areas with shrinking populations, where services will become more expensive for consumers due to an increase in demand and a decrease in labour supply. The forms of delivery of care services should have an emphasis on flexibility and financial effectiveness, and promote opportunities for some services to be delivered by social enterprises.

- b. Invest in early healthy lifestyles and active communities by incorporating new approaches to the development of infrastructure and the provision of services to the society, designed to reduce medical costs in later life, such as investment in community-based agencies for health and social support, facilitating non-profit/voluntary efforts, and fostering local resource sharing.
- c. Invest in healthy and prosperous communities, to maintain and increase the vitality of places and encourage personal networks and/or attachments, which in turn stimulates the business environment and improves quality of life, entrepreneurship and innovation. All are factors that can foster resilience in shrinking areas. Investments can be in the form of institutional assets that are located in shrinking areas and that can act as ‘magnetic infrastructure’ (e.g. a new educational institution or a cultural landmark), and digital media can be used in promoting intergenerational (alumni) and social networks. Good communities nurture entrepreneurship and healthy lifestyle living conditions.

³ Clusters are geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related sectors and related institutions (eg. universities, R&D institutions, trade associations etc.) in fields that compete but also co-operate (Porter, M.E. (1998) “*On Competition*”, Harvard Business School Press).

CHAPTER 1

**ADDRESSING DEMOGRAPHIC TRANSITION AND AGEING LABOUR MARKETS IN THE
NETHERLANDS**

Demographic transition is one of the major policy issues impacting policy development internationally. The Netherlands has been experiencing significant demographic changes, such as population decline, low fertility rates and an ageing population. This chapter discusses the social and economic effects of demographic transition, international policy responses, and good practices and policies of the Dutch labour market.

1.1 Introduction

This report outlines the results of the Netherlands case study for the international project *Local scenarios of demographic change: The impact on local labour markets*. The project is conducted by the Organisation of Economic Development and Co-operation (OECD) Local Economic and Employment Development (LEED) Programme with the support of the European Commission DG Employment, Social Affairs and Inclusion. The analysis in the Netherlands was conducted in partnership with the Ministry of the Interior and Kingdom Relations and the regions of Groningen/Drenthe, Zeeland and Limburg (Figure 1), with the aim of providing guidance in “how to prevent” as well as “how to deal with” a shrinking and ageing society, especially within the context of local labour markets.



Figure 1 Map of the Netherlands and the study regions

Shrinking regions within the Netherlands are facing problems in their labour markets. A shortage of young people negatively impacts on the potential growth of local firms, while an ageing workforce implies an increasing challenge for skills development and company training activities, also flexible

engagement in society. These demographic consequences will have potentially negative consequences on local economies, which in turn can speed up outmigration and demographic shrinkage.

In the Netherlands, the *intergovernmental action plan on population decline* is actively addressing a wide range of issues connected to demographic shrinkage. At the same time, national labour market policies are increasingly paying attention to the shortage in the active young population and an ageing workforce over the long term. However, the relationship between these two policy fields is still weak.

Regions facing demographic shrinkage are the breeding-ground for future labour market problems for the whole country, therefore local activities, initiatives, and strategies are of particular importance in planning for the future.

This study used a mix of quantitative and qualitative methods. An extensive statistical data analysis of demographic changes in the Netherlands was collected through dedicated indicators from the years 1960 to 2010. Primary data from key regional actors was collected via an analysis of policy indexes – Elderly Friendly Places to Live (ELFRI) questionnaire; and the Older Workers Friendly Places to Work (OLWOF) questionnaire (refer Annex 1 table for themes). Qualitative data was collected from regional field studies and workshops (OECD, 2012a, b, c) with international and local experts. The analysis has taken into account the territorial dimension of different levels of government (Martinez-Fernandez *et al.*, 2011). A detailed methodological note is provided in Annex 1.

The social and economic effects of demographic transition will now be discussed, followed by national policies for labour market responses in the Netherlands. The rest of the report is divided into four chapters: Chapter 2 outlines the national policies for demographic change and cross-regional analysis; Chapters 3, 4 and 5 present the regional chapters for Groningen/Drenthe, Zeeland and Limburg; and Chapter 6 concludes with guidance for developing strategies and programmes for national/regional management of the Netherlands' demographic changes and an ageing society.

1.2 The social and economic effects of demographic transition

The demographic transition is having profound effects on the economies of the industrialised nations, according to the Demographic Transition model developed by Hugo (2008, 2011), in which societies' populations transition from a *high stationary* (high fertility, high mortality, low growth) to a *low stationary* (low fertility, low mortality, low growth) situation as development proceeds. The early stages of the demographic transition (Figure 2) are accompanied by rapid population growth, as high fertility levels are associated with declining mortality rates. According to Hugo (2011), in traditional societies, high fertility rates are cancelled out by high mortality rates. Development results in declining mortality rates as societies gain control of their environment through agriculture and health interventions. Yet fertility remains high because cultural 'props', developed to support high fertility levels during the period of high mortality, remain. Hence, in the second stage of the transition there is rapid population growth. In time, these cultural props are eroded and fertility too starts falling. Thus, in the third stage, population growth is still increasing, but at a declining rate. Finally, fertility and mortality more or less reach a state of equilibrium. It is this fourth stage that the European nations began to experience in the 1990s (European Commission, 2007). Hugo notes that some writers have defined a youth deficit, when the proportion falls below 15%. This brings with it problems of labour shortages.

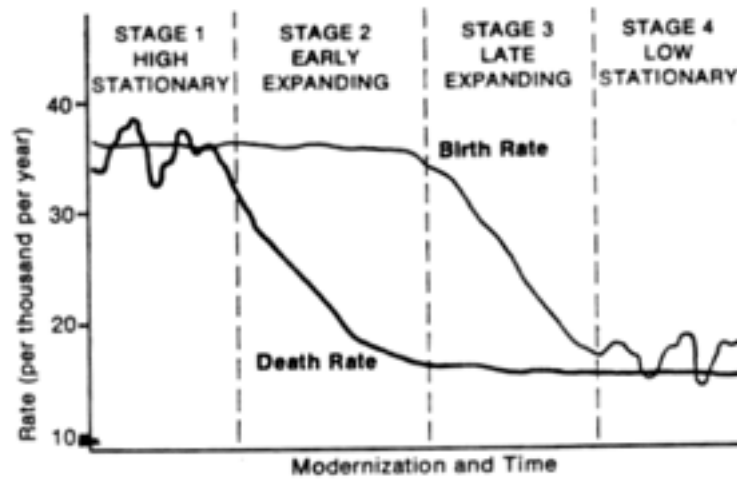


Figure 2 Model of the demographic transition

Source: Hugo (2008)

The social and economic effect of demographic transition is a complex interrelated system, as Figure 3 illustrates the interrelatedness of demography, economy, skills and labour market as being essential for sustainable and resilient communities.

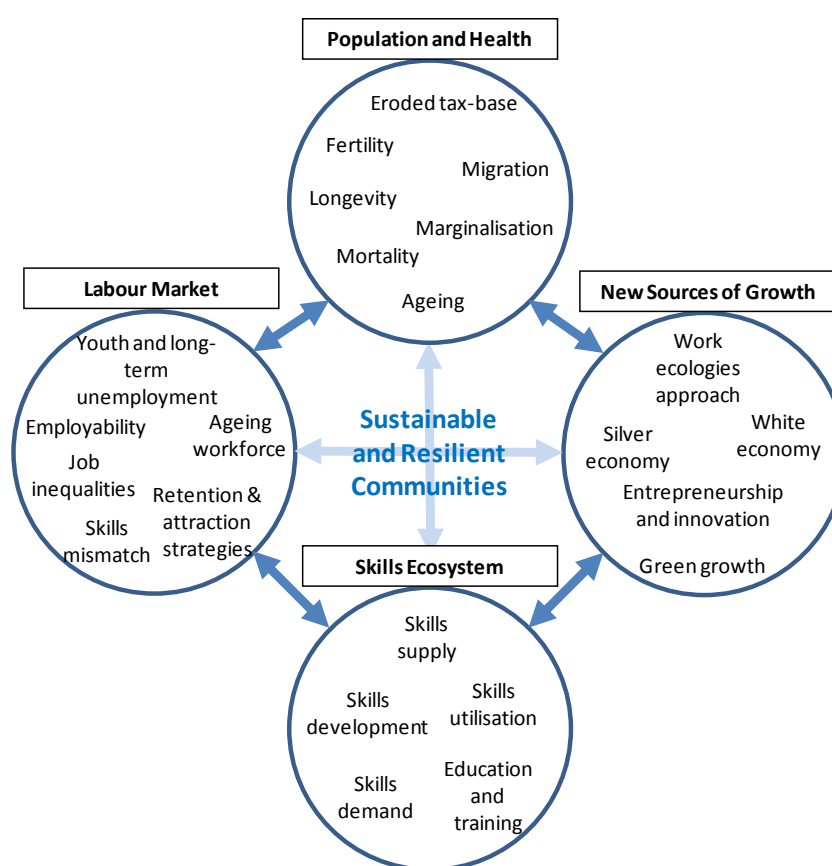


Figure 3 Sustainable development approach

Source: Based on OECD, 2012

In Europe, population shrinkage is a major concern in rural areas, which are experiencing increasing emptying of areas due to depopulation and a rapid increase in the ratio of the older population. At present, densely populated areas profit from migration gains at the expense of rural ones. As a consequence, some regions of Europe will hardly be affected by demographic change whilst in others the impact will be fast and profound. According to the European DART (2012) project, demographic conversion and change processes will continue to manifest, see Box 1. The OECD (2012) has identified a need for local governments to accept the increasing trends of community shrinkage and to adapt to the demographic trends of an ageing and declining population. Collective efforts by both national and local governments are important in effectively managing the fluctuating trends and to respond appropriately to the changing environment. Population ageing, as identified by the United Nations (2001) provides an opportunity and a challenge for socio-economic societies. “In the economic area, population ageing will have an impact on economic growth, savings, investment, consumption, labour markets, pensions, taxation and intergenerational transfers. In the social sphere, population ageing influences family composition and living arrangements, housing demand, migration trends, epidemiology and the need for healthcare services. In the political arena, population ageing may shape voting patterns and political representation” (2009, p. viii).

Box 1 Key demographic changes

- Continuous population decline.
- Continuous ageing of the population.
- A decline in population density.
- An increase in the share of the foreign-born population.
- An increase in the age at which a mother gives birth to her first child.
- An increase in life expectancy.
- Negative balance in the natural population growth (births/deaths).
- Negative balance in spatial population movement (immigration/migration).
- Change in the composition of households (increase in 1-person households).
- Decrease in the number of pupils and the number of trainees.
- Structural changes in the labour force – increase in older workers and employment of women, strengthening of long-term unemployment.
- Structural changes between the sectors of the economy.

Source: DART project (2012)

Demographic transitions have consequences for the availability of labour, both in terms of quantity and quality, which impacts on labour markets needs and regional economic development. During periods of growth, a highly educated young population can encourage innovation through their task flexibility, their high productivity, and territorial mobility. However, in a situation of economic stagnation or insufficient development, an excess working age population may cause important problems of unemployment and labour inactivity, with different demo-socio economic consequences by gender, age and household composition. In and out migration patterns often solve labour shortages or supply excesses (Gesano and Heins, 2009). The shift towards an older population affects the size and composition of the labour force and increases pressures on pension provision. Taylor (2008) points to a sharp upward trend in employment rates among older workers in the OECD countries, although rates are only just returning to levels last observed at the end of the 1970s after a period of marked decline in the 1980s and 1990s, to a large extent due to policies of early exit in the case of men, although older women's participation showed a steady rise over this period. Furthermore, the cost of pension payments and fewer workers to pay for them is of course a source of concern for public institutions (OECD, 2012, p. 26).

As the rate of growth of the working age population is dropping, this, coupled with an increase in the old age dependency ratio, means that labour supply will outstrip demand, with general upward pressure on wages and tight labour market conditions. They note, however, that although labour supply will reduce overall (including technology substitutes like robots), there will be a relative glut of older workers, which may depress their wages relative to other age cohorts. This could make work a less desirable option to those contemplating retirement and those that do continue working will experience incomes that may not meet consumption demands (Triest, Sapozhnikov and Sass, 2005). Another potential consequence of an ageing workforce is the threat of businesses relocating to areas with younger age profiles. Ageing economies will either need to make their older workers work longer, increase migration, or export jobs to other nations in order to remain competitive, making outsourcing and off-shoring a logical business strategy. Countries such as India, Vietnam and the Philippines are, in demographic terms, already gaining from such a rearrangement of the age balance across the world, as they are currently experiencing the 'demographic gift' phase (Asher and Nandy, 2006).

The changing age profile of a society will ultimately affect labour supply. The retirement age varies considerably among countries. In countries with high per capita incomes, older people can retire earlier and thus these countries tend to have lower labour participation rates at older ages e.g. France, Luxembourg (United Nations, 2009). Extending working lives, delaying the retirement age and increasing

employment rates among the older population are important government policies, and rates of labour force participation among older people have been increasing steadily (Dini, 2009, p. 12; McDonald and Temple, 2008, p. 7). Premature labour market withdrawal of older men among the developed countries is likely to be related to factors such as shortage of employment opportunities, skill obsolescence and deficient knowledge and training to keep abreast of new developments. Other factors that may drive the older population into retirement include mandatory retirement ages, negative attitudes of employers towards older workers and inflexible employment rules that make it difficult to work part-time (OECD, 2006, p. 3). It is important to consider the push and pull factors that influence older workers' relationships with the labour market and their retirement behaviour. According to Shultz, Morton and Weckerle (1998), push factors are typically described as negative considerations, such as poor health or dislike of one's job, which induce older workers to retire. Pull factors are typically positive considerations, such as the desire to pursue leisure interests or volunteer activities, which may attract older workers to labour market withdrawal. Conversely, push factors towards work might include loneliness or low income levels, whereas pull factors might include opportunities for personal fulfilment.

Significantly, migration is a key element in the possible solution to labour shortages associated with population ageing - it may reduce population decline and rebalance the labour force. In recent years, a number of immigration policies have been adopted across the OECD countries. But national policies are not consistent over time and are often not adapted to demographic and labour market needs (OECD, 2012). However, there are communities and entire countries with a low fertility rate and a rapidly ageing population, a process that is often combined with the outward migration of young people, thus accelerating the process of shrinkage (OECD, 2012, p. 26). Migration, while not a substitute for structural reforms, has a role to play in managing population ageing and helping societies to respond well to skill and labour shortages. Immigration is presently the primary engine of European demographic growth and without it there would be an even more pronounced future decline in the population of working age.

However, in the medium to long term, immigration cannot possibly compensate for massive exits from the labour force caused by population ageing without profound threats to social cohesion (European Commission, 2008). Furthermore, McDonald and Temple (2010) have investigated the efficacy of population strategies, particularly migration strategies, and warn that while migration can significantly slow population ageing: 'The impact of immigration on population ageing and, hence, upon the rate of growth of per capita gross domestic product is subject to diminishing returns, the effects get smaller as the migration level increases' (McDonald and Temple, 2010, p. 3). Frouws and Buiskool (2010) note that third country migrants are especially vulnerable to falls in economic activity, they are likely to be younger, in temporary jobs, and to be working in sectors that have been hardest hit by the economic slowdown. The barriers they face are many, and are cross-cutting and self-reinforcing. They include:

- language skills
- a lack of professional and educational skills
- a failure to recognise qualifications
- limited labour market knowledge
- limited social and professional networks
- discrimination
- poor working conditions
- not being allowed to work in the case of asylum seekers
- extensive social security (reducing incentives)
- social environment
- cultural conflicts.

Interventions should focus on education and skills, counselling and advice, mentoring and coaching, workplace diversity management, recognition of qualifications, internships and networking, and a contextual approach (e.g. targeted at a whole area or neighbourhood). They add that programmes of activity should be integrated, tailored, involve partnerships with stakeholders, involvement of employers, giving staff skills as job coaches, trainers, and mentors, and developing outreach strategies (Frouws and Buiskool, 2010).

The population structure of a region has considerable effects on its local market of goods and services. In addition, population change, with new influxes by births or immigration, nourishes and modifies the frame of local consumption markets (Gesano and Heins, 2009). The silver economy refers to the potential the ageing of populations will have for the provision of goods and services that meet their needs. According to Heinze and Naegele (2009 p.39), on ‘the basis of the markedly higher spending power of seniors as well as on empirical evidence for an age-specific change in consumption needs, an obvious procedure for giving impulses for economic growth and new jobs is to systematically promote the development and improvement of new age-sensitive products and services. In this respect, experts regard the “silver economy” as an important constructive “counter message” to the macroeconomic threat scenarios’.

1.3 International responses to demographic transition

There seems to be no practical, exclusively demographic solution to the demographic transition. The remedies for its negative effects need to be sought among non-demographic policies. Nations need to act in such areas as economy, health care, attitudes towards older people, social security, education and skills and so on. The mix of policy responses required of European nations differs. Southern Europe must focus on increasing fertility and economic activity; Central Europe on fertility, economic activity and, to a lesser extent, immigration; while amongst the German-speaking nations, increasing fertility comes top of the list (Bijak *et al.*, 2007). All of the developed nations have been active in areas of employment and retirement policies aimed at prolonging working lives.

According to Ferry and Vironen (2010), nations are considering the demographic transition from a labour market perspective, due to geographical variations in economic activity rates of labour supply and the provision of skills. As people age or migrate, regional labour markets are required to respond in order to retain workers and mobilise those remaining. To engender economic growth, *public policy must be aimed at drawing more people into regional workforces and sustainable employment.*

Regional economic restructuring is a policy intervention responding to structural weaknesses in regional economies. For example, parts of North-East France have found it difficult to retain younger people, losing their future workforce to migration. They have also faced a restructuring of the defence sector, with the closure of military facilities. A consequence has been these areas being rated ‘least dynamic’ in terms of population and economic growth. In response, the Grand-Nord Est strategy included ‘contrats de redynamisation de sites de defense’ (CRSD), in which €225 million was committed for 2008-2015 to support 30 contracts. Based on reviews of each area, such contracts supported measures suited to the locality, such as the provision of industrial estates, incubator units and leisure facilities. There was a demographic rationale for the contracts, these being limited to areas losing more than 200 jobs and viewed as economically and demographically fragile (Ferry and Vironen, 2010).

While active labour market policies that aim to lift employment rates have often been enacted at the national level, variations in the effects of demographic processes on regional labour markets have been reflected in the emergence of region specific policy responses. These have often been co-ordinated

between national and regional policy-makers and the business community, and have targeted different segments of regional labour forces. Against a background of demographic decline or population ageing, some interventions have focused on the provision of relevant education, skills and training to ensure that limited labour resources are most effectively deployed to suit the needs of regional economies (Ferry and Vironen, 2010). The Danish Ministry of Employment implemented local and regional networks of unemployed older workers – so-called senior networks. Under the label of ‘self-activation for older workers’, since 2000, financial assistance has been given by the National Labour Market Authority (NLMA) to groups of unemployed workers above 50 years of age, in order for them to create networks and activities to develop new areas of employment. Around 25 such networks based on self-activation now operate across the country (Madsen, 2012).

Regional Employment Pacts are another initiative utilised in many countries such as Germany, Austria, and Hungary. In Germany, *Perspective 50 Plus – Employment – Employment Pacts for Older Workers in the Regions*, is part of the *Initiative 50 Plus* programme of the German Federal Ministry of Labour and Social Affairs¹. Regional pacts have used a wide range of different tools and instruments, including profiling, assessments, special training measures, internships in companies, placement activities (adapted to the special needs of the target group and to the region), wage subsidies for enterprises, time management, and publicity campaigns to raise awareness of the challenges of demographic change. There was also a commitment to developing better governance of the issue (at the local and between local and national levels). According to Simon (2012), in 2011 some 70 000 people were integrated into regular employment. Box 2 outlines other positive outcomes.

Box 2 Positive outcomes of employment pacts

- A diversity of projects that take account of varying regional labour market conditions.
- Programmes that support a shift in awareness of the value of older worker.
- Taking the specific needs of older long-term unemployed persons seriously and recognising their specific situation in the labour market is a prerequisite for designing adequate national and local projects.
- Allowing local actors to design approaches that respond to the needs of their local labour markets allows for tailor-made, creative and effective solutions.
- Participants are as heterogeneous as the overall population and taking their capabilities, qualifications and ambitions seriously is a key factor for empowering them and triggering their motivation which in turn is a prerequisite for a successful return to work.
- SMEs are the key drivers of employment for this target group.
- Transitions to employment are shaped by a number of small steps, rather than by a single breakthrough.
- Local and trans-regional networks allow for an efficient transfer of knowledge within and across regions.
- Best practice examples are disseminated efficiently through local and trans-regional networks.
- Networks and linkages between different institutions help to design new holistic approaches, e.g. by including health care services in activation measures, which are geared towards a sustainable integration into the labour market.

Source: Simon (2012)

Focusing on older workers, *Targeted Initiative for Older Workers (TIOW)*², is a joint initiative of the Government of Canada and the Nova Scotia Department of Labour and Advanced Education,

¹ <http://www.forumpartnerships.zsi.at/attach/germany2.pdf>

² http://www.aes.gov.nl.ca/forms/2012-13_tiw_guide_for_proposals.pdf

developed to aid unemployed older workers in communities affected by significant workforce downsizing or workplace closures through programming aimed at reintegrating them into employment. TIOW aims to provide employment support to address the immediate employment needs of workers. Each TIOW project requires a project sponsor. These are organisations responsible for planning, designing, and implementing a project, developing a project model that is responsive to the needs of older workers and the community. To be eligible for TIOW, communities must be affected by downsizing or closure(s) and/or experiencing ongoing high unemployment. To be eligible as a community affected by downsizing or closure(s) the community must have had an estimated 20% reliance on the affected employer(s) or industry. In Europe, the ‘Central European (CE) Knowledge Platform for an Ageing Society has innovative actions at the regional level (Box 3).

Box 3 The Central European (CE) Knowledge Platform for an Ageing Society

The Central European (CE) Knowledge Platform for an Ageing Society, (CE-Ageing Platform), aims to minimise the negative effects of demographic change in Central Europe. The project idea derived from partners’ desires to jointly contribute to improved framework conditions in their regions in order to foster economic growth, regional development and social cohesion. It was built on the belief that the challenges brought by the cross-cutting issue of population ageing could only be solved in partnership. The CE-Ageing Platform aims to jointly develop a CE-Ageing Strategy enabling partners to adapt to demographic change, integrating lessons learnt from previous activities on the one hand and results and lessons learnt from innovative actions implemented by the CE-Ageing platform on the other. The innovative actions implemented at the regional levels include the development of four Regional Age Platforms with which two Regional Ageing Strategies as well as two Regional Training Concepts are being established (Age-Partnership Actions). In other CE-regions five additional pilots, Age-SME Interventions, are being implemented in co-operation with SMEs. For instance, in Central Transdanubia in Hungary a two-year pilot project launched in 2011 focuses on older employees of local SMEs facing retirement. Each employee becomes a mentor of a young graduate trainee in order to share their knowledge and work experience. The older worker has a reduced workload at the same salary level, while trainees can achieve professional experience and some payment, since the Regional Employment Centre provides a subsidy. The initiative includes the development of regional cross-generational human resource strategies by key regional stakeholders (e.g. municipalities, government agencies, employers groups) and selected SMEs. The initiative’s methodology includes seminars with regional stakeholders and a training programme for the participants in the pilot. The project is targeting 25 workplaces.

Source: http://www.ce-ageing.eu/index.php?option=com_content&view=featured&Itemid=101

Encouraging inward migration processes is another means of responding to regional labour market needs. For instance, immigration can provide at least a partial solution to the decline of the working age population in some parts of Finland. The effects of immigration are considered to be particularly important in the Helsinki area and in the largest urban areas, but may also be an option in the east of the country (Ferry and Vironen, 2010). Similarly, in Sweden there are initiatives to bring qualified people from abroad to address regional labour market shortages, supplementing domestic labour resources. The 2008 labour immigration reform is an important part of migration policy. It involved efforts towards increased mobility and greater openness to the rest of the world. The reform provides several routes into Sweden and facilitates needs-driven labour immigration. In Sweden, there is no difference in labour market rights between labour immigrants and those workers born in Sweden³. A Swedish employer who cannot meet his or her labour needs with employees from EU/EEA countries or Switzerland is allowed to employ a third-country national if it can be ensured that their terms of employment and insurance protection are equivalent to those that would apply for an employee already in Sweden.

³ See <http://www.government.se/content/1/c6/01/83/20/b61cce15.pdf>

A Spanish village went to the extreme of placing an advertisement in the international press (see Box 4) seeking families willing to immigrate. In some cases, initiatives have been introduced to lure back workers who have left a region in recent years or to reduce the proportion of workers leaving. In Germany, for instance, the Federal Ministry of Transport, Construction and Urban Development have funded pilot projects in the new Länder. One is aimed at maintaining links with young outward-migrants (e.g. via regional contact points). Another is aimed at developing family-friendly universities in order to foster student retention. An additional initiative in the East German state Mecklenburg-Vorpommern is ‘Migrate and Return’ – see Box 5.

Box 4 Initiative in Aguaviva in Spain

The municipality of Aguaviva in Spain (pop. 700, rural area, lowest population density of all Spanish provinces, Region of Aragon) has brought together the issues of immigration, integration and employment. The mayor placed an advertisement in the international press: ‘Spanish village is looking for immigration willing families’. The target group was couples aged under 40 without university level education, who have work permits and at least two children under the age of 12 years. The village offers them: low-rent housing; jobs in agriculture; construction or services; free medical care; and schooling. In return, the families agree to stay for at least five years. From 2000, the population of Aguaviva grew from 590 to 700, and the school roll doubled. More than 30 new homes were built on the outskirts of the village. The village community benefits not only from a bigger population but also from greater cultural diversity. The mayor also founded the Spanish Association of Towns Against Depopulation, with 120 members.

Source: Hollbach-Grömig, B. and Jan Trapp, J. (2006)

Box 5 Migrate and Return

An initiative to keep skilled migrants in contact with their region of origin and to support them if they wished to return was ‘Migrate and Return’ (mv4you) in the East German state of Mecklenburg-Vorpommern. This region is rural and sparsely populated. mv4you offered opportunities for job-seekers, providing contact addresses and job offers. For enterprises they provided a database with information on skilled workers. Most clients were young people. The project was financed by the Mecklenburg-Vorpommern Ministry for Employment, Building and Spatial Development.

Now the mv4you is an agency (<http://mv4you.de/index.php/de/>), which establishes the connection between business and technical, and management personnel. Businesses are supported in their personal work and experience a wide range of recruiting services. Candidates find job vacancies suitable to their request, as well as a wide range of information about the retreat / immigration and the state of Mecklenburg-Western Pomerania. In addition to the country's migrated youth, mv4you also appeals to commuters and people who want to live and work in within the state. The Agency has established and maintained ‘mv4you’ connections between specialists and executives as well as the resident companies and institutions in the country. Partner agencies of ‘mv4you’ are ministries, employment agencies, business associations, economic developers, chambers and associations of the country, associations and initiatives.

Source: Hollbach-Grömig, B. and Jan Trapp, J. (2006) and mv4you (2013)

Flexible working arrangements and an increasingly mobile workforce have resulted in more sophisticated analyses of the impact of demographic change on regional labour markets. Long-distance commuting or tele-commuting may mean that, while people may live in one region or locale, they work elsewhere (Ferry and Vironen, 2010). This is the case in Italy, where a shortage of skilled employment in the south, together with a high cost of living in the central north mean that a significant proportion of the working age population live in the region but work elsewhere. One solution utilised in several member

states is to take a more flexible approach to administering labour market interventions. In Sweden, for instance, there has been discussion about the creation of larger labour market regions due to increasing differences between regions in terms of imbalanced age structures. It is argued that such an approach would allow policymakers to manage the labour force more efficiently.

In the United Kingdom, there have been efforts to identify functional economic areas (FEAs), including labour market areas (e.g. through inter-regional frameworks such as the Northern Way, Multi-Area Agreements and city-regions). The principle of FEAs is that people and economic flows overlap the boundaries of local authority areas, so that distances over which key economic markets operate are usually larger than the administrative units of local authorities, and broadly correspond to sub-regions or city-regions. FEAs defy accurate definition, but proxies such as travel to work areas, retail and leisure catchment areas, and business supply chain interactions are employed. While uniform national or regional policy may lack the flexibility to respond well to intra-regional differences, many local authorities are ‘under-bounded’, that is, they cover geographical areas that are too small to encompass most economic markets and so cannot tackle economic challenges effectively. This gap may inhibit strategic decision-making and create problems of co-ordination of economic policy between local authorities (HM Treasury 2007).

A serious issue for some member states is a lack of mobility of domestic workforces. Reasons include: jobs that provide insufficient remuneration to make relocation worthwhile; housing affordability, particularly in major cities; and inadequate transport infrastructure. As a result, certain sectors of the economy may simultaneously experience labour shortages in some regions and labour surpluses in others (Ferry and Vironen, 2010). For instance, in Poland, in response to the global economic downturn and low internal mobility of its workforce, a ‘mobility package’ has been introduced, which is designed to encourage jobseekers to relocate in order to find work. There is weak mobility - both professional and geographical - in Poland. Migration abroad is more likely than internal migration. There is a view that this is due to a lack of a culture of mobility as well as the poor housing situation in the country. An anti-crisis package adopted in 2009 introduced a relocation benefit for unemployed people who took a job 50 kilometres or more from their home, amounting to approximately 830 EUR. A ‘motivation benefit’ for people who took a pay cut to take a job, amounting to approximately 1007 EUR, was also introduced. The two benefits were financed by the ESF, but they have not been widely used (Kwiatkiewicz, 2011).

A range of initiatives has emerged in recent years, aimed at providing local labour market responses to demographic trends. Key elements include drawing on the talents of disadvantaged groups such as older workers and migrants for regional economic development and regeneration, social cohesion, mutual learning, and knowledge transfer such as social enterprises (Box 6), job growth and expansion of the silver economy (Box 7).

Box 6 Tradice Slovácka in the Czech Republic

Tradice Slovácka in the Czech Republic is a social enterprise that manufactures folk costumes and accessories using traditional methods, thus conserving and renewing crafts and training. In 2006, the company was founded by two local councils seeking to bring two municipal buildings back into use. The respective municipalities turned to the present director of the company, who was at the time a member of a folk group and who was interested in the culture of folk costumes. The aim was to find a use for the buildings that would at least partly maintain their public function and which would simultaneously increase employment in the area. Although investment in the building and some of the basic equipment was funded by European Structural Funds, the company's salaries and related expenses, along with its educational programmes, are funded by profits obtained from its production and services, which are reinvested in the company. Currently, the company operates two centres, employing a total of 17 women ranging in age from young graduates to women of pre-retirement and retirement age, with an average age of 40 years. Due to lack of formal professional training in relevant skills, the company must rely on intergenerational experience and knowledge transfer. It subcontracts to embroiderers whenever necessary. These are often aged between 60 and 75.

Older workers' experience and know-how represent the backbone of the production process. However, a diverse workforce age profile is also required in order to ensure the company's sustainability. Young graduates are teamed with more experienced employees in order to learn the necessary skills or to contribute missing expertise, such as project management and language skills. Due to the need to reduce expenses and to increase productivity, modern technologies have been introduced into the production process, for example, sewing machines. Younger workers tend to be more proficient in using the computerised programme available to process hand-drawn sewing patterns. As a consequence, these workers transfer knowledge to their older colleagues. The concept of mutual learning is also reflected in the overall atmosphere within the company and in the workshops, which operate an 'open door' policy. Individuals as well as groups interested in the production process can visit the workshops and the show-area and observe employees at work.

Tradice Slovácka is also involved in educational activities that take place on its premises. These are aimed at unemployed people, older people and mothers on maternity leave. They are mainly run by external specialists and are subsidised by the company. Among the most important courses are: the teaching of traditional crafts; sewing classes; and computer training for older people. The aim of these courses is to increase company visibility and to maximise local council funding. They also aim at reducing anti-social behaviour among young people.

Source: http://www.eurofound.europa.eu/areas/populationandsociety/ageing_workforce_advanced.php

Box 7 Initiative in Teuteoburger Wald region in Germany

A recognition of the benefits of the 'silver economy' in terms of products and services for older people and in terms of employment opportunities for healthcare workers and others led the Teuteoburger Wald region in Germany to initiate an association designed to promote age-adequate housing. This initiative of craftsmen offered services to convert apartments and houses for older residents, and tourism and wellness services for older people. Twenty-five partners in the region also worked together to develop specific tourism services for older people. Partners were hotels and guesthouses, wellness providers and recreational and tourist information agencies. 'Silver economy' was a co-operative project funded by the North-Rhine-Westfalian Ministry of Economics within the senior economy initiative.

Source: Hollbach-Grömig, B. and Jan Trapp, J. (2006)

Local labour markets are impacted in different ways by demographic change, often in combination with other factors associated with the industrial structure and local economy. Migration and population change often result from this ‘demographic mix’, which requires early intervention to manage the process and mitigate the undesirable impacts on community and economic vitality. The rest of the report will unpack these elements and offer key principles for strategies and policy initiatives.

1.4 The Netherlands labour market

1.4.1 National and Regional developments in the labour force

The expected decline in potential labour force (which consists of all people between the ages of 20 and 65) for the Netherlands as a whole will not automatically mean a decline in the actual labour force (the labour supply).⁴ The labour force in the Netherlands consists of all people who are professionally employed (for at least 12 hours a week), or who have accepted employment (for at least 12 hours a week), or those who are willing or available to work (for at least 12 hours a week) and are actively searching for work (CBS, 2012).^{5 6}

Whether or not a decline in potential labour force results in a decline in the actual labour force, depends on developments in labour participation (Verwest, 2011). At the national level, the potential labour force has been decreasing since 2011, although the actual labour force is expected to continue to grow to the year 2020, as a result of an increased level of participation (Euwals et al., 2009). In the last decades, the participation level of women has grown strongly.⁷ This is expected to continue in the coming years. However, from 2015 onwards, the increase in the participation level is expected to slow down. This has to do with the fact that, after 2015, women born in the early 1950s – who caused the high increase in participation – will retire and leave the labour market (Euwals et al., 2009, p.147).

Based on the general retirement age of 65, the Dutch Labour Participation Commission (also known as the *Commissie Bakker*, 2008)⁸ and Euwals et al. (2009) predict that the labour force will decrease. They expect this decrease to start somewhere between 2016 and 2020 (Commissie Bakker, 2008, pp. 19-21; Euwals et al., 2009, p. 147; Verwest, 2011, p. 33; Verwest and Van Dam, 2010). These expectations do not take into account the current and expected changes in the Dutch General Old Age Pensions Act (Algemene Ouderdomswet (AOW)). In 2012, the Dutch Government decided on a gradual increase in the retirement age from 65 to 66 by 2019, and to 67 by 2023 (Ministry of SZW, 2012). Recently, the newly elected government proposed an accelerated increase to 66 by 2018 and to 67 by 2021, and thereafter to link the retirement age to the increase in life expectancy (VVD and PvdA, 2012, p 5). It is expected that these changes to the Dutch General Old Age Pensions Act will increase labour participation among people of the ages of 65, 66 and 67. However, this is not expected to fully compensate for the

⁴ In the Netherlands a distinction is made between the potential labour force and the actual labour force.

⁵ The Dutch definition of the term 'labour force' includes everyone who is professionally employed, has accepted employment or is willing/available to work. The international definition of labour force usually includes people within a certain age group (often all people between the ages of 15 and 65). The main difference between these definitions is that the Netherlands applies a threshold value of 12 working hours a week, while internationally such a threshold value is usually not applied (CBS, 2013b).

⁶ As a result of this distinction between potential labour force and actual labour force, in the Netherlands, three groups can be distinguished (potential labour force, labour force, and working population), while internationally mostly only two groups are distinguished (labour force and working population). The first two are defined above. In the Netherlands, the working population (also called the economically active population) consists of people between the ages of 20 and 65 who are professionally employed (for at least 12 hours a week).

⁷ An increase of 15 percentage points between 1996 and 2011 (Grip and Thor, 2013, p. 13).

⁸ The Dutch Labour Participation Commission was appointed in 2008 by the Ministry of Social Affairs and Employment to increase labour participation and improve the labour market.

expected decline in the potential labour force for the Netherlands as a whole (Commissie Bakker, 2008; Euwals *et al.*, 2009; Verwest, 2011, p. 54; ESPON and NIDI, 2010).⁹

Regionally, a decrease in the labour force is expected to begin earlier, because in several regions the potential labour force has already been decreasing for some years, whereas at the national level this only started recently. According to Renes *et al.* (2009, p. 129), the labour force (based on the retirement age of 65, and not including the recent changes in the Dutch General Old Age Pensions Act) will decrease between 2008 and 2020 in the province of Limburg by 9%, and in Zeeland and Groningen both by 3%. The exact start of this decrease in labour force in the three regions will depend on developments in local labour participation,¹⁰ and may vary between regions (Broersma and Van Dijk, 2002; Verwest and Van Dam, 2010, p. 12). The same is true for the size of the decrease in the working population. Hilbers *et al.* (2011, 111-112) show that in both the low¹¹ and high scenarios¹² the working population¹³ in shrinking regions will decrease between 2020 and 2030 (see Figure 4). However, the extent of this decrease will depend on the development in labour participation rates.

⁹ The decrease in potential labour force and the ageing of the population result in an overall decrease in the ratio of people of 65 years and over to the potential labour force. In 1995 this ratio was 1:4.7, and in 2008 it was 1:4.2. For 2020, this is expected to decrease even further to 1:2.95 (excluding recent changes to the Dutch General Old Age Pensions Act) (PBL and CBS, 2009). This raises the question of how to keep the social security system (more specifically pensions) affordable.

¹⁰ The regional chapters describe the *gross labour participation level* in the shrinking regions. Gross participation level is the percentage of people in the potential labour force who are willing to work for at least twelve hours per week (CBS, 2012).

¹¹ The low scenario was derived from the WLO Regional Communities scenario: low population growth, little international co-operation and low economic growth. There is less immigration, a lower decrease in the average size of households and a much lower increase in car ownership (Hilbers and Snellen, 2011, p. 5).

¹² The high scenario was derived from the WLO Global Economy scenario, which includes high population growth, international co-operation and market-focused processes. This scenario assumes more immigration and a greater decrease in the average size of households, with the higher growth in prosperity leading to increased car ownership (Hilbers and Snellen, 2011, p. 5).

¹³ In the Hilbers study, the working population consists of all people between the ages of 15 and 65 who are professionally employed (for at least 12 hours a week).

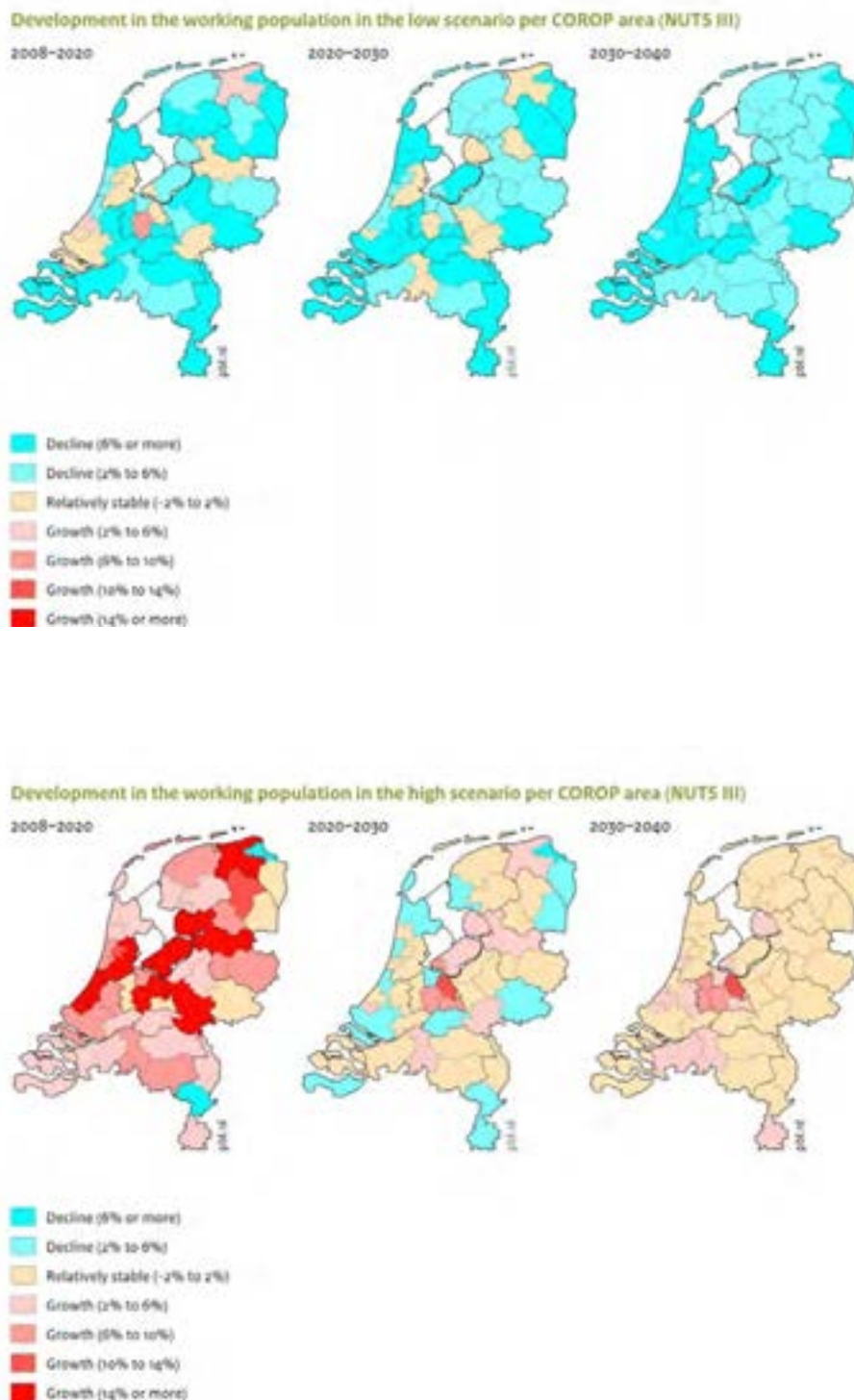


Figure 4 Development in the working population in the low and high scenario per COROP area (NUTS III)

Source: Hilbers et al. 2011, 112

Generally, in most shrinking regions (68% in Limburg, 70% in Zeeland, and 70% in Drenthe) the labour participation level lies below the national average (71% in 2010) (UWV Werkbedrijf, 2011, p. 71; Verwest, 2011). Some conclude from this that, in the future, the labour participation level can still grow in these areas, while others are of the opinion that it will stay below the national average. An increase in labour participation may compensate for the decrease in the potential labour force in these regions in the short term, however, this is not expected to be the case in the long term (see also ESPON and NIDI, 2010¹⁴). All researchers agree that the labour force will decrease, however, they disagree about when this will start (Verwest and Van Dam, 2010; Verwest, 2011). The effects of a decreasing labour force on the labour markets potentially include shortage of labour, increase in wages, decrease in unemployment and increase in the price of some services, which are further discussed in Annex 2.

1.4.2 National and regional mismatches on the labour market

Although in comparison to international standards the unemployment level in the Netherlands is not high (it increased from 3.8% to 6.4% between 2008 and 2012), however, there is a mismatch between vacancies and job seekers. This leads to the paradoxical situation that, on the one hand for certain professions vacancies are difficult to fulfil, while on the other hand the number of job seekers is increasing. According to the annual labour market perspectives of ROA (2011), shortages will emerge in the coming years particularly in technical and health care professions.

Demographic changes (such as population decline and ageing) are one of the causes of the emergence of sector-based mismatches in the labour market. Population decline and ageing and rejuvenation are two sides of the same coin. As a consequence of the change in the age structure of the population, the demand for goods and services will change as well (Euwals *et al.*, 2009). Ageing will result in an increase in the demand for labour-intensive services, such as health care, as has already been observed in the Netherlands in recent years, meaning that the only professions that experience a growth in the number of jobs are in health and care (ROA, 2011). This development will take place in a labour market in which total labour supply will not increase or even decrease, which in turn will have a strong upward effect on the prices of these services. According to some estimates, the relative price increase of the health sector, in a situation in which labour supply does not react to changing demand, would be between 30% and 70% in the coming decades (Euwals *et al.*, 2009). Adjustments of the labour supply in response to significant shifts in the demand structure of the labour market have been observed in the past (Huizinga and Smid, 2004). In a situation where labour supply is no longer increasing (as will be the case after 2020) these adjustments may be more difficult to make (Euwals *et al.*, 2008). First, the inflow of young workers is low, and this group is much more receptive to sector-based price differences than incumbents. Second, labour intensive services are non-tradable on the international market, which means that adjustments have to be realised within the Dutch labour market.

An educational mismatch exists as well. There is a shortage of various types of higher educated workers and higher unemployment among the lower educated. Educational mismatches also appear within sectors, for instance, within the healthcare sector. The number of staff vacancies in nursing homes has increased in recent years while the number of unemployed is also rising. Moreover, RWI (Raad voor Werk en Inkomen) anticipates shortages for higher educated workers in health care, a mixed situation for middle professions, and an oversupply in the lower educated professions for the period up to 2015 (RWI, 2011). These developments indicate a clear gap in educational requirements between demand and supply within the sector and compound the issue of worker's value-added potential.

¹⁴ It shows that the labour force in, for example, southern Limburg – in the Limited Social Europe scenario as well as in the Expanding Market Europe scenario – will decrease in the future.

Sector-based and educational mismatches explain to a large extent the regional mismatches in the Netherlands. Chapter 3 on Groningen-Drenthe mentions the mismatch between an increasing demand for highly skilled labour and a large pool of lower skilled unemployed. Chapter 4 on Limburg suggests that the structural high unemployment level in South-Limburg may be due to a skills mismatch on the labour market as well. Chapter 5 on Zeeland identifies a large number of vacancies in the health sector and ICT. Despite regional incidences of mismatches, compared to international standards the Dutch regional variation in unemployment is small (OECD, 2005; Vermeulen, 2006), but it is larger for women, the young and the lower educated. The higher educated are more mobile and leave the peripheral regions for the urban centres in which the jobs are to be found. This has a diminishing effect on regional unemployment variations, because the less mobile, lower educated remain in the regions in which there are not enough jobs for them. Regional variation is increasing, but this is mainly due to regional differences in the composition of the labour force, and the fact that there is an increasing gap in unemployment levels between lower and higher educated workers. In the Netherlands, barriers exist to bridge the gap between regional demand and labour supply. *The above conclusion that increasing demand for labour intensive personal services is difficult to meet by increasing the supply of adequate labour at the national level, applies even more forcefully to regional markets: the relatively large increases in personal and health services in declining and ageing regions has to be met by adjustments in the local and regional labour markets.*

Unfortunately, compared to other countries, the spatial mobility of workers in the Netherlands is relatively low. As a result, both unemployment and job vacancies may exist in declining regions, as has been observed in the regional labour markets considered in this OECD report. Thus, the national mismatches that exist may appear even more forcefully in declining regions in the Netherlands. For instance,

Table in Chapter 4 on Limburg shows higher labour shortages for the period up to 2016 in a number of occupational groups than anticipated for the Netherlands as a whole. It is therefore not a problem that is unique to these declining regions. The Socio-Economic Council advised in its report on population decline that national labour market policies should also be used for regional policies in declining regions (SER, 2011). In the next section, therefore, attention is focused on general options to bridge the gap, which are also applicable to declining regions.

Nevertheless, two remarks are in order at this point. First, ageing related labour market problems appear first in declining regions, and vulnerable groups are overrepresented in declining regions which makes them frontrunners in the need for labour market policies. Second, the regional context is quite different between declining regions, a fact also observed by the Top-Team Population Decline (Dijkstal and Mans, 2009). The region Groningen-Drenthe as a whole is not declining due to the continued growth of the cities of Groningen and Assen. Therefore, jobs can be found in these cities if the region as a whole is viewed as one labour market region (Chapter 3). The main labour market issue in this region is therefore the educational mismatch between higher level jobs and structural low educated unemployed. In Limburg the stagnating regional population and resulting stagnating economy calls for economic revitalisation (Chapter 4). In Zeeland the labour force will not decline until 2040, but ageing and the educational mismatch is the key issue (Chapter 5). These different regional context calls for tailor-made policies at the regional and local level. In section three policy options at the regional scale are taken into account.

Summing up, the main policy implications are as follows:

- Labour market issues in declining regions are essentially not different from national issues. Therefore, national strategies should also be utilised in declining regions.
- Nevertheless, declining regions are often frontrunners in the demand for new policies, due to their more advanced stage in the ageing process and the relatively higher vulnerability of their populations.
- Moreover, the regional and local contexts demand tailor-made solutions for each region.

1.4.3 Labour market policy response

In 2008, the national government perceived the decline in the potential labour force and the problem it posed for the labour market, so tried to solve this problem by increasing the labour supply (e.g. through increased labour participation for women and the elderly). The decline in the potential labour force, in combination with an ageing population, raised the question of how to keep the social security system (more specifically: the pension payments) affordable. This issue was flagged by the Dutch Labour Participation Commission (also known as the *Commissie Bakker*), appointed by the Ministry of Social Affairs and Employment in 2007. The commission expected that, from 2010 onwards, the potential labour force would decrease at a national level, and that after 2016 so would the actual labour force (Commissie Bakker, 2008, pp. 19–21). The commission recommended that the national government stimulate labour participation by: improving childcare arrangements; providing fiscal benefits both for people working past the age of 65 and for employers that employ the elderly; and increasing the retirement age from 65 to 67 gradually from 2016 onwards by one month per year up to the year 2040 (Commissie Bakker, 2008).

Over the past years, the discussions about increasing the retirement age have dominated both political and public debate. Figures 5 and 6 show the effects of proposed changes in the Dutch General Old Age Pensions Act (algemene Ouderdomswet or AOW)¹⁵ on the future development of the potential labour force per labour market region (COROP area (NUTS III)). They show that the proposed increase in the retirement age (from 65 to 66 by 2018 and to 67 by 2021) may postpone and mitigate the decrease in the potential labour force, but that this measure would neither compensate nor reverse it. They also show that

¹⁵ Not yet approved by the Dutch House of Representatives nor by the Senate of the Dutch Parliament.

the number of regions facing a decline in potential labour force will decrease, and that the size of the decrease will also diminish. However, in many regions, especially those on the periphery, the expected long-term growth in the potential labour force due to the increasing retirement age will not be sufficient to compensate for the decreases caused by ageing and outward migration, and by decreases in the number of people under the age of 19.

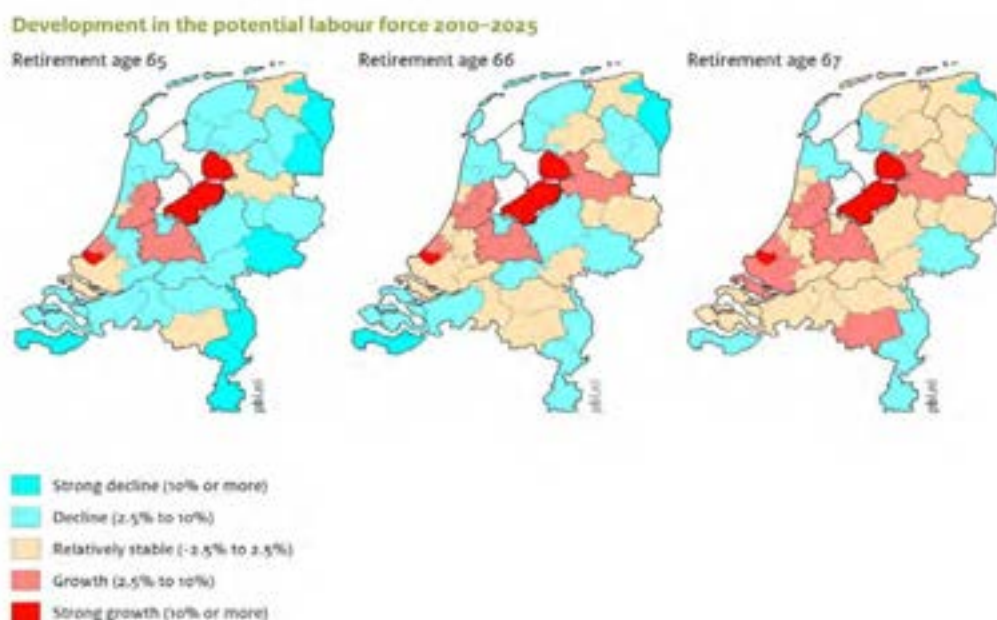


Figure 5 Development in the potential labour force 2010–2025

Source: PBL/CBS, 2011

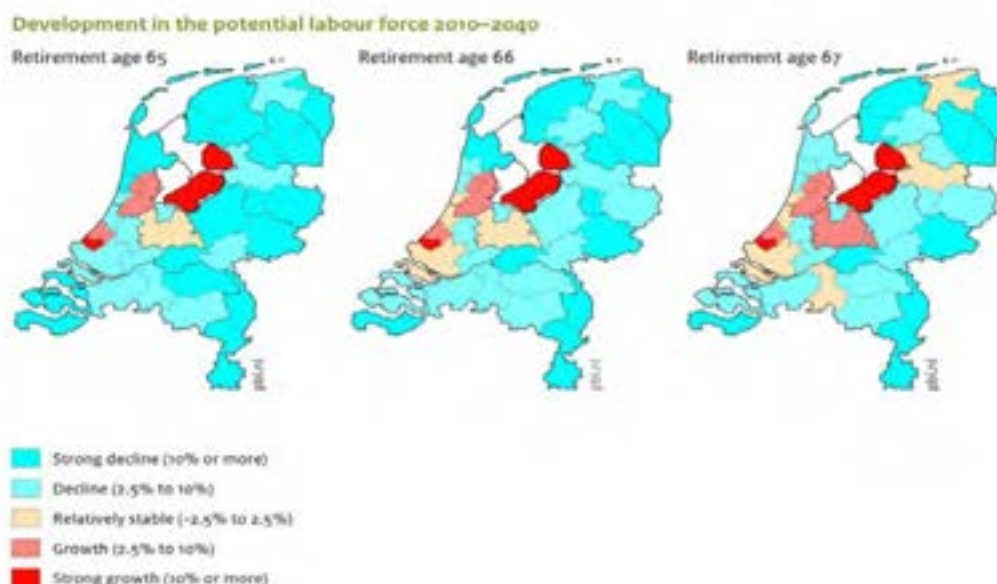


Figure 6 Development in the potential labour force 2010–2040

Source: PBL/CBS, 2010

Despite the attention paid to the labour market by the Ministry of the Interior and Kingdom Relations in their action plan on population decline (Ministry of BZK, 2009), the Ministry of Social Affairs

and Employment paid little attention to specific labour market problems in shrinking regions. An explanation for this may be that the ministry's focus was on national labour market issues, and it considered municipalities, businesses and social partners to be responsible for regional labour markets. Municipalities, for example, are responsible for the implementation of the Work and Social Assistance Act (*Wet Werk en Bijstand (WWB)*)¹⁶, which means that municipalities must provide financial support to households in need, up to the supplementary benefit level (in Dutch: *bijstandsniveau*).

Thus, at the national level, little attention has been paid to labour market issues in shrinking regions, or on regional strategies in order to deal with a decrease in the potential labour force. An exception is the above mentioned Socio-Economic Council (SER) advice, in which labour market issues in relation to demographic decline were included. The SER concluded that in shrinking regions, labour market problems will become more apparent earlier than in other Dutch regions. It argued that national labour market policies need to be utilised in shrinking regions as well as at national levels. However, it would be up to local governments to determine whether or not they need to formulate additional labour market policies in order to solve bottlenecks in the regional labour market. Moreover, the SER noted that it would be important to diminish barriers that hinder cross-border commuting. It recommended that decentralised social partners make better use of the information available on the regional labour market, and co-operate with the Platform Beta Engineering (*Platform Beta Techniek*) and the 'Centre of Expertise on Vocational Education, Training and Labour Market' (*Kenniscentra Beroepsonderwijs Bedrijfsleven*), to enhance the attractiveness of their regional labour market. In addition, the SER advised businesses and educational institutes to co-operate more closely in order to improve the match between labour supply and demand, and to allow businesses to formulate strategic human resource policies (SER, 2011).

1.6.6 National policy options to bridge the gap

The educational mismatch is the most prominent issue and leads to lower educated unemployed, and vacancies in professions requiring higher skilled workers. Almost 10% of the Dutch population has only low levels of literacy. Forty percent of the young do not have the minimal required 'starting qualification' to enter the labour market (Advies Commissie Arbeidsparticipatie, 2008). Over time, labour market policies have changed from a passive role of paying social welfare benefits to a more active role, with compulsory responsibilities for the unemployed, employers and the state. The principle behind the *Wet Werken naar Vermogen* (Work according to capacity) (WWNV) is that individuals are primarily responsible for finding themselves a job, and that jobs should be found in the regular labour market. Moreover, since 1999, many responsibilities have been transferred from the central government to the level of the municipality. Since 2013, the municipality has also been responsible for carrying out the Wajong (social security for young disabled), WSW (social workplaces) and WWB (welfare benefits) Acts. One of the motivations of this change is that the municipality is better equipped to deal with the local situation than national organisations. At the same time, significant budget cuts in social security have to be realised within a period of economic crisis so that increasing numbers of unemployed have to be directed towards decreasing numbers of jobs, with fewer resources. These are national issues, but are even more pertinent in the declining regions, with their higher numbers of socially vulnerable population categories.

The following options are in place or have been proposed recently to bridge the gap (see for example the influential report by the Commission Bakker: *Advies Commissie Arbeidsparticipatie*, 2008):

¹⁶ The WWB grants a minimum income to any legal residents in the Netherlands who are without sufficient means to provide for their basic subsistence needs. The supplementary benefit bridges a period between jobs. People receiving this benefit need to do their utmost to become self-reliant again and are under the general obligation to find and accept new employment. In the search for employment, social services, UWV WERKbedrijf and/or reintegration services may also provide support, including education and/or retraining (Ministry of SZW 2011, 26).

- Improvements in matching school outflow to labour market inflow. Examples are:
 - Close collaboration between lower vocational schooling (“VMBO”) and industries.
 - Better collaboration between lower, middle and higher levels of vocational training.
 - Stimulating private schooling initiatives (e.g. industry initiatives).
 - Tax benefits for schooling costs.
 - Parallel schooling and learning trajectories.
 - Policies for encouraging the unemployed to invest in schooling, such as:
 - Lifelong learning initiatives.
 - Better collaboration between employers and schools.
 - The introduction of a personal work budget and work insurance (Commission Bakker 2009; not considered for implementation).
 - Compulsory measures for workers and the unemployed to invest in schooling.

Solving sector-based mismatches involves providing more flexibility for workers, including providing training and learning, which may be difficult in an ageing labour market, where both employers and employees are less willing to invest in training at higher ages. The growing health care sector is a case in point, both at the national level and the regional level. Apart from schooling options, other options may be available, such as:

- Engaging the ‘hidden’ labour supply, especially women who are not active in the labour market or work part-time. ROA (2011) estimated that this option would have a large effect on labour shortages in the health care sector. Options are for instance:
 - Introduce fiscal incentives to promote increasing work hours for part-timers.
 - Introduce a bonus for remaining active at higher ages.
 - Stimulate second jobs for part-time workers.
 - Increase flexibility in working hours and improve day-care facilities, to combine family care and work.
 - Encourage work from or near home.
 - Equip job centres to have child care or senior care facilities.
- Mismatches also occur due to information biases. Policies to reduce these biases have been proposed. The region is the appropriate level at which to organise this knowledge. At the regional level, various initiatives have been developed, such as Monsterboard, Platform Beta Techniek, Noorderlink Kenniscentra Beroepsonderwijs Bedrijfsleven, Banenrijklimborg.nl. These initiatives support websites where vacancies and job seekers may be matched. The main options are:
 - Collaboration between social partners to improve knowledge bases for vacancies and job seekers.
 - Develop a digital portfolio of competencies and diplomas for all workers.

Fixing the mismatch not only involves activating the supply side of the labour market, but should also address the demand side. Economic policy in the Netherlands aims at increasing economic growth at the national level, and is very much focused on the strongest regions and sectors of the country. Infrastructure investments are more directed to the Randstad and less to the periphery. Economic policy is strongly focused on nine so-called ‘top sectors’, which are considered the most innovative sectors in the economy and where, through subsidies, knowledge institutes and industry should collaborate to foster innovation and profitability. Top sectors are present in declining regions, as mentioned in the three regional chapters: in Groningen-Drenthe - health and life sciences, energy, agri-food and recreation and tourism; in Limburg - chemicals (Chemelot), health and life sciences (University of Maastricht), energy, agri-food, logistic and high-tech materials and systems; in Zeeland - energy, health, water, agri-food and tourism. Although the top sector policy has not been implemented yet, with the exception of a few strong clusters in

declining regions, such as energy and health and life sciences in the north, chemicals in Limburg and chemicals and water in Zeeland, due to the regional distribution of innovative industries in the Netherlands it remains to be seen if the declining regions will benefit from this policy as equally as the core regions in the west.

At the national level, the ageing of the population and its effects on the labour market are a major source of concern and labour market policies are aimed at increasing the participation rate of older workers, as well as increasing the retirement age of the population. It is unlikely that increasing the participation rate of the older population in declining regions will help to solve the labour market mismatch. The exception may be the health sector if these measures increase the number of health workers. In general, in declining regions it will increase the number of older unemployed workers.

The policies to bridge the mismatch gap at the national level can be summarised as follows:

- Better matching of school outflow to labour market inflow.
- Activate the hidden labour supply, particularly of women.
- Develop electronic databases at the regional level for matching demand and supply on the labour market.
- Declining regions should benefit equally from the top sector policy.

1.6.7 The key role of the municipality

Labour market policies should primarily be implemented at the regional level, in the context of the national policy framework. Municipalities should develop additional policies wherever required (SER, 2011). They play the leading role in labour market policies at the local and regional level. At the regional level, collaboration between municipalities is required. Here, improvements have been made in recent years (e.g. the installation of 35 labour market regions of collaborating municipalities in 2012), but there are a number of problems for municipalities in developing long-term regional labour market policies, due to their need to integrate horizontal (inter-municipal) and vertical (sector-based) policies. Collaboration at the inter-municipal level takes place mainly at the implementation level, but is much less developed at the level of longer term visions (IWI, 2008). Population decline does not stop at the municipal border. Labour markets, but also market areas for many public services, have a much larger spatial scale than the municipal scale. Therefore, regional collaboration is very important, but it is to a large extent a bottom-up approach (see the examples of Parkstad in Limburg (Parkstad Limburg, 2010) and the Eemsdelta in Groningen (Regio Eemsdelta, 2013)). The SER therefore advises that the role of the provinces should become more important (SER, 2011).

Sector-based labour market policies are developed at the national level and may conflict with local interests. *For instance, national policies may force schools or care services to close down due to minimum size requirements, which may conflict with local efforts to provide at least a minimal level of service at the local level.* Another example concerns the effects of extending the age of retirement. In declining regions where unemployment is already high this will lead to higher unemployment levels. Therefore, *integrating horizontal and vertical policies is a major challenge for municipalities.* One way out of this dilemma of national legislature and local context is to allow local or regional experiments, to foster innovative solutions to region-specific problems, as for instance suggested by the Advisory Commission of Population Decline of the Rural Parliament (Plattelandsparlement, 2011). However, *individual municipalities in declining regions are in general not capable of designing and implementing such experiments and the role of the province as a facilitator of these initiatives is required.*

The options for bridging the mismatch gap at the national level that are mentioned in Section 2 are also relevant for declining regions, but they arise earlier, are more sharply visible and are often more pressing. Often solutions are found that have not yet been tried in ‘anticipatory’ or ‘second generation’ declining regions (regions that will start to decline in the near future). This principle, in the WWI law discussed in Section 2, which outlines that the unemployed should seek solutions within the regular market, puts job seekers in regions with declining numbers of jobs in an unfavourable situation, unless they include moving to other regions as one of their options.

The educational mismatch is quite pressing in declining regions. Not only is the level of education of the workforce relatively lower, but the quality of the educational system is also at stake as well, with many very small schools, and forced school closures (Haartsen and van Wissen, 2012). Collaboration between schools, employers and the local government has in some instances proven to be very effective here. A good example is the “Zorgacademie (Care Academy) Parkstad Limburg”, a joint initiative that has resulted in a substantial increase in the number of school leavers with an appropriate background for health care institutions. This is a good example of ‘best practice’ that may also work in the ICT and technical sectors. *The key to successful solutions in declining regions is often for different stakeholders to join forces.*

Bridging the labour gap involves bringing together labour supply and demand. Within municipalities, labour supply policies are usually covered by the social department and labour demand policies by economic departments. These departments often do not work closely together (IWI, 2006). Local economic policies are often directed towards attracting enterprises by providing commercial land. History has shown that competition between municipalities in this respect may have adverse effects on local finances, and without the economic gains that were anticipated. Regional collaboration is a more fruitful approach in this situation. *Local and regional economic policies should start with the existing local or regional strengths.* Tourism, whether or not in combination with agricultural activities, is a natural strength of many declining regions, which have a competitive advantage in the available space. For instance, in the province of Drenthe, one out of every eleven workers depends on tourism. In Limburg, this ratio is one out of every fourteen workers. The corresponding figure for the Netherlands is one out of twenty-five workers.

Naturally, some municipalities are better off than others in terms of given amenities and natural advantages. In general, local and regional governments are too optimistic about the effects of local economic policies. Often, external circumstances at the national or international level are responsible for the economic revitalisation of declining regions. For instance, in a cross-regional study of three European regions who had partially changed their course from decline into growth (Nord-Pas-de-Calais, Aberdeen and Brandenburg), the cause of this change was not internal to the region, but due to other developments at the national or international level, such as the construction of the high speed rail line Paris-London-Bruxelles (Nord-Pas-de-Calais), the exploration of the North Sea oil (Aberdeen), or the move of the national government of Germany to Berlin (see Galjaard *et al.*, 2012). New airports or regional university or research centres have a similar population stimulation impact.

The policy implications can be summarised as follows:

- Delegation of the execution of the labour market and social security legislation to the municipalities is a heavy burden on municipalities in declining regions. Not only are vulnerable groups overrepresented, but the options of job seekers are also less in a declining labour market.
- Municipalities have to integrate horizontal (cross-municipal) and vertical (sector-based) labour market policies. However, these policies may be conflicting.

- Although the top sectors are represented in all three declining regions, and some sectors are even strong, it is likely that the implementation of this policy will favour the Randstad region, in which most innovative industries are located.
- The effects of local economic policies on economic growth in declining regions should not be overstated.

1.6.8 Spatial dimensions of the mismatch

Whereas many of the issues discussed are primarily national issues, when dealing with regional labour market mismatches, an explicit spatial dimension is introduced. Spatial mismatches exist if labour shortages exist in one region and oversupply in another. Spatial mobility may solve this problem, through interregional migration and commuting, but in the Netherlands, interregional migration is rather low. The young are moving out of the declining regions, and inflow of families and older residents, although sometimes sizeable, is too low to change the tide of population decline. For regional labour markets in declining regions, commuting may be part of the solution. Here, cities and rural areas may complement each other, with higher educated people working in the city and living in the countryside. More generally, good connections between the city and hinterland in declining areas are a useful strategy for labour, housing, and products and services markets of declining regions (Box 8). Therefore, improving the connections between cities and rural areas in declining areas may be useful. Housing market policies aimed at increasing spatial mobility could be helpful here as well.

Box 8 Groningen and its hinterland

In the report, *Quickscan Groningen* (van Dam *et al.*, 2008), the consequences of regional population decline for Groningen are outlined, and solutions presented whereby the continued growth of the city is beneficial for the declining region as well. The report recognises that the growth of the city is important for the wellbeing of the region as a whole. Concentration of vital health care services and schooling in the city of Groningen is feasible if the connections between the hinterland and the city are optimised. The scale of the region is small enough to allow short travel times. Moreover, with improved connections, the rural countryside could provide housing for those workers in the city who prefer a rural residential setting. In this way, the relationship between the city and the hinterland can be beneficial for both.

International migration may also be of some interest for declining regions. Although the majority of international migrants choose the economic core areas of the Netherlands, for some (e.g. agricultural workers from Eastern Europe), living in a rural area in the Netherlands may be an option. In fact, in Limburg, small communities of Polish immigrants exist. Border migration may be relevant as well. Reducing border effects has a positive effect on the labour market of border regions (Marlet *et al.*, 2012). Clearly, the potential effects will be larger in Limburg, where large urban centres are located in Germany close to the border, than in Groningen. An example of an initiative in this area is the Taskforce Cross-border Collaboration (Box 9).

Box 9 Taskforce Crossborder Collaboration

The Taskforce Crossborder Collaboration is a joint initiative of the Netherlands, Germany and Belgium. It covers joint activities in innovation, co-ordination of structural funds, infrastructure, and labour markets. For improving cross-border labour market matching, better information channels, co-

ordinated recognitions of diplomas, joint educational facilities, and removing institutional barriers to mortgages of cross-border commuters, are examples of joint activities.

The policy implications are the following:

- Cities in declining regions and the rural countryside should complement each other, not compete. Good connections between the city and its hinterland are therefore essential.
- International immigration could be potentially beneficial for declining regions.

1.6.9 Conclusion and policy themes

Due to the current economic crisis, with increasing numbers of unemployed, especially among the young, some inevitable long term labour market developments remain hidden. In the long run, both nationally and regionally there will be less workers and a shift to more capital intensive modes of production will emerge. In sectors where productivity increases are difficult to realise, such as the health sector, price increases will be inevitable, both in the public and private sectors. This may be undesirable from a society-based perspective. Increasing inter-sector and spatial mobility of workers may partly remedy this effect, but not solve the problem. *Municipalities will be key players in the process of solving labour market imbalances, but they are severely restricted in their potential due to the reduced budget available for local labour market policies. Collaboration between municipalities and stakeholders in the labour market is thus crucial to finding solutions.*

A summary of policy themes are outlined in Box 10.

Box 10 National labour market policy themes

- Increasing the spatial mobility of job seekers would reduce the regional mismatches in the labour market.
- Increasing the cross-border mobility of workers is also helpful in reducing the gap, for instance by recognition of foreign diplomas in Europe. However, the prospects of these policies are more relevant in Limburg and Zeeuwsch Vlaanderen, which are close to larger cities across the border, than in Groningen-Drenthe.
- Reducing border effects for immigration as well as commuting.
- Better matching of school outflow to labour market inflow.
- Activate hidden labour supply sources, particularly women.
- Develop electronic databases at the regional level in order to match demand and supply within the labour market.
- Declining regions should benefit equally from the top sector policy.
- Municipalities have to integrate horizontal (cross-municipal) and vertical (sector-based) labour market policies. However, these policies may be conflicting.
- National regulations in labour market policies should allow for local and regional experiments, to cope with these conflicting goals.

- Regional initiatives of schools, employers, and local and regional governments should be stimulated to tailor demand and supply in specific sectors, such as was done at Zorgacademie Limburg.
- Within municipalities, the departments dealing with social and economic aspects of the labour market should be more integrated.
- Policies aimed at available local and regional strengths have a better chance of being successful. Nevertheless, the expectations of economic policies should not be overstated in declining regions.
- In declining regions, the city and the rural countryside should complement each other, not compete. Good connections between a city and its hinterland are therefore essential.
- International immigration could potentially benefit declining regions.
- Regional opportunities in growth sectors should be promoted for job creation.

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CHAPTER 2**NATIONAL POLICIES FOR DEMOGRAPHIC CHANGE AND SHRINKAGE**

The Netherlands as a whole and many Dutch regions in particular, are experiencing a decline in the potential labour force as well as an ageing population. These demographic developments may have consequences for the regional labour market and economy, especially in peripheral regions (e.g. Zeeland, Groningen-Drenthe, and Limburg) that are expected to face a severe decline in their potential labour force. Municipalities, as well as the business community in these shrinking regions, would be better off focusing their policies on managing or anticipating these demographic changes rather than combating them. The national government and the provinces could encourage them to do so, support them in their search for the most effective strategies, and create the conditions needed to include and anticipate demographic changes in their policies.

2.1 Key demographic trends and causes

This chapter describes the national and regional demographic developments in the Netherlands in the past, present and predicted future, and considers the possible consequences of these demographic developments for the regional economy. It also describes the national policies on population decline and the economy. Subsequently, it provides an overview of various policy strategies that local governments (municipalities and provinces) can formulate in order to deal with the demographic changes they are facing or are expected to face in the future, and the effectiveness of these strategies.

2.1.1 National demographic developments in the Netherlands

Over the past decades, population and household numbers in the Netherlands have grown. Statistics Netherlands (CBS) expects this growth for the country as a whole to continue over the coming years, but much more slowly than in the past decades. According to the National Population Forecast¹, the population will reach its peak of nearly 18 million in 2040², and the number of households around the year 2045 is projected to increase to nearly 8.5 million. From that year onwards, a slow decline is foreseen (CBS, 2010; CBS, 2011). Looked at from an international perspective, the current and forthcoming population shrinkage is quite modest (Van Dam et al., 2006).

The potential labour force (which consists of all people between the ages of 20 and 65^{3 4}) has also shown continued growth in recent decades. However, it has been decreasing since 2011. The decrease in potential labour force is expected to continue in the future (PBL and CBS, 2011; Hilbers *et al.*, 2011). Between 2012 and 2025, a decrease of about 150 000 people is expected (De Jong and Van Duin, 2011, p.8) (Figure 7).

This decrease is caused by the outflow of the post-war baby boomers (those born between 1945 and 1970) and their inflow into the age group of 65 and older, in the coming 15 years (De Jong and Van Duin, 2011). As a result, the number of people aged 65 and over is expected to increase from 2.6 million in 2011 to nearly 4 million in 2025 (De Jong and Van Duin, 2011, p 10). In 2025, 22% of the population will be aged 65 or over, compared with 16% in 2011 (De Jong and Van Duin, 2011, p. 10) (Figure 8). At the same time, the share of those under the age of 19 is decreasing (Figure 9).

¹ In January 2013, the National Population Forecast was updated (CBS, 2013a). For consistency reasons this research is based on the National Population Forecast of 2010, as the data from the national and regional household projections that were used are also based on the National Population Forecast of 2010.

² In January 2013, the National Population Forecast was updated. The population is still projected to reach the peak of nearly 18 million by 2040. Thereafter, a stabilisation is foreseen, instead of the slow decline previously projected. The reason for this difference is an increase in life expectancy (of around 2.5 years in comparison to the previous forecast) and in inward migration (CBS, 2013a).

³ The lower limit of 20 years is common in demographic studies; in economic studies, 15 years is also used (De Jong and Van Duin, 2011, p. 8).

⁴ Recent changes in retirement age are not included in this definition (more information about these changes can be found in Sections 3.3.1 and 3.4.3). For methodical reasons, the age limit of 65 was kept, as the retirement age will change in a series of steps, something that it is complicated to include. Another reason to keep this age limit of 65 is that in the public sector as well as in civic society, it is still a commonly used age limit. For example, the funds that municipalities (*Gemeentefonds*) receive from the national government are in part based on the size of the municipal population aged 65 or over.

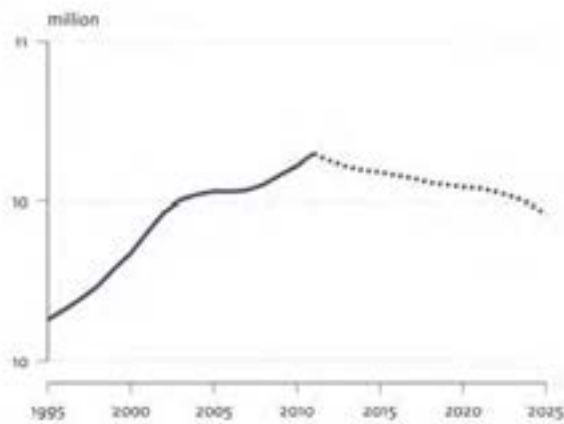


Figure 7 Population in the 20 to 65 year age group, 1995 to 2025

Source: De Jong and Van Duin, 2011, p. 8; National Population Forecast 2010–2060 (CBS).

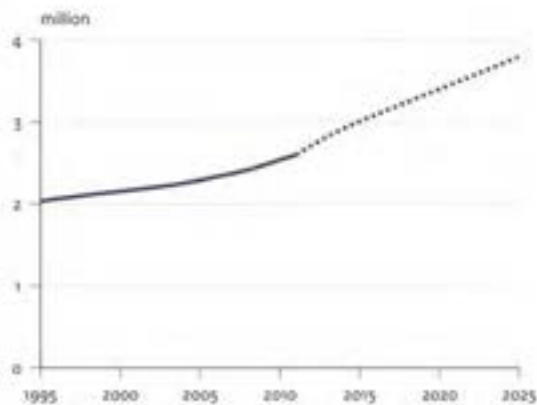


Figure 8 Population, aged 65 and over, between 1995 and 2025

Source: De Jong and Van Duin, 2011, p. 11; National Population Forecast 2010-2060 (CBS).

The male-female distribution ratio towards the year 2025 shows an increase in the number of women within the late working age and the later stages of life (Figure 9). This gender structure transition has important implications for policy development in the Netherlands. There is a need for policies that target female employees maintaining a working lifestyle, with specific initiatives that allow for flexible arrangements such as sharing their care responsibilities with partners. At the same time, elderly women often live alone and have distinct health and social inclusion needs. Both age groups need to be taken into consideration, together with the infrastructure for services in their local environment so that they remain active for as long as possible.

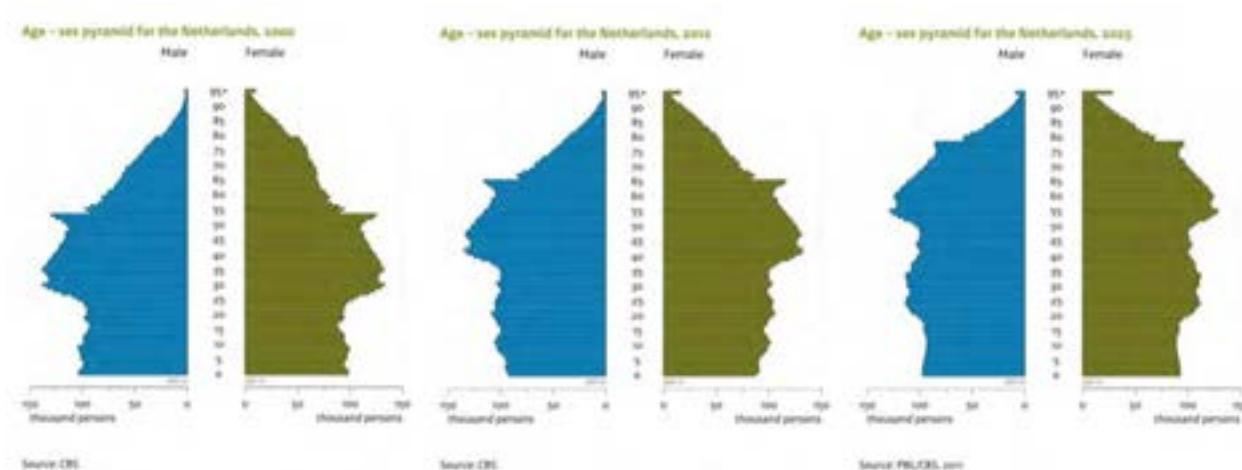


Figure 9 Age-sex pyramids for the Netherlands, 2000, 2012, and 2025

Source: CBS, 2012 and PBL/CBS 2011.

2.1.2 Regional demographic developments

Although the population and number of households in the Netherlands as a whole have grown over the past decades, some regions and municipalities have experienced a decline. The NUTS III regions (local COROP⁵ areas) and municipalities currently experiencing population decline are mainly located in the provinces (NUTS II regions) of Zeeland, Groningen-Drenthe⁶, and Limburg, the three areas⁷ that are the object of this study.

According to current regional projections, the population of these three case study areas (referred to as *shrinking regions*) will continue to decrease.⁸ Moreover, also other NUTS III regions are expected to face a population decline; examples are south-east Drenthe, north Limburg, middle Limburg, and the Achterhoek region (De Jong and Van Duin, 2011). The regional chapters describe the past, present, and future demographic developments in the three selected case-study regions in more detail.^{9 10 11 12}

⁵ This classification divides the Netherlands into 40 regions. Each region consists of a central city and surrounding municipalities, and covers labour market relations.

⁶ Groningen and Drenthe are two separate provinces, however, in this study they are considered one case-study area.

⁷ More specifically, Zeeuws-Vlaanderen, the Delfzijl region, east Groningen, and southern Limburg.

⁸ However, in comparison with other European regions, current and future demographic decline in the Netherlands is expected to be relatively modest.

⁹ The information on past and present developments is based on data from CBS that have been adapted by the Ministry of the Interior and Kingdom Relations. The information on future developments is based on different regional population projections: 1. the regional population projections by PBL Netherlands Environmental Assessment Agency and Statistics Netherlands (CBS) (PEARL); 2. Primos by ABF Research; 3. Provincial population projections; and 4. Projections bij Etil (Economic Technological Institute Limburg). It is important to note that these projections differ in the assumptions on migration movements, and whether or not they take local policies into account.

¹⁰ When using projections it is important to note that they have a certain degree of uncertainty, for they are dependent on socio-cultural and economic developments, which are difficult to predict, especially for the long term. Uncertainty increases when the geographical detail of projections increases and when the time periods become longer (Van Dam et al. 2007; De Jong and Garssen 2009; Verwest 2011, 113).

¹¹ Because projections are uncertain, it is advisable to use both projections and scenarios to describe future developments. In the regional chapters, only projections were used. This chapter uses both projections and scenarios. These scenarios (see also Section 3.3.1) show that, for many Dutch regions, it is uncertain whether growth or shrinkage will take place, and that both types of developments must be taken into account: Shrinkage under the low scenario and growth under the high scenario (Hilbers et al. 2011).

These case-study regions not only experience population decline, but also have an ageing population. An ageing population can cause a decline in population, because ageing leads to fewer births and more deaths (Verwest, 2011, p. 24). The ageing population is the result of selective outmigration of young people and families, a low inflow of migrants, as well as a low birth rate (De Jong and Van Duin, 2011). Furthermore, in the coming years, the share of people aged 65 and over in the three shrinking regions is expected to increase and, at ratios of 27% to 29% by 2025, to remain above the Dutch average of 22% by 2025 (Figure 10), and the share of those under the age of 19 is expected to decrease and stay below the Dutch average.

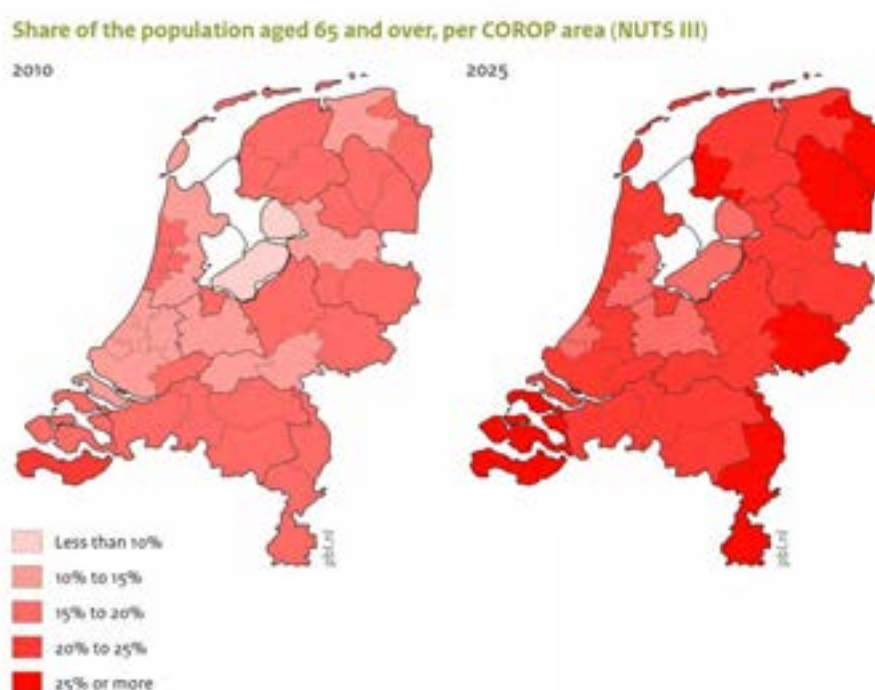


Figure 10 Percentage of the population aged 65 and over, per COROP area (NUTS III)

Source: CBS/PBL 2011; De Jong and Van Duin 2011, p.11

At the regional level, the decrease in the potential labour force is widespread (De Jong and Van Duin, 2011, p. 9). In 2010, a decrease in the potential labour force was begun in 24 of the 40 COROP areas (NUTS III) (Verwest and Van Dam, 2010). According to the regional projections (PBL and CBS, 2011), the potential labour force is expected to decrease in almost all (COROP) areas before 2040. Peripheral regions, including the case-study regions, are expected to face a severe decline in the potential labour force. This applies in particular to the Delfzijl region, with an expected decline of over 20%, and Zeeuws-Vlaanderen, east Groningen, south-east Drenthe, north Limburg and mid-Limburg, with a decline of 10% to 20% (De Jong and Van Duin, 2011). For south Limburg, the expected decline is just below 10% up to the year 2025 (De Jong and Van Duin, 2011, p. 9) (Figure 11).

¹² The regional chapters in this report describe the past, present and future demographic developments at different geographical scales: province, COROP area (NUTS III) and municipality). At provincial and COROP level, there is no decline in the number of households yet, however, at municipality level there is.

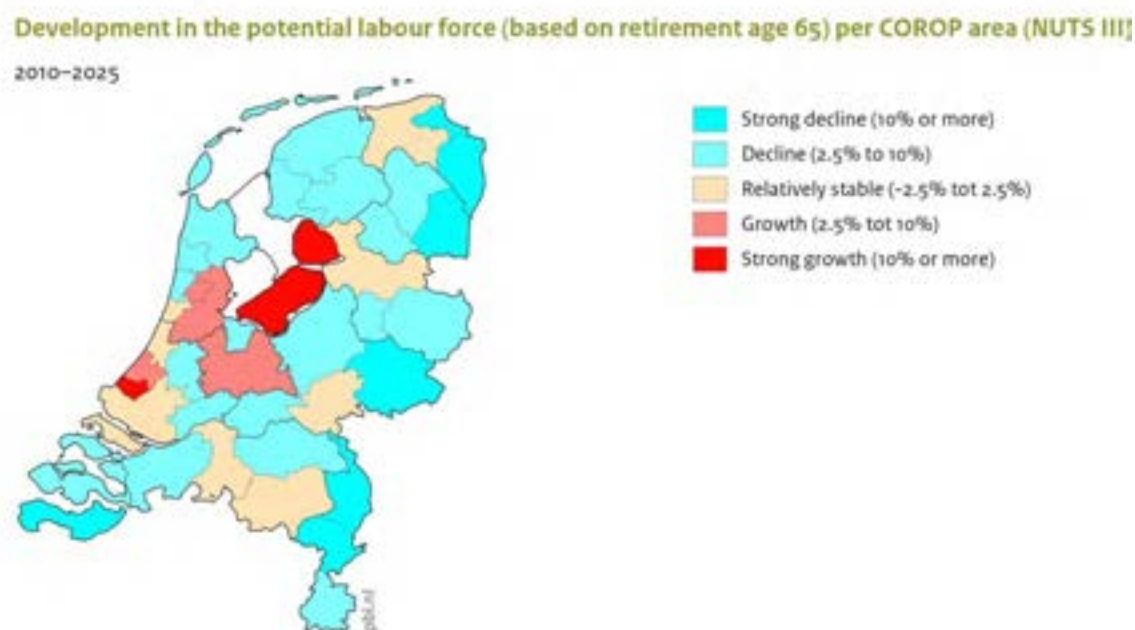


Figure 11 in the potential labour force (based on retirement age 65) per COROP area (NUTS III), 2010–2025

Source: PBL/CBS 2011; De Jong and Van Duin, 2011, p.10.

2.1.3 Causes of national and regional demographic changes

The demographic changes described above (i.e. declines in population and potential labour forces, increase in the share of people aged 65 and over, decrease in the share of those under the age of 19) are the result of changes in the following components: births; deaths; and external and internal migration rates. The population of a particular area (e.g. country, province, region, or municipality) declines when the sum of the natural balance (number of births minus number of deaths) and the migration balance (number of immigrants/arrivals minus number of emigrants/departures) is negative.

Changes in the size of the potential labour force depend primarily on the age distribution of the population and (age-specified) migration (De Jong and Van Duin, 2011). The decline in the number of young people means that in many regions fewer young people join the labour force, while the ageing of the population means many older people leave the labour force (De Jong and Van Duin, 2011). The large 'baby boom' cohorts will no longer constitute the 20 to 65 age group in the coming decades and will be replaced by smaller birth cohorts (De Jong and Van Duin, 2011, p. 9). As a result, the potential labour force will decline, particularly in the peripheral regions, which already have large ageing populations, decreasing birth rates, and the departure of young people to more economically attractive regions (selective outmigration) (De Jong and Van Duin, 2011).

In general, there are three reasons for these demographic changes; socio-cultural developments (e.g. individualisation and emancipation); regional economic developments (e.g. in commerce and work opportunities); and planning decisions (primarily related to housing). Socio-cultural factors mainly affect natural population developments (birth and death rates). For example, variations in the ages at which

people enter into marriage or cohabitation, when they have their first child, and in the number of couples who decide to stay childless, all of which can cause falling birth rates¹³.

Regional economic and spatial planning factors mainly affect migration patterns. The economic situation or particular spatial planning policies influence inward and outward migration levels. For instance, a negative economic situation and a restrictive spatial planning policy can increase the rate of outward migration¹⁴ (Van Dam *et al.*, 2006; Verwest and Van Dam, 2010; Verwest, 2011, see Section 3 for more information about the relation between economy and demographic decline).

Previously, declining populations in municipalities and regions were mainly caused by a negative economic situation, which in turn resulted in a negative migration balance. The current and future declines in rates are also increasingly being caused by a negative natural balance, which is a result of socio-cultural developments and changes in the composition of the population. Verwest *et al.* (2010), for example, show that between 2000 and 2008, the shrinking experienced in many municipalities in southern Limburg and north and eastern Groningen was caused by both natural changes and a negative migration balance.

2.2 The consequences and challenges of demographic changes for the regional economy

The previous section has shown that different types of demographic changes are experienced on a local scale. This section provides an overview of the consequences of these demographic changes for the regional economy and labour market. The relationship between demographic decline (e.g. in population and potential labour force) and the economy is very complex. This has to do with the fact that economic developments may be the cause as well as the consequence of demographic decline (Van Dam *et al.*, 2006; Verwest, 2011, p. 51).¹⁵ As a result, there is much disagreement and much uncertainty about the economic consequences of demographic decline. This section, nevertheless, attempts to provide an overview of the possible consequences. The regional chapters in this report investigate whether or not the possible consequences as described in this section actually occur in the three shrinking regions. The indicators used to describe the economic consequences have been put in italics. However, before discussing these consequences, national and regional developments in the labour force are first described.

Developments in the labour market are determined not only by labour supply, but also by labour demand. This labour demand is difficult to predict and is partly influenced by the economic trend (Verwest and Van Dam, 2011, p. 12). Moreover, labour supply and demand are often related (Commissie Bakker, 2008, p. 4; De Graaff *et al.*, 2008). Labour demand may also be negatively affected by demographic decline. This section focuses on the relationship between demographic decline and labour demand.

Some argue that industries (especially those that are population-related or labour-intensive) tend to leave shrinking regions, which could reduce labour demand (Verwest, 2011, p. 54). A decrease in potential labour force is expected to result in a tight labour market as well as an increase in out-migration

¹³ These social cultural developments are also called the second demographic transition.

¹⁴ This results in processes whereby people move from the periphery to the centre, which is also known as an urbanisation process.

¹⁵ A negative economic situation may cause an increase in out-migration (people who find work elsewhere). This may lead to a decline in population, which in turn may cause businesses to relocate or close, thus causing a decrease in the number of jobs, which will have further negative effects on the economy. However, Broersma and Van Dijk (2002) concluded that, in the Netherlands, a negative economic situation (loss of employment) does not immediately result in population decline. A reason for this is that changes in labour demand (job losses) are compensated by changes in labour participation rates, and in regional unemployment rates, rather than by changes in spatial mobility (increase in the outflow of people). The relatively short commuter distances within the Netherlands could also have an effect; people who become unemployed in one region could find work in other regions without having to move away. At this point, the Netherlands differs from the United States, where job losses result in spatial mobility (migration). The relationship between demographic decline and the economic situation is described in Section 3.3.3 in more detail.

or closure of particularly labour-intensive industries, which would reduce the labour demand. Weterings and Knoben (2012) and Raspe *et al.* (2012) confirm that the labour market is indeed a push factor for companies that decide to relocate over long distances (outside their regional labour market). However, according to Van Oort *et al.* (2007), this is not the case when they relocate over short distances (within municipalities and COROP areas (NUTS III)) – which applies to most business relocations (94% of businesses move within their COROP area, and 75% stay within their municipality). For these companies, push factors are business growth and availability of land for expansion.¹⁶ A decrease in potential labour force may also result in a decrease in inward migration of businesses and company start-ups. For municipalities in which the potential labour force decreases, it can become more difficult to attract new companies. *New companies will be hesitant to move to regions with an ageing population and a decreasing potential labour force, for fear of not being able to find enough qualified personnel* (Verwest, 2011). Overall, there is only limited migration of companies over longer distances in the Netherlands (Van Oort *et al.*, 2007).

A decrease in potential labour force may decrease labour demand (i.e. a decrease in the number of jobs). This is related to the previous two points. De Beer (2009) argues that *a decrease in labour force may lead to a reduction in job growth. Together with an ageing population, this may cause companies to decide to avoid such shrinking regions and, instead, establish themselves in growing regions, where there are more opportunities for finding enough and suitable employees* (Verwest, 2011). This behaviour creates an important policy implication related to inward investment for the private sector, pointing out the need for regional and local authorities to work with existing firms to avoid companies leaving the area.

Verwest and Van Dam (2010) show that, between 2001 and 2007, the percentage of company closures in shrinking regions was not higher than the national average. However, the percentage of company start-ups in two out of three shrinking regions was below the national average. This could have been due to a reduction in population size, but also could be the result of a lower educational level and less disposable income of the population remaining in such shrinking regions. According to Raspe *et al.* (2009), the percentage of start-ups in the business service sector is higher in areas with relatively higher educated people and people from higher income groups. In addition, Verwest (2011) shows that, between 1996 and 2008, even in shrinking regions, the number of jobs grew in most sectors, although more slowly than in the Netherlands as a whole.

Researchers disagree about the relationship between decreases in potential labour force and living standards¹⁷ (*gross regional product per capita*). Some (including De Beer, 2009) conclude that a decrease in labour force may result in a decrease in regional Gross Domestic Product per capita. Others (including Derks *et al.*, 2006; Van Dam *et al.*, 2006; Gáková and Dijkstra, 2010; Verwest and Van Dam, 2010; Verwest, 2011) argue that demographic decline may lead to economic decline, but not automatically. Effects may vary per economic sector and region, and partly depend on the type of businesses in the region and on developments in labour participation and productivity (Verwest and Van Dam, 2010; Verwest, 2011; Weterings and Knoben, 2012; Weterings *et al.*, in prep.).

Based on research findings by Gáková and Dijkstra (2010), De Graaff *et al.* (2008), and Verwest (2011), we can conclude the following. *Demographic and economic decline is more likely to occur in*

¹⁶ More specific information about the number of company relocations away from shrinking regions is not available, nor do we know their rationale for relocating. More in-depth research on these issues in relation to shrinkage and labour market and regional economic effects would be very useful.

¹⁷ Different definitions are used to analyse the economic effect of a decrease in potential labour force. De Beer (2009) and Gáková and Dijkstra (2010) use gross domestic product per capita, while Verwest and Van Dam (2010) use gross regional product per capita. Gross regional product per capita is a better indicator for prosperity/standard of living, although there are methodical reasons for why De Beer and Gáková and Dijkstra choose to use another indicator. These include that their studies are both of entire European regions whereas Verwest and Van Dam only include Dutch regions in their analysis. The difference in study object and availability of data are thus primary reasons for the differences.

peripheral rural regions with a monofunctional economic structure and/or in regions that have large consumer services, health care and public welfare, government and educational sectors. However, central urban regions with a diverse economic structure and/or regions with large business services, industry or logistics sectors, seem less vulnerable to demographic and economic decline.

2.3 National policy strategies

2.3.1 Policy on population decline

In the autumn of 2009, the former Ministry of Housing, Spatial Planning and the Environment (VROM) and the Ministry of the Interior and Kingdom Relations (BZK), the Association of Netherlands Municipalities (VNG), and the Dutch Association of Provincial Authorities (IPO) launched an action plan to address population decline. This plan was mainly intended for municipalities and regions already experiencing population decline. The Dutch Cabinet declared that the municipalities themselves should have the primary responsibility for dealing with demographic decline, and this action plan was intended to support them in their handling of this issue.

Actions for shrinking regions to implement were outlined as part of the plan, both short and long term, in the fields of housing, education, employment and spatial planning. The action plan stated that population decline may negatively influence the labour market (especially in the area of health care), and various actions were formulated to tackle this problem. For example, shrinking regions would need to undertake regional labour market analyses, supported by the Ministry of Social Affairs and Employment (Ministry of BZK *et al.*, 2009).

The content of this national action plan on population decline was influenced by studies undertaken by ‘Top Team Dijkstal and Mans’ (2009a, b, c), who recommended that governments and the business community pay more attention to demographic decline, and municipalities and provinces incorporate the consequences of demographic decline into their economic and labour market policies. This team also argued that it would be important to strengthen the co-operation between educational institutions and the business community, in order to resolve mismatches between labour supply and demand.

Following the publication of the action plan, various initiatives were introduced, including the creation of a working group on ‘economic vitality and labour market’, which was set up by the National Network of Population Decline (*Nationaal Netwerk Bevolkingsdaling*). In addition, several conferences were organised, such as the December 2010 conference entitled ‘Shrinkage in motion: Working together for ambitious regions’ (*Krimp in beweging. Samen werken aan ambitieuze regio’s*), organised by the Ministry of the Interior and Kingdom Relations, IPO, VNG and the provinces of Groningen, Zeeland and Limburg (Ministry of BZK, 2010). This conference also contributed to the progress report on the intergovernmental population decline action plan and the strategic knowledge agenda, which was sent by the ministry, the IPO, and the VNG to the Dutch House of Representatives in early 2011 (Ministry of BZK, VNG and IPO, 2011).

The progress report confirmed that the Dutch Cabinet was continuing its focus on shrinking regions. However, the Cabinet decided to widen its focus and include regions that were not yet experiencing consistent population decline, but were likely to do so in the future: so-called ‘anticipating’ regions. Furthermore, they emphasised that, in the long term, the strengthening of the economic vitality of these shrinking and anticipating regions would be of major importance and, therefore, they decided to put more effort into this issue. The mismatch in the labour market was perceived to be one of the major problems in shrinking regions, and the Dutch Cabinet recommended municipalities make better use of

regional labour market analyses in order to obtain a clear view of current and future labour market issues (Ministry of BZK, IPO and VNG, 2011, p. 26).

The progress report stated that the national government in the near future would not be able to allocate additional resources to shrinking and anticipating regions with respect to this issue. However, there would be some facilitation through analyses of whether or not national law and regulatory structures would be ‘decline proof’ and, if not, this would be adapted. The Dutch Government, in the progress report, also stated their intention to support these regions by increasing local government awareness of demographic decline and its effect on the economy and labour market. Finally, the report stated the intention of increasing the knowledge on shrinkage through the formulation of a national knowledge agenda (prominently including economic vitality) (Ministry of BZK and Platform 31, 2012), and launching a knowledge platform on demographic transition (*kennisplatform demografische transitie (KDT)*).

Meanwhile, the new Dutch Cabinet (VVD and PvdA, 2012, p. 38) has indicated in its coalition agreement that different ministries will continue to focus on issues of shrinkage. Examples outlined include the labour market, housing, services and education. Again, it is stated that local governments are expected to take the lead on these issues, although the national government is willing to facilitate, by means such as delivering flexibility through made-to-measure regulation.

2.3.2 Policy on economy

Unlike the Ministry of the Interior and Kingdom Relations, the Ministry of Economic Affairs initially paid little attention to population decline. It was invited to participate in the action plan on population decline but did not accept, presumably because this was not in accordance with the national economic policy at the time, which focused on stimulating the regions that were strong, rather than supporting those (often peripheral and shrinking regions) that were the weakest¹⁸ (Ministry of EZ, 2004). As a result, the action plan (2009) was not focused on the economy.

From 2010 onwards, however, the Ministry of Economic Affairs started to pay more attention to demographic decline. In response to the Dutch House of Representatives’ resolution by Ortega, Smeets and Ten Hoopen (Tweede Kamer, 2009), the ministry commissioned the Dutch consulting firm Berenschot to investigate the economic consequences of and local economic strategies for demographic decline in relation to services, business activity and employment (Ministry of EZ, 2010). In January 2010, the Ministry of Economic Affairs and Berenschot published their report entitled *Entrepreneurship in times of shrinkage (Ondernemend met krimp)*. This study presented an overview of possible strategies to respond to shrinkage for both governments and businesses (Ministry of EZ, 2010).

In the same year, the Cabinet increased its attention on demographic decline in relation to the economy. It asked the Social and Economic Council of the Netherlands (SER) to investigate how the business community could contribute in order to resolve the negative consequences of population decline. The SER was asked to investigate how awareness within the business community could be strengthened and how they could anticipate demographic changes (Middelkoop, 2010; Verwest, 2011, p. 268). The SER concluded that shrinking regions would need to undergo a transition process, as the demographic decline was found to be a structural phenomenon that could not be reversed. It noted that certain conditions would be required in order to realise such a process. Government authorities, businesses and societal institutes would need to raise this awareness, and co-operate in order to make use of the changes in their region. The

¹⁸ In the past, the Ministry for a long time tried to distribute growth fairly. New jobs were previously created by the national policy to decentralise public services and to stimulate companies (by means of fiscal measures) in order to establish themselves in those regions. As this policy seemed ineffective, the Ministry decided to replace this policy with one focusing on supporting the strongest regions (Verwest, 2011).

SER emphasised that it would be important to realise economic diversity by focusing on those economic sectors (such as biobased economy, and care facilities) that would fit within patterns of regional distinctiveness (SER, 2011).

In 2011, the Ministry of Economic Affairs decided to focus initially on nine, and later ten, top sectors, and it launched a policy document entitled ‘To the top: Towards a new enterprise policy’ (*Naar de top: de hoofdlijnen van het nieuwe bedrijfslevenbeleid*) (Ministry of EZ, 2011a). These are sectors in which the Netherlands excels, on a global level.¹⁹ The government did not make its own proposals for these sectors, but rather invited businesses, knowledge institutes and governments to draw up joint action plans (Ministry of EZ, 2012). In addition, neither spatial elaboration of this top sector policy nor the regional labour market were targeted, as the spatial economy is no longer the primary responsibility of the national government, but rather that of local governments (Raspe *et al.*, 2011). Provinces have previously collaborated with businesses and knowledge institutes to draw up action plans and decide on which industrial sectors to focus. However, when deciding on the top sectors, the features of the regional labour market were not particularly taken into account. The provincial top sector policy and labour market issues are currently linked, to discover whether the selected top sectors match the competencies of the regional potential labour force. These analyses and planned actions are then combined to form what are called Human Capital Agendas (HCAs). First, the national government encouraged each top sector to draw up its own HCA, after which they promoted formulation of an HCA for each region’s provinces, businesses, and educational institutes.

In 2011, Dutch research institute Alterra and the Ministry of Economic Affairs published the knowledge agenda EL&I (now: EZ) on population decline (Breman and Coninx, 2011). The report emphasises that demographic changes are likely to affect the labour market and employment. So far, this knowledge agenda has resulted in a study on agriculture within shrinking regions (Breman and Van Doorn, 2011), but there is not yet a study that addresses labour market issues in these regions.

2.4 Regional policy strategies for demographic change

2.4.1 Overview of regional policy strategies

This section provides a short overview of the possible policy responses to demographic changes in relation to the labour market, economy and education (Skills Ecosystem²⁰).²¹ The policies formulated by local governments in the selected shrinking regions can be classified in different ways, one of which is according to policy field. The policy fields described in this overview may also be affected by policies in other policy fields (e.g. transport, housing, culture). Some policies are in a preliminary stage (proposed policies), while others have already been approved. Also, a distinction can be made between policy plans and actions (legally binding/not legally binding).

Furthermore, policies may have different objectives. When local governments experience demographic changes, they may try to increase their population, household numbers and potential labour force in order to reverse the decline (Verwest, 2011). Examples are policies that focus on strengthening the

¹⁹ These sectors are characterised by a strong market and export position, a solid knowledge base, close collaboration between entrepreneurs and knowledge institutes and the potential to provide input in solving societal challenges (Ministry of EZ 2011b, 4).

²⁰ *Skills Ecosystem*, here, is a collective name used by the OECD for education and training, and for the development, demand, and utilisation of skills.

²¹ Policies focused on demography are not included because in the Netherlands national nor local governments do not formulate a specific policy on population.

regional image as a place to live and work (through marketing campaigns or regional branding foundations) in order to attract new residents or businesses from outside the region.

Alternatively, local governments can accept the demographic changes and adapt their policies accordingly (Verwest, 2011). Examples are policies that focus on stimulating innovations in order to increase labour productivity, thus, doing more with fewer people, develop new economic sectors that match the competences of the regional potential labour force, or develop training courses specifically to improve the match between regional labour supply and demand.

In addition, policies may differ in the underlying policy assumptions on which they are based. For example, some policies are focused on the assumption that people follow jobs, while other policies focus on the assumption that jobs follow people. Policies that are based on the first assumption, primarily those focused on the regional economy, businesses, and office locations, acquisition, spatial planning and transport, are focused on attracting new businesses (through marketing, acquisition, new business location development, synergy/clustering, or the promotion of specialist niches), or on developing new economic sectors and clusters, encouraging the local people to start their own businesses, and expanding infrastructure in order to create new jobs. Policies that are based on the second assumption (that jobs follow people), which are primarily those focused on labour market and education (but also housing and culture which are not discussed in this study) work to attract people to their region (through marketing, expanding educational facilities, setting up new campuses²²), improving people's skills (through education and/or on-the-job training), increasing participation of women and the elderly (by extending the opening hours of child care centres and investing in employee vitality), and improving the image of certain professions.

Finally, policies may differ according to those who formulate or initiate them. A distinction can be made between governments, businesses, social partners, educational institutes, or any combination of these.

The regional chapters in this report describe the policy responses by local governments and businesses to demographic changes. The above mentioned classifications must be noted in relation to the content of these regional chapters. Box 11 provides a broad overview of the policy responses that can be distinguished. This distinction is based on the policies mentioned in the literature (see also Verwest and Van Dam, 2010; and Verwest, 2011). In addition, the box also presents some examples of strategies in the selected case-study regions.

²² This can be done also through housing market policies and cultural amenities, however, this is not the focus of this study.

Box 11 Overview of possible policy strategies and examples found in the selected case study regions

1. Economy

- Joint and individual marketing campaigns; the creation of a new positive regional image to attract new businesses and jobs to the region.
- New businesses are attracted through acquisition.
- Development of new concepts for business locations (e.g. Carbon 6 in the Limburg region).
- Development of new economic sectors and clusters
- Development of new economic activities that fit the regional distinctiveness (e.g. silver economy, bio-based energy, care facilities).
- Development of new economic sectors that match the competencies of the regional potential labour force.
- Development of new economic sectors that match the competencies of the population.
- Stimulation of economic diversification.
- Promotion of specialist niches (e.g. Chemelot in the Limburg region).
- Encouragement of small and medium-sized enterprises to innovate through co-operating with universities (e.g. Cill in the Limburg region).
- Encouragement of individuals to start their own business.

2. Labour market

- Joint and individual marketing campaigns; the creation of a new positive regional image to attract new people.
- Creation of a positive image of technical professions and health care (e.g. Seaport Experience Centre in the Groningen-Drenthe region) to increase the number of young people who choose these subjects.
- Improvement of the image of companies, to become an attractive employer and attract people from other regions (e.g. Dow Chemicals in the Zeeland region and Oosterlengte in the Groningen-Drenthe region).
- Increase in labour productivity by investment in innovations (e.g. ICT innovations in health care institutes in Meander in the Limburg region).
- Increase in labour participation of women and people over the age of 65, through life-long learning, by extending the opening hours of child care centres, or by investment in employee vitality (e.g. Sorgzaam in the Zeeland region).

3. Education (Skills Ecosystem)

- Development of specific training courses to improve the existing mismatch of labour supply and demand (e.g. Oosterlengte in the Groningen-Drenthe region).
- Expansion of educational facilities to improve people's skills and to attract new people from other regions (e.g. set up campuses, stimulate co-operation between local businesses and educational institutes, develop specific educational programmes).

Apart from these active responses, it is also possible to ‘do nothing’. Some economists are of the opinion that the economy and labour market will adjust themselves through market mechanisms and that specific economic, labour market or other policies are unnecessary. However, they ignore that in shrinking regions, such as those studied here, problems associated with the demographic transition (decline in population and potential labour force, increase in the share of people aged 65 and over, decrease in the share of those under the age of 19) are large, and will not solve themselves, due to market failures and negative external effects. Problems may strengthen the negative consequences of shrinkage (creating high numbers of vacancies for shops, offices, and in housing, leading to mismatches between labour supply and demand, or even to a shortage of labour). A smaller population, fewer households and a smaller potential

labour force do not necessarily present a problem, but the transition from one situation to the next can be difficult. This is particularly so in the case of rapid, extensive and persistent shrinkage in several bordering municipalities at the same time, and if municipalities fail to come up with a timely and co-ordinated response (Verwest and Van Dam, 2010, p. 14). This finding is in keeping with OECD (2009), SER (2011) and Barca *et al.* (2011), who all argue that *strategies should be place-based and highly contingent on context (instead of place neutral): they should consider economic, social, political and institutional diversity in order to maximise both the local and the aggregate potential for economic development.*

2.4.2 Local government responses to demographic changes

Verwest (2011) concludes that in the field of the economy, local governments have hardly factored demographic changes into their policies, let alone changed their policies in response to it. Policies were found to be primarily focused on improving the image of the regional business environment, on setting up specific educational programmes (especially in health care and technology), and on increasing labour participation and productivity. In addition, there are economic policies that do not explicitly take demographic changes into account but do influence demography. Examples are the development of new economic drivers and acquisition.

An explanation for the fact that in economic policy not much attention has been paid to demographic changes could be related to the current economic crisis and the resulting decrease in the demand for labour, things that may mask any possible economic problem in the labour market caused by a decrease in potential labour force. Governments, as well as businesses, are afraid to mention demographic decline, because they think that it will damage the regional economy. This is based on the generally accepted assumption that demographic growth is an important condition for economic growth. However, Section 3.3.3 shows that many researchers conclude that demographic decline may result in economic decline, but does not do so automatically. Whether or not decline will happen depends on the type of businesses in the region and the developments in labour participation and productivity. Another explanation may be that, in economic policy, local governments generally are more reluctant to intervene and tend to believe that the economy and labour market will be adjusted through market mechanisms (Verwest, 2011).

The regional chapters show how governments and businesses in the selected shrinking regions recently have reacted and/or are still reacting to demographic changes, and whether or not they are aware of the demographic changes and are adapting their strategies accordingly. Below, the effectiveness of different policy strategies is discussed.

2.4.3 Effectiveness of different policy strategies

For governments and employers in the Dutch shrinking regions it will be difficult to attract new employees from other regions, both nationally and within Europe. Almost every Dutch municipality is expected to experience a decrease in its potential labour force between now and 2040, according to the projected demographic developments (CBS and PBL, 2011). In addition, projections indicate that this also applies to other European regions (Espon and NIDI, 2010; see also Figures 12 and 13).

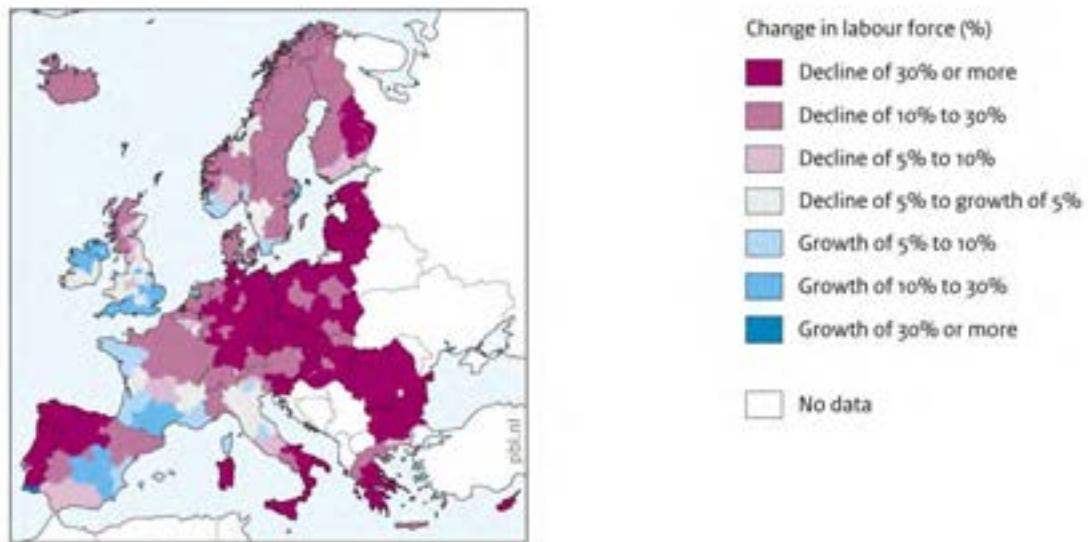


Figure 12 Development of the labour force per COROP area (NUTS III) in Europe, 2005–2050, in the limited Social Europe scenario

Note: This scenario shows the consequences of effective cohesion policies in times of low economic growth and growing environmental problems. This future is characterised by relatively small decreases in mortality, constant fertility patterns and declining migration levels (ESPON and NIDI 2010, VI & VII)

Source: ESPON and NIDI, 2010

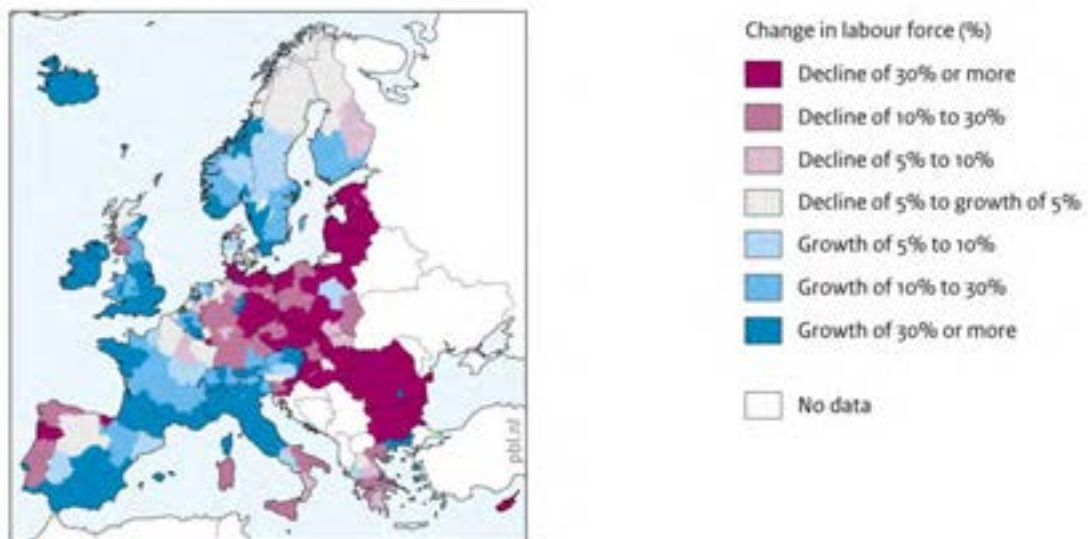


Figure 13 Development of the labour force per COROP area (NUTS III) in Europe, 2005–2050, in the expanding Market Europe scenario

Source: ESPON and NIDI, 2010

Note: This scenario shows the demographic development if policies focus on competition in case of sustainable economic growth. Slightly less favourable developments in mortality and fertility are assumed to go hand in hand with large increases in migration and further diverging regional inequalities (ESPON and NIDI, 2010, p. VI)

Municipalities as well as the business community in the shrinking and anticipating regions, therefore, would be better off focusing on how to do more with fewer people, rather than try to attract more people, in particular in the 20 to 65 age group (in a bid to increase their potential labour force). With this in mind, municipalities, for example, could stimulate businesses and knowledge institutes to develop joint educational programmes, so that the competencies of the available labour force would better match current and future labour requirements. Examples are educational programmes in the health care and welfare sectors to meet the expected increase in the demand for care as a result of the ageing population (Verwest and Van Dam, 2011, p. 25).

De Graaff *et al.* (2008) concluded that in some economic sectors and some (especially peripheral and shrinking) regions, jobs not only follow people, but people follow jobs as well. For this reason, policies in relation to business locations, marketing and acquisition, and economic clustering (profiling) are relevant, too. However, if municipalities focus their strategies on attracting new businesses in the belief that people will follow work, it is possible that expectations will be too high and not match the demographic and spatial-economic reality. As noted by Van Oort *et al.* (2007), only a very small proportion of business relocations are outside the local area. Most businesses move within the same municipality; location shifts to other regions are exceptional. Therefore, *municipal policy focused on attracting new businesses will result mainly in interregional or intraregional competition between municipalities for the same businesses and may lead to unprofitable spatial investments or careless use of space, vacancies, and to high interest charges for municipalities* (Verwest and Van Dam, 2010, Verwest, 2011).

In addition, Weterings and Knobben (2012) show that spatial concentrations of similar or related firms, a higher level of urbanisation and research and development (R&D) intensities keep companies from leaving their labour market region. From this can be concluded that stimulating these ‘keep’ factors can be a more fruitful strategy for municipalities, regions, and provinces on which to focus. Furthermore, Thissen *et al.* (2011), Raspe *et al.* (2012) and Van Oort (2012) show that they should develop economic sectors that are in accordance with the skills that are regionally available. Verwest and Van Dam (2010) agree and recommend *municipalities stimulate those economic sectors that match the competencies of the potential labour force or those that benefit from the projected demographic changes.*

Finally, Marlet *et al.* (2012) suggest making use of the opportunities of cross-border labour markets. They argue that an integration of labour markets increases the number of available jobs and decreases unemployment in the long run. They believe it can even increase the attractiveness of the bordering regions (if these are shrinking or anticipating regions) to households from outside the region to settle there (see also Marlet, 2012). Integrating these opportunities seems difficult, given current and expected demographic developments, however, it could prevent the current population from leaving, thus reducing demographic decline and preventing associated labour market problems.

2.5 Conclusions

The Netherlands as a whole and many Dutch regions in particular experience a decline in potential labour force as well as an ageing population. These demographic transitions may have consequences for the regional labour market and economy:

- In the long term, a decreasing potential labour force may lead to a decreasing labour supply, a tight labour market, more competition over workers, or even to labour shortages. This will particularly disadvantage labour-intensive sectors.

- In addition, a decrease in population and number of households implies a smaller local market and may lead to an oversupply of amenities. Such a surplus in amenities may in turn result in vacant properties.
- At the same time, for consumers, some services (e.g. health care) may become more expensive, as demand in shrinking regions is expected to increase due to ageing with a simultaneous decrease in labour supply.
- As the labour market is one of the push factors for companies to relocate outside their regional labour market, in theory, this may increase the outflow of businesses from shrinking regions to growing regions. However, this applies only to a limited percentage of relocations, as most businesses (94%) relocate within their region or municipality. It is uncertain if this situation – of companies moving away from their ‘shrinking’ region because of labour market issues – is already occurring, as no specific data are available on precisely this type of behaviour. Future more in-depth research on shrinkage and its labour market effects, therefore, would be useful.
- Demographic decline may lead to economic decline, but not automatically. Whether or not this occurs depends on the spatial characteristics and economic structure of shrinking regions and their size, and the duration and speed of the demographic transitions they face.

The labour market, people's skills, the ecosystem and the economy are considered key policy intervention fields to address these consequences of demographic decline and population ageing. However, until recently, only a few economic and labour market strategies were found to pay particular attention to these demographic changes (Verwest and Van Dam, 2010; Ministry of EZ, 2010; SER, 2011; Verwest, 2011). This does not mean that economic or labour market strategies have not been developed in these regions, however, there appears to be no explicit intention to remove or soften the effects of shrinkage. The regional chapters provide an overview of the present consequences of demographic changes and strategies in the fields of the labour market, the economy, and education (skill ecosystem) as developed in three Dutch shrinking regions.

Based on this chapter, the following policy issues can be formulated for municipalities, provinces and the national government.²³

Municipalities

- Municipalities and businesses in current shrinking and anticipating regions need to take demographic transitions into account in their policies on the labour market, the economy and education (skill ecosystem).
- Municipalities in current shrinking and anticipating regions should choose an integral strategy that focuses on housing, the economy, the labour market, and education, instead of on a sector-based approach. Municipalities in the existing shrinking regions currently often choose a sector-based approach that focuses on the housing market, but this is rarely sufficient, as work (jobs) not only follows housing (people) in such regions but, often, housing (people) also follows work (jobs). Good quality housing and attractive surroundings, therefore, are not enough to either hold on to current residents or attract new ones.
- It would also make sense for municipalities in current shrinking and anticipating regions to focus future policy efforts more on managing or anticipating demographic decline than on combating it. After all, experiences in the current shrinking regions show that resistance is fairly ineffective and leads mainly to intraregional competition over the same residents and businesses, unprofitable spatial investments and vacancies.

²³ These recommendations are based on the confrontation between policy assumptions and literature about the spatial patterns of people and businesses, and experiences in current shrinking regions. See also Verwest and Van Dam (2011).

- Municipalities as well as the business community in the shrinking and anticipating regions would be better off focusing on how to do more with fewer people, rather than on how to attract more residents; in particular, those in the 20 to 65 age group (in a bid to increase their potential labour force). With this in mind, municipalities, for example, could stimulate businesses and knowledge institutes to develop joint educational programmes, so that the competencies of the available labour force would better match current and future labour requirements. Examples include educational programmes in the health care and welfare sectors to meet the expected increase in the demand for care as a result of the ageing of the population.
- Finally, it would make sense for municipalities in the shrinking and anticipating regions to stimulate those economic sectors that match the competencies of the potential labour force or those that may benefit from the projected demographic changes.
- It is recommended that municipalities in shrinking and anticipating regions formulate and coordinate their strategies on a regional level, and that other actors active in regional labour markets are involved as well.

Provincial and national government

- The national government and the provinces should raise awareness among local government officials and businesses of demographic transitions and the effects on the labour market and regional economy.
- The national government and the provinces could also highlight the importance of focusing on demographic decline in policies on the labour market, the economy and education (skill ecosystem), and of timely and preferably joint anticipation on a regional level.
- They also could support local parties in their search for the most effective strategies and inform them about successful strategies implemented in other shrinking regions.
- In addition, they could support municipalities and businesses in creating the conditions needed to include and anticipate demographic changes in their policies. For example, they could help to overcome institutional barriers (such as rules and taxes) that prevent cross-border labour markets from functioning properly.
- Finally, demographic transitions force the national government and the provinces to reflect and/or adjust (reformulate) their own policies on the economy and the labour market.

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CHAPTER 3**GRONINGEN-DRENTHE: THE LABOUR FORCE CHALLENGE OF ACTIVATING AND SKILLING WITHIN A CHANGING DEMOGRAPHIC ENVIRONMENT**

Population decline in some of the northern areas (Groningen and Drenthe Provinces) seems to be driven more by economic-geographic concentrations in production and employment towards urban and economic core regions and, as a consequence, migration behaviour, than by negative natural growth rates. The less mobile, lower educated and more inactive job seekers that stay behind leave shrinking areas with relatively high stocks of unemployed and/or disabled persons. Keeping this unemployed labour supply active and skilled for the years to come is the main policy challenge of today.

For the near future, ageing is the central labour market challenge. The expected shortages on the labour market, together with investments in innovative economic sectors like energy, healthy ageing and agribusiness requiring highly skilled labour, conflict heavily with the stocks of low productivity and inactive, unemployed labour force. To solve this matching problem, skills upgrading and job carving on the one hand and enhancing geographical mobility on the other hand have the highest priority.

3.1 Local demographic conditions

In this regional chapter, the case of the Dutch Provinces Groningen and Drenthe (located in the north of the Netherlands) will be analysed. Next to a general analysis, results of the workshop discussions which took place on 5 November 2012 in Assen (Drenthe, Netherlands) are presented. Section 2 provides an overview of the local demographic conditions in Groningen and Drenthe, followed by an analysis of labour market issues in Section 2. Section 3 pays attention to ageing and lifelong learning, followed by a short insight into the presence, chances and challenges for the white, silver and green economy in Section 4. Section 5 deals with key regional topics such as cross border labour market activities and new sources of growth, and highlights the main conclusions of the study visits and the workshops. In Section 6, conclusions are drawn and policy recommendations are devised.

The Netherlands is one of the most densely populated countries in the world. However, the northern regions are the least dense, being traditionally a rural environment. The Provinces of Groningen and Drenthe are two of the three Provinces at the NUTS-2 level in the North of the Netherlands (Figure 14). Together with the Province of Friesland they form the NUTS-1 region of Northern Netherlands, in which they co-operate in an administrative partnership called The Northern Netherlands Provinces Alliance (NNPA). Although the Province of Friesland is not specifically accounted for in this study, some of its areas, especially in the northern part of the Province, also have to deal with population decline and ageing in the years to come. The issues to be faced for Friesland are similar to those outlined for Groningen and Drenthe in this chapter. Three NUTS-3 areas within Groningen and Drenthe that currently face population decline and ageing are paid specific attention in this background note: Northeast Groningen (covering the municipalities of Delfzijl, Appingedam and Loppersum), Southeast Groningen (covering the municipalities of Oldambt, Bellingwedde, Vlagtwedde, Menterwolde, Pekela, Stadskanaal and Veendam) and Southeast Drenthe (covering the municipalities of Coevorden, Emmen and Borger-Odoorn). These areas will be analysed in comparison to the provincial and national averages.

In order to obtain an impression of demographic conditions within the northern areas, in this section attention will be paid to population development, causes of this development and the current population structure.



Figure 14 Groningen and Drenthe regions discussed in this study

3.2.1 Population growth/decline

Figure 15 shows that the population development of the Northern Netherlands in the last decades has been different compared to the national average. Also, for the near future, a continuation of these differences is expected. While the total population of the Netherlands will still keep on growing, specific areas in the Northern Netherlands show a different pattern. The Province of Groningen and the NUTS-3 area of Southeast Drenthe show a lower growth rate compared to the national average. The NUTS-3 areas of Northeast and Southeast Groningen are even declining in population (relative to the situation in 1972).

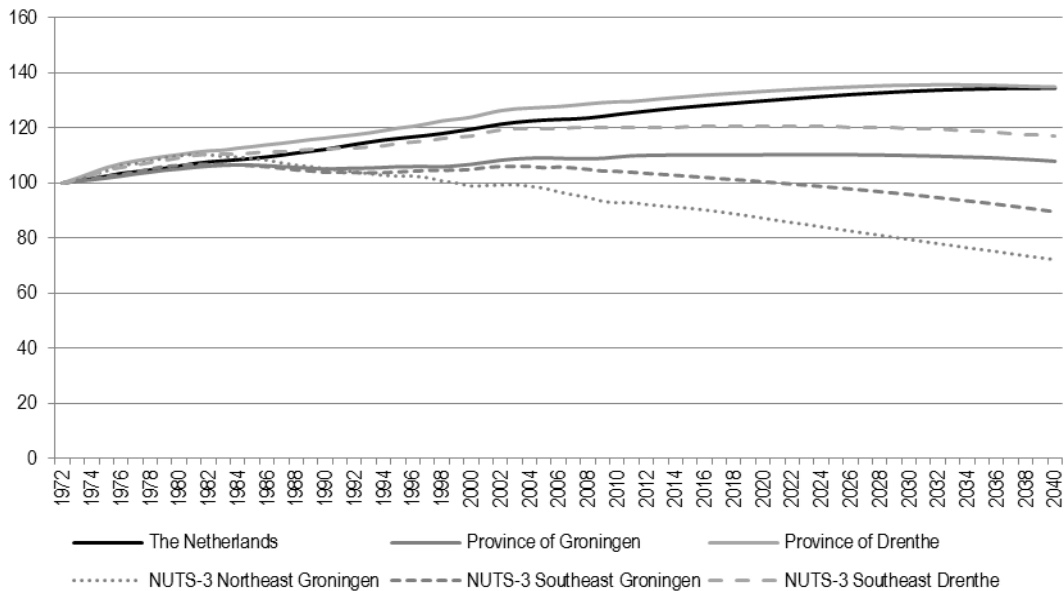


Figure 15 Population growth and projections

Source: ABF-Primos

Figure 16 illustrates the regional variety of population developments on a more detailed level for the coming 13 years, based on data from Statistics Netherlands. It is important to note that there are also areas within the Northern Netherlands that will still continue to grow in the coming years. From the map, a distinction between urban and rural areas becomes clear, with the dark blue areas indicating municipalities in which a bigger city is located. The municipalities facing population decline are mainly rural areas.

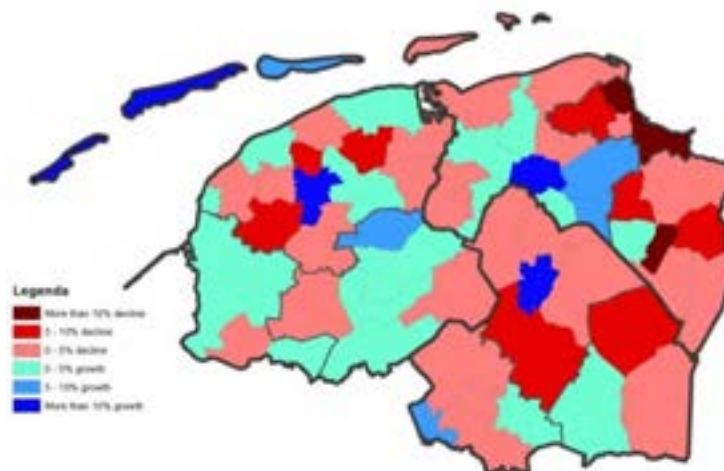


Figure 16 Population development in the Northern Netherlands, period 2012-2025

Source: PBL/Statistics Netherlands, CAB, 2012

When a distinction is made between the developments of different age groups, clear differences arise. Figure 17 shows the ratio between the number of elderly and the population between 20 and 65 for the Netherlands and the two Provinces. It indicates that the ratio of elderly to economic active people will increase in the next decades. For the Netherlands, the ratio between active and older inactive people is expected to change from 5:1 in 1990 to 2.5 workers to 1 older inactive person in 2040. In Groningen and Drenthe, this growth of the older inactive group relative to the active working group is expected to be even stronger.

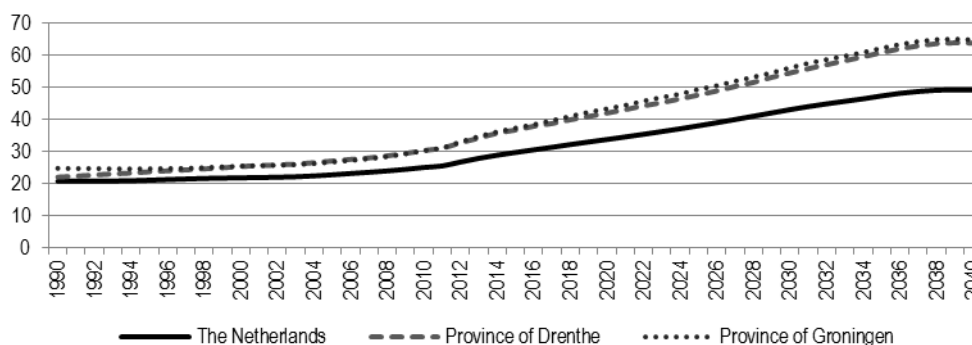


Figure 17 Ratio of population older than 65 and that between ages 20 and 64, 1990-2040

Source: Statistics Netherlands/CAB, 2010

Also, from Figure 18 it becomes clear that ageing seems to be much more of a problem than population development per se in the near future. While the total population in the two northern provinces will still increase and finally more or less stabilise, the relative decrease of the potential work force is much stronger.

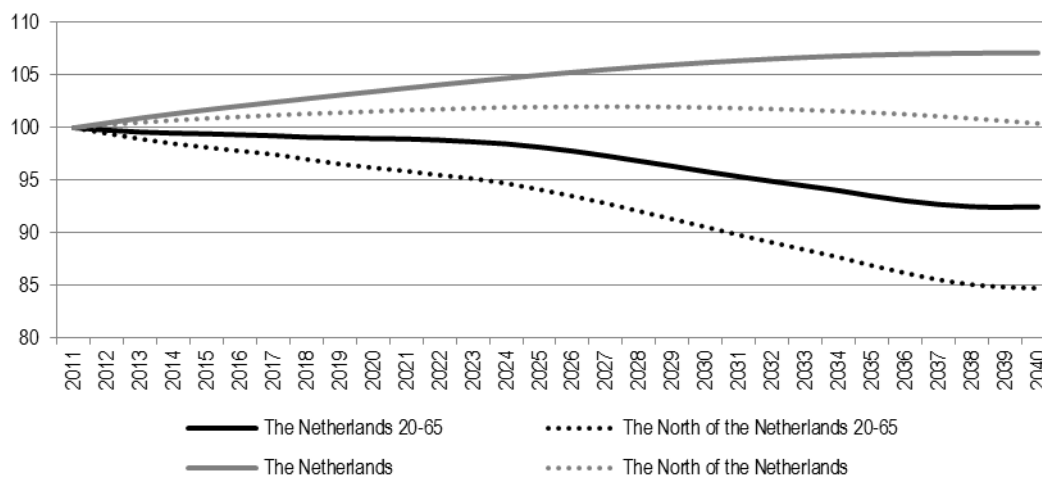


Figure 18 Development of total population and population 20-65 years, 2010-2040

Source: Statistics Netherlands/CAB, 2010

Figure 19 shows the spatial division of the ageing population. Compared to Figure 32, more red spots arise. Except for the areas surrounding the bigger cities of Groningen and Assen, where population growth is expected due to a concentration of jobs that attract people to the cities, decline of the 'economic active' population group is expected in almost all areas.

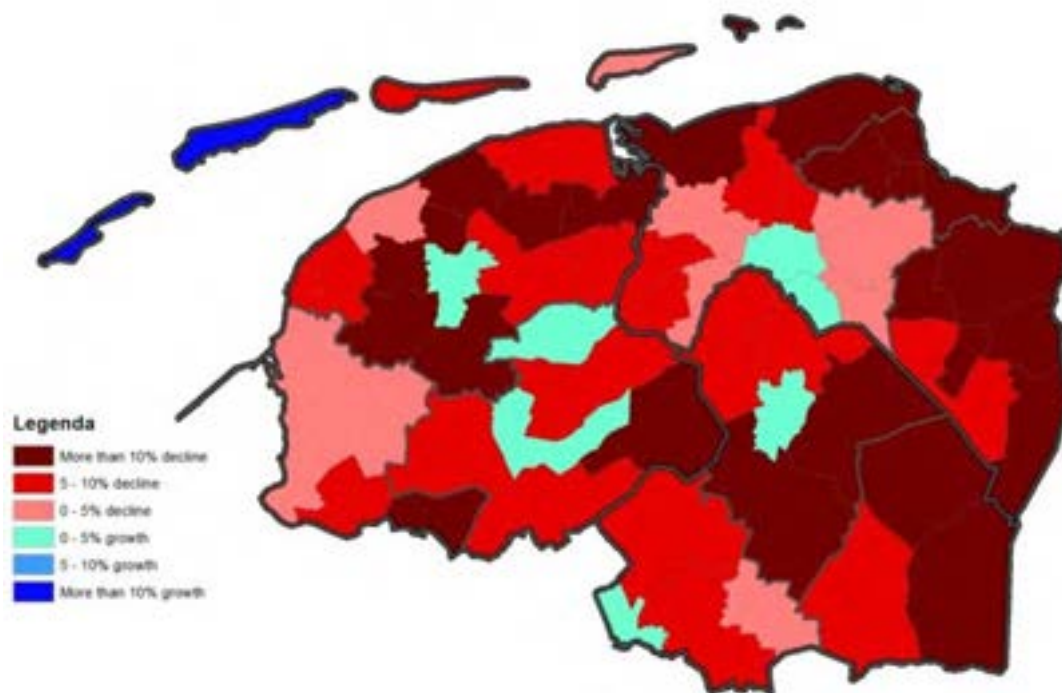


Figure 19 Regional development of population 20-64 years in the Northern Netherlands, 2012-2025

Source: PBL/Statistics Netherlands, CAB, 2012

Although the number of citizens might drop in some areas, Haartsen and Venhorst (2010) show that the number of households will continue to grow until 2040 in most urban and rural municipalities, because of an increase in single households (older people who become widow/ered, middle-aged people who divorce and youngsters leaving home). However, in Northeast Groningen, both the number of households as well as the population ratio have declined in recent years. According to Haartsen and Venhorst (2010, p. 222), regional differences in the timing and degree of population stagnation and decline can be the result of both population composition effects and differences in migratory flows as a result of region-specific concentrations of opportunities and limitations. In other words, population decline is spatially concentrated in specific areas, which makes it even more important to determine the mechanisms behind population dynamics.

3.2.2 Fertility, birth and death

Figure 20 shows the development of fertility rates over the past twenty years, from which various conclusions can be drawn. Firstly, the fertility rates in Groningen and Drenthe are growing and following a similar pattern to the national trend. This trend is based on a ‘catching-up’ effect. By postponing pregnancies in earlier years a low national fertility rate of 1.4 was reached in 1983. After this point, fertility rates started rising again until a national level of around 1.8 children per woman was recently reached. A stabilisation of this level is expected in the shorter term (De Graaf, 2007). Secondly, all the areas that are the focus of this study have a higher fertility rate than the national average, except for the Province of Groningen. The latter is due to the city of Groningen, which is not part of the other NUTS-3 regions and whose inhabitants consist of relatively smaller households and (young) students. That the other areas in Groningen and the Province of Drenthe are above the national average is the result of characteristics of the households in more rural areas; family size is often larger in rural areas compared to more urban areas.

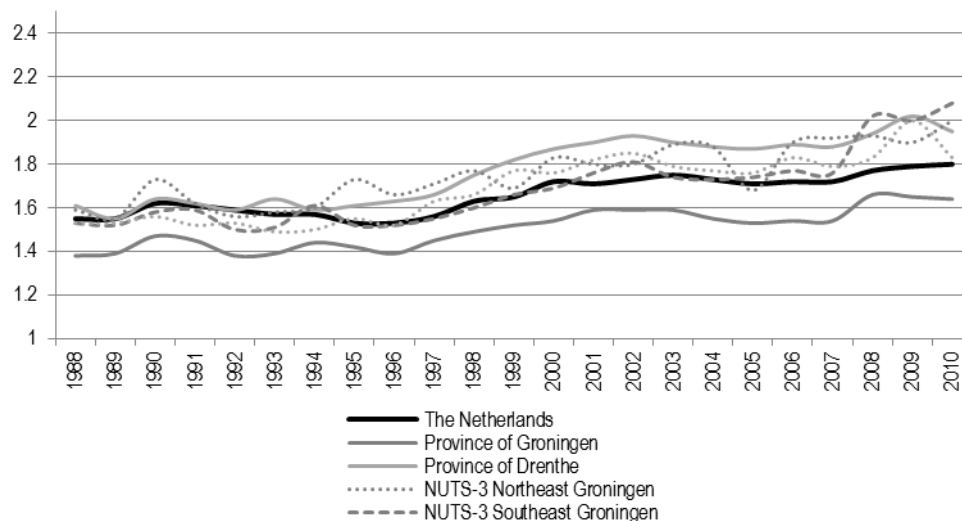


Figure 20 Development of fertility rates in northern areas, 1988-2010

Source: Statistics Netherlands

Although the fertility rates increased slowly and are expected to stabilise in the near future, the number of births per 1 000 inhabitants has dropped over the years, as can be seen from Figure 21, due to a decrease in the number of women in the fertility phase (De Graaf, 2007). While the fertility rate of women in the Northern Netherlands is on average higher than the national average, the birth rate is lower. This is a result of the household composition within these areas, with relatively more elderly women who are no longer of child-bearing age, leading to a lower number of births per 1 000 inhabitants. As a consequence of this household composition effect, the number of deaths is also higher (Figure 22).

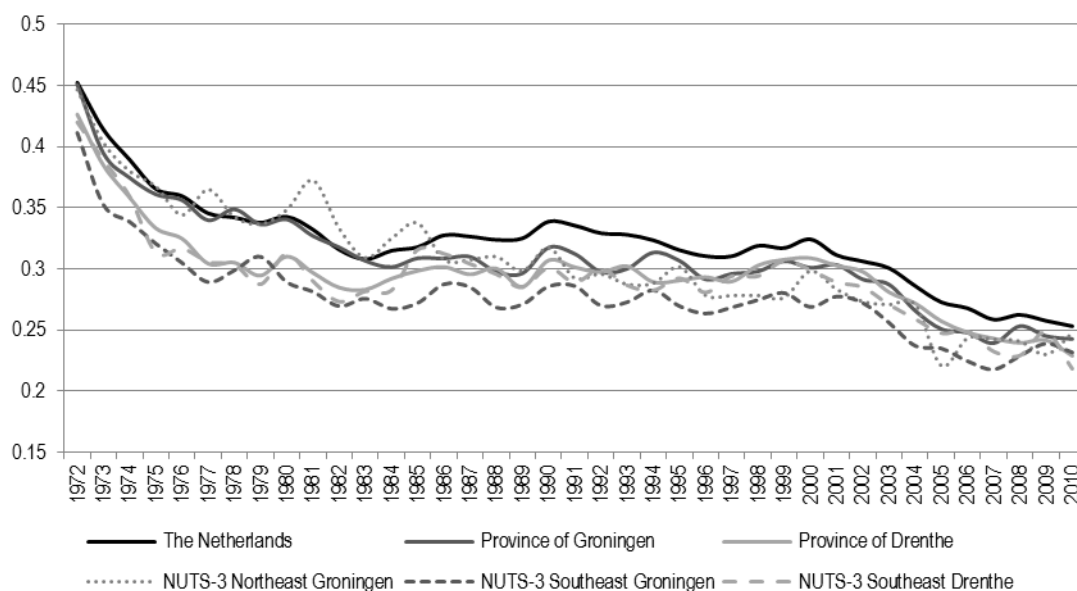


Figure 21 Development of birth rates in northern areas, 1972-2010

Source: Statistics Netherlands

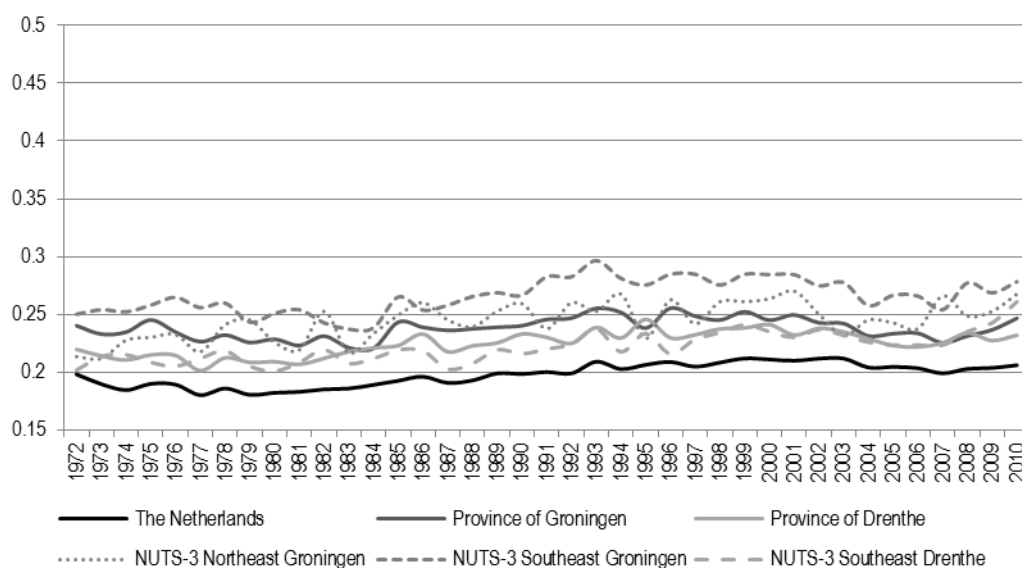


Figure 22 Development of death rates in northern areas, 1972-2010

Source: Statistics Netherlands

Although the number of elderly people within the society has increased, the death rates have remained quite stable over the last decades. Figure 23 shows that the number of children born dead or dying in their first year has substantially declined over the last twenty years. Both the changes in death rates and the number of children born dead are partly due to improvements in healthcare. In this respect, the areas that are shrinking are not deviating from the country as a whole.

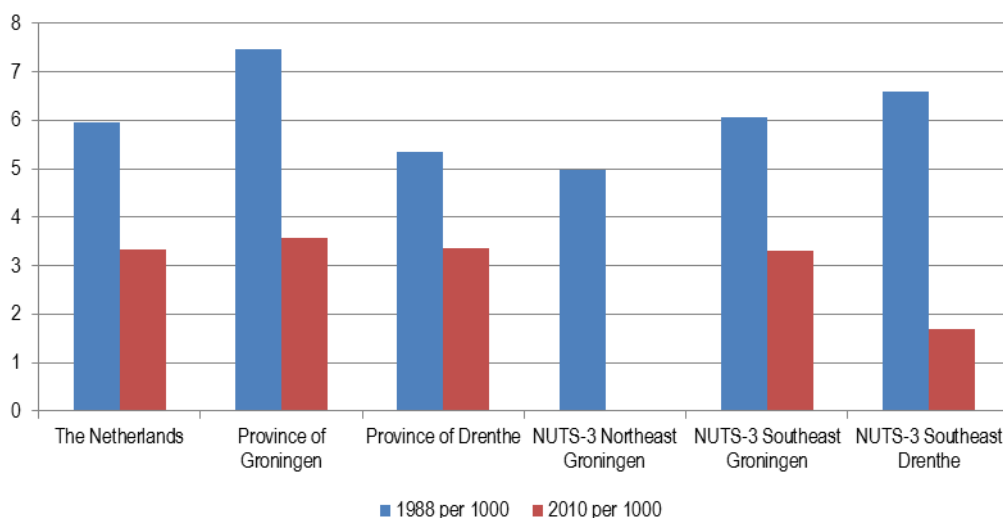


Figure 23 Number of children born dead or dying in first year in northern areas per 1000 inhabitants, 1988-2010

Source: Statistics Netherlands

3.2.3 Life expectancy

Table 1 shows the life expectancy of the municipalities in the shrinkage areas in the Northern Netherlands and its deviation from the national average (80.5). In drawing conclusions we have to mention that in general the life expectancy in the Netherlands is relatively high compared to other countries. However, there are within-country differences. In general, the life expectancy in the Northern Netherlands is lower compared to the national average. The NUTS-3 area of Southeast Groningen in particular falls below the average. Recent research shows that the municipal life

expectancy is related to four groups of explanatory variables: demographic; lifestyle; socio-economic; and cultural/geographical. Of these variables, the socio-economic indicators, i.e. level of unemployment and disability benefits and the average income, are the most important in explaining the level of life expectancy (Loke and De Jong, 2012). As will be discussed later in section 3, the shrinkage areas in the north score highly in the level of unemployment and lower on the level of average income.

Table 1 Life expectancy for each municipality 2007-2010 in years

Region	Municipality	Life expectancy 2007-2010	Deviation from life expectancy total country (80.5 in 2007-2010)
NUTS-3: Northeast Groningen	Appingedam	79.1	-1.4
	Delfzijl	79.7	-0.8
	Eemsmond	81.7	1.2
	Loppersum	81.6	1.1
NUTS -3: Southeast Groningen	Bellingwedde	79.9	-0.6
	Menterwolde	79.3	-1.2
	Oldambt	78.8	-1.7
	Pekela	78.5	-2
	Stadskanaal	79.5	-1
	Veendam	78.9	-1.6
	Vlagtwedde	78.6	-1.9
NUTS -3: Southeast Drenthe	Aa en Hunze	80.9	0.4
	Borger-Odoorn	80.2	-0.3
	Coevorden	80.8	0.3
	Emmen	79.5	-1

Source: National Dutch Institute for Public Health and the Environment

3.2.4 In-and-out migration

Although birth rates are lower and death rates are higher in the northern regions, the net of both rates is on average still in balance (Figures 22 and 23). Table 2 shows that population decline in the shrinkage areas is caused mostly by negative migration and, to a much lesser extent, by a low natural growth rate. The population decline, in the municipality of Delfzijl (-10.2%) for instance, is caused almost completely by a negative net migration (-9.4%). However, there are geographical differences. Looking at the municipalities in Southeast Groningen, for example, although negative migration plays an important role, population decline is also equally caused by a negative natural growth rate. As was demonstrated in the previous Figures, Table 2 shows that municipalities in Southeast Drenthe have still shown a positive growth rate in the last ten years. Because of the population ageing, future developments are expected to be driven more by natural growth/decline, as birth rates might decrease, death rates increase and fertility rates stabilise.

Table 2 Population development by natural growth & migration for each shrinkage area, 2000-2010, in percentages

Region	Municipality	Population growth 2000-2010	Natural growth 2000-2010	Net Migration 2000-2010
NUTS-3: Northeast Groningen	Appingedam	-1.5	-0.5	-1.1
	Delfzijl	-10.2	-0.8	-9.4
	Eemsum	0.3	3.1	-2.8
	Loppersum	-5.7	2.0	-7.7
NUTS-3: Southeast Groningen	Bellingwedde	-2.4	-3.3	0.9
	Menterwolde	-0.7	2.5	-3.2
	Oldambt	-1.4	-1.7	0.3
	Pekela	-1.8	-1.0	-0.8
	Stadskanaal	1.9	-0.9	2.8
	Veendam	-0.7	-0.4	-0.3
	Vlagtwedde	0.1	-2.3	2.4
NUTS-3: Southeast Drenthe	Aa en Hunze	3.4	0.8	2.6
	Borger-Odoorn	0	1.0	-1.0
	Coevorden	4.7	1.7	3.0
	Emmen	3.8	1.1	2.7

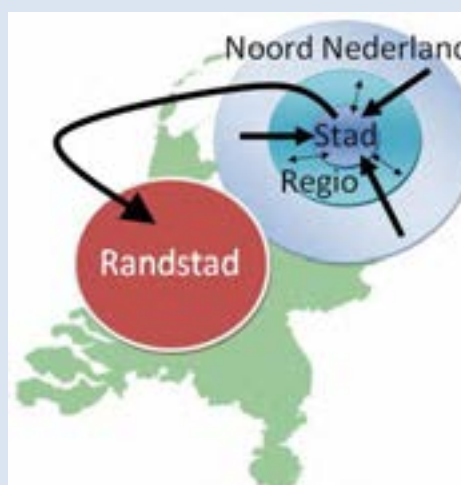
Source: Statistics Netherlands / Knowledge Centre Population Decline, 2012

Van Dam *et al.* (2009) conclude that the shrinking pattern in the Northern Netherlands is distinct from elsewhere. Firstly, population decline is primarily caused by migration (see Box 12) and secondly there is variability in population development between the different municipalities in the region. Although some areas are shrinking, there are also strongly growing areas like the city of Groningen. This makes current population decline a much more regional-geographic and economic problem than a demographic one.

Box 12 Moving patterns in Groningen and the Netherlands

In the Province of Groningen and the North of Drenthe, 50,000 persons on average move each year. Most people (also in shrinking areas) move for reasons of employment, family, facilities and so on and not because of the quality and price of houses. Only people that move out of the city of Groningen do so because of better housing conditions. The same holds true for people moving towards shrinking areas. Students are an important group of movers in and out the city of Groningen, but they are not taken into account in this study. Shrinking areas do not shrink because many people leave, but rather because there is hardly any inflow. Those above 25 years of age choose to move towards the bigger cities of Groningen and Assen, while people above 40 tend to move to the region between these two cities.

Most movers follow a sequential pattern (better quality in combination with prices) and use the existing housing supply instead of newly built houses. Apart from youngsters, most movers stay within the boundaries of their current area and focus more on areas of population growth than on shrinkage areas, particularly in the north of the province of Groningen (Delfzijl and De Marne). It can be concluded that population decline is not likely to be reversed by building new houses.



The migration behaviour is not bounded by the region. Some youngsters, especially higher educated graduates, leave the more rural regions to search for job opportunities, mainly in the Randstad-area. This migration behaviour is called the 'Escalator model' because people move to areas where they can lift their socio-economic status. Venhorst (2012) shows that half of these 'brain drain' movers eventually return to the region of their origin because of the connection they feel with the area.

Source: KAW (2012), 'Groei, krimp en migratie' (Growth, shrinkage and migration), Groningen: KAW Architecten en adviseurs; Van Dam et al. (2009) 'Quick scan Wisselwerking Groningen en krimpgebieden'. Groningen: RUG; Venhorst, V. (2012) 'Smart Move? The spatial mobility of higher education graduates'. Groningen: RUG.

3.2.5 Population structure by age

The consequence of population decline, ageing and migration is also shown by the age structure of the population. In all the areas, the shares of age groups under forty years of age are decreasing whereas the age groups over forty years of age are increasing (Table 3). The group aged 40+ is on average somewhat bigger in the northern areas compared to the national level. That the level of the Province of Groningen is comparable to the national level is due to the presence of the city of Groningen, which contains a large percentage of young people. The Province of Drenthe and the shrinkage areas each have higher percentages of elderly people in their population and the difference between this ratio and the national level has increased somewhat between 1988 and 2011.

Table 3 Population structure in 1988 and 2011 for northern areas, in percentages

Years of age	The Netherlands		Province of Groningen		NUTS-3 Northeast-Groningen		NUTS-3 Southeast Groningen		Province of Drenthe		NUTS-3 Southeast-Drenthe	
	1988	2011	1988	2011	1988	2011	1988	2011	1988	2011	1988	2011
< 10	12	11	11	10	12	10	11	10	12	11	12	11
10 - 20	15	12	15	12	16	12	15	11	16	12	15	12
20 - 30	17	12	18	15	16	10	14	9	15	9	16	10
30 - 40	16	13	15	12	15	11	15	11	15	11	15	11
40 - 50	13	16	12	15	13	15	13	16	13	16	13	16
50 - 60	10	14	10	14	11	15	11	15	10	15	11	15
60 - 70	9	11	9	12	9	13	10	14	9	13	9	13
70 - 80	6	7	6	7	6	9	7	8	6	8	6	8
80 - 90	2	3	3	4	3	4	3	4	2	4	2	4
> 90	0	1	0	1	0	1	0	1	0	1	0	1

Source: Statistics Netherlands

3.2.6 Regional policy programs to deal with population decline

Due to the demographic changes in shrinkage areas, both the Provinces of Groningen (Box 13) and Drenthe (Box 14) have initiated policy programmes to deal with population decline and ageing. The focus is mainly on liveability issues and housing (particularly in the Province of Groningen) and less on labour market challenges. The policy approach is one that fosters awareness and a sense of urgency and deals with issues in a comprehensive, area based way. Both provinces are working to stimulate shrinkage areas to develop their own programmes and bottom up planning to deal with the social, economic and physical consequences of population decline and an ageing society.

Box 13 Province of Groningen (2010): Action programme for population decline 2010-2013

The Province of Groningen wants to use the development towards population decline to make a move towards quality. “We are no longer talking about growth and expansion”. This focuses on the transformation, quality and use of free space and buildings. The demolition of buildings and the possible incorporation of quality construction provide exceptional opportunities to strengthen cultural and historical features (such as mounds and ribbons) in the landscape. The province also wants to invest in sustainability in order to connect the demographic trend to long-term developments in climate adaptation and energy. The purpose of this action plan is to create a joint, qualitatively attractive environment with adequate facilities. In other words, the shrinkage of the population provides opportunities for more living space, a better quality of life, fewer but better homes and fewer but better facilities.

The programme divides actions into six categories:

- Communication and awareness.
- Regional residential and viability plans: the aim of these plans is for the three shrinking areas, as defined by the province (De Marne, Eemsdelta and East-Groningen), to make their own integral sub-regional plans with concrete actions and programmes to sustain liveability.
- Experiments around demolition and restructuring of: housing; educational services for children; art and culture contributions and heritage; a masterplan designed to care for the future; and a ‘Green for Red’ plan.
- Strategic co-operation between stakeholders.
- Knowledge and vision development.
- Socio-economic revitalisation.

For the financing of projects, the Province initiated a subsidy scheme to ‘Reserve Liveability of Areas that Shrink’: the purpose of the ‘Reserve Liveability of Areas that Shrink’ is to contribute in an integrated manner to the prevention and possible solving of liveability issues in housing, education, care, health, socio-economic revitalisation, vulnerable groups and services and amenities.

Box 14 Province of Drenthe (2010): From growth to flowering: Responding to the consequences of population decline

The province has chosen an approach in which they absorb the effects of shrinkage. Their goal is to prevent related developments together causing a negative spiral for the sub-regions. The effort is aimed at exploiting opportunities to keep Drenthe vital with less people by:

1. Encouraging awareness: encourage a change in thinking and active engagement of partners.
2. Strategy for shrinkage: a structured approach and development of comprehensive solutions at the regional scale.
3. Space for experimentation: knowledge and scope for the development of solutions at a regional level.

Overview of activities in 2011:

1. iAge: research into the use of ICT for sustaining liveability and economic vitality of declining regions.
2. Knowledge Network for a Shrinking Northern-Netherlands (KKNN): Knowledge Network of Northern Provinces; University of Groningen; and Hanze University of Applied Sciences for networking, knowledge sharing and knowledge development
3. Master classes for policymakers, regional politicians and administrators.
4. Research into the movement patterns of inhabitants in relation to public services and amenities.
5. Research into effects and bottlenecks from population decline for primary education.
6. Experiment with 'care power' to find out the best method of co-operation between stakeholders to supply care services in shrinking areas.
7. Project 'Creativity within shrinkage', to determine the contribution of art and culture activities to the liveability of declining regions.
8. Project 'Five star co-operation', to find out what inhabitants themselves – through clustering of villages - can do to sustain local services and amenities.
9. Research into cross-border co-operation.

Within the framework of the regional economic policy, demographic changes are ordered into priority themes of education and labour.

What becomes clear is that from a labour market perspective, the potential labour force is declining. In the next section, labour market issues will be further discussed. On the one hand, the declining labour force brings opportunities for those who are unemployed due to an absence of jobs, but on the other hand a declining labour force is also a threat for sustainable economic growth in the decades to come.

3.2 Regional Labour Market Analysis

In addition to demographic changes, the development of the regional and local economy is of crucial interest in understanding the issues taking place and needing to be faced. Figures 24 and 25 show total GDP and GDP per capita of the different areas, compared to the province and the Netherlands as a whole. In Groningen, GDP and GDP per capita are relatively high compared to the national level. This figure is somewhat biased, however, due to the revenues of gas and mineral extraction in Groningen, which are part of the regional and sub-regional GDP (per capita), while the actual revenues disappear in the national treasury. The Province of Drenthe has a lower GDP per capita than the national average.

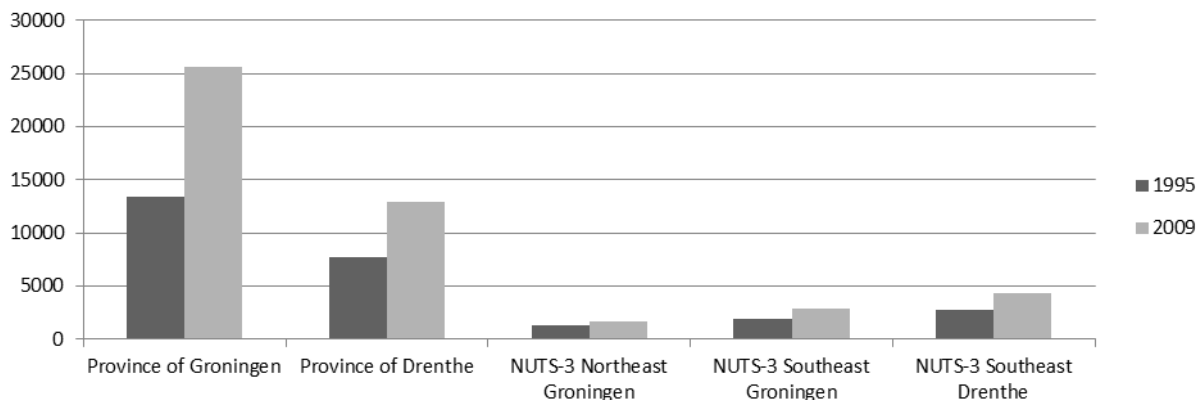


Figure 24 Total GDP in northern areas, 2009

Source: Statistics Netherlands

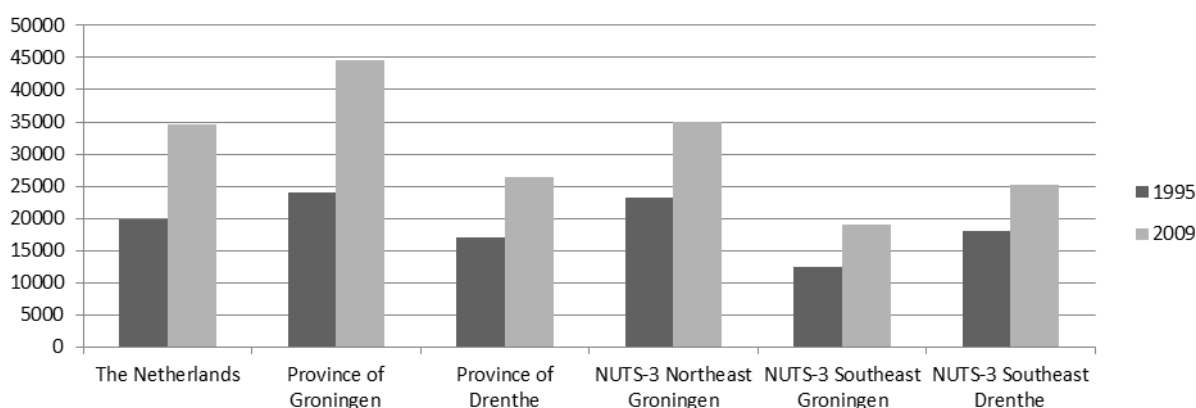


Figure 25 GDP per capita in northern areas, 2009

Source: Statistics Netherlands

The common picture, when gas and mineral revenues are excluded, is that GDP in the shrinking sub-regions is lower than the regional and national average, suggesting a weak economic structure, as shown in Figure 26. The average income level of inhabitants of the Northern areas is clearly below the national average. Especially in the NUTS-3 areas of Southeast Groningen and Southeast Drenthe, the income levels are relatively low.

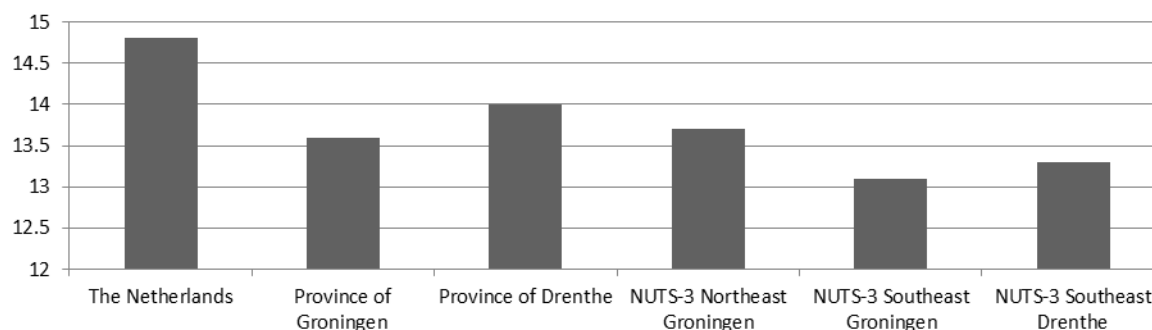


Figure 26 Income per person in northern areas (x1000 euro's), 2009

Source: Statistics Netherlands

Compared to the country and the region as a whole, in the shrinking sub-regions, relatively more people work in the secondary economic sectors (Table 4). This division makes the sub-regional economic structure vulnerable, because employment development shows a decline in employment share for agriculture and manufacturing mainly due to processes of globalisation and automation of production. On the other hand, the (health) care sector is a growing business, certainly in shrinking areas (UWV, 2012a, 2012b; CAB, 2012). Box 15 outlines the spatial economic policy for the northern part of the Netherlands, including introduction of economic core zones, priorities for economic development investments and defining the nine top sectors.

Table 4 Employment structure in 1995 and 2008 for industrial sectors, in percentages

Subcategory	The Netherlands		Province of Groningen		NUTS-3 Northeast Groningen		NUTS-3 Southeast Groningen		Province of Drenthe		NUTS-3 Southeast Drenthe	
	1995	2008	1995	2008	1995	2008	1995	2008	1995	2008	1995	2008
Agriculture and fishing	1.5	1.4	0.9	0.7	0.6	0.6	1.0	1.0	1.7	1.3	2.4	1.7
Manufacturing	22.9	16.1	24.5	17.2	31.7	27.7	32.5	22.2	28.5	19.7	37.9	24.8
Commercial services	44.3	49.9	38.5	43.0	36.5	39.8	36.0	39.8	37.1	41.9	34.8	43.6
Public services	31.4	32.5	36.1	39.0	31.1	31.9	30.5	36.9	32.7	37.1	24.9	29.8

Source: Statistics Netherlands

Box 15 Regional concentration and top sectors

In terms of spatial economic policy, the northern part of the Netherlands in 2007 made the choice to concentrate regional economic development in cities and economic core zones. These economic core zones are centred around and between the urban concentrations. The shrinkage areas in this policy are allocated to the rural areas.

In 2007, the national economic approach to regional policy shifted its focus from an approach based around compensating regions to a sector-based approach in which the focus was on the main industries of innovative activities. In terms of prioritising economic development investments, for the northern Netherlands, the focus is laid on five 'clusters' of innovative, economic activities: energy; healthy ageing; water technology; sensor technology; and agribusiness.

In 2011, the Dutch Ministry of Economic Affairs and Agriculture defined 9 top sectors which it sees as being vital for the future development of the Dutch economy. On criteria like mass, specialisation and growth potential, the Socio-Economic Council of the Northern Netherlands (Sociaal Economische Raad Noord-Nederland, 2012) concludes that there are four specific specialisations in the north of the Netherlands: agribusiness; life sciences (health care); energy; and recreation and tourism. Healthy ageing is mainly concentrated around the city of Groningen (because of the University Medical Centre), agribusiness and energy are more spread throughout the whole region. Recreation and tourism are concentrated in Friesland and Drenthe.

However, one might question how far the focus on top sectors will contribute to solving the current labour market problems. In terms of total labour demand, these sectors are relatively small in number. Moreover, it is questionable whether or not the skill base demanded within these sectors fits the supply in the northern regions. For example, in the Eemshaven (Northeast Groningen), the growth in the bio-based industry increases demand for technical employees. However, there is an overall shortage of technical workers nationwide. Because of this, people from abroad are hired to fill the work needs.

3.2.1 Labour supply

The employment rate in the shrinkage areas is lower on average than the provincial and national averages, as can be observed from Table 5. This is partly a heritage from the past in which the restructuring of agriculture and old industrial manufacturing sectors (strawboard-industry) has left

marks in the economic structure of today in terms of (intergenerational) unemployment. Other explanations are the spatial economic concentration of economic activities and migration patterns from which shrinking areas do not benefit, and the more traditional role division in rural areas in which women are working less often. When attention is paid specifically to older adults, it becomes clear that their employment rate is below the national average.

Table 5 Employment rate and growth employment, three years average, in percentages

Region	Employment rate 2009-2011	Growth Employment rate 1996-2011 (1996=100)	Employment rate 15-24 (2009-2011)	Employment rate 55-64 (2009-2011)
The Netherlands	67.4	111.5	38.6	49.2
Province of Groningen	62.4	113.0	32.7	47.0
Province of Drenthe	65.4	111.7	38.5	45.7
NUTS-3 Northeast Groningen	62.7	119.6	27.6	48.2
NUTS-3 Southeast Groningen	60.5	109.5	33.2	40.2
NUTS-3 Southeast Drenthe	62.2	109.0	38.2	43.0

Source: Statistics Netherlands.

As could be expected from the lower employment rate, unemployment rates are higher in the Provinces of Groningen and Drenthe compared to the national level (Table 6). Compared to the regional average, Northeast Groningen seems to be an advantageous exception as the unemployment rate is relatively low, and the employment rate and employment growth rate are relatively high compared to the other areas, which could be explained by the concentration of manufacturing near the Eemshaven. The building of new power plants and exploiting energy distribution activities is combined with relatively high commuting rates.

From Table 6 it also becomes clear that younger people especially have problems to find a job. The high percentage of youth unemployment is also a trigger for youngsters to leave the areas. In contrast, the percentage of unemployed older people is lower than the national average (Table 6).

Table 6 Unemployment, three year average, in percentages

Region	Unemployment rate total(2009-2011)	Unemployment rate 15-25 (2009-2011)	Unemployment rate 55-64 (2009-2011)
The Netherlands	5	11.3	4.6
Province of Groningen	7	15.2	4.6
Province of Drenthe	5.9	13.5	3.8
NUTS-3 Northeast Groningen	5.7	12.4	3.9
NUTS-3 Southeast Groningen	6.3	16.2	3.3
NUTS-3 Southeast Drenthe	7.1	13.7	4.4

Source: Statistics Netherlands.

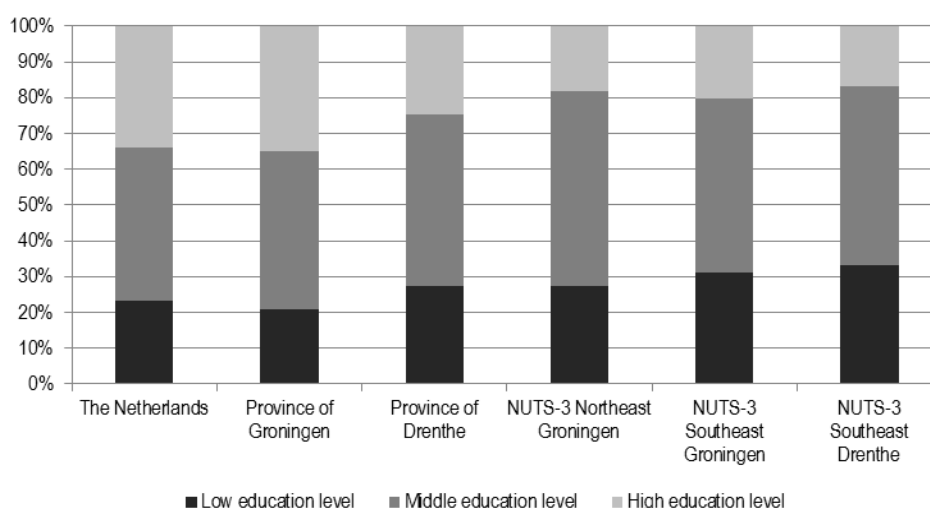
The official unemployment figures hide the actual unemployment and inactivity problems in the shrinking regions. Table reports the registered numbers of 'not employed jobseekers'. These numbers deviate from the unemployment rate in Table in the sense that the unemployment rate only accounts for unemployed people available for more than 12 hours per week. The magnitude of unemployment, inactivity and welfare dependency is by far the highest in the northern part of the Netherlands compared to the national average. Certainly in the east of Groningen, the weak socio-economic infrastructure translates into high shares of lower skilled and less productive social assistance and disability recipients (Table).

Table 7 Unemployment, insurances, social assistance recipients, disability recipients and sheltered employment, as a percentage of number of households, 2010

Region	Not Employed Jobseekers	Recipients of unemployment benefits	Social assistance recipients	Disability recipients	Sheltered employment
The Netherlands	8.6	4.6	5.5	14.2	1.8
Province of Groningen	10.5	4.8	7.3	14.6	3.1
NUTS-3 Northeast Groningen	13.4	6.1	7.3	16.2	3.4
NUTS-3 Southeast Groningen	14.2	6.6	7.4	22.7	6.6
Province of Drenthe	10.8	6.2	5.7	18.1	3.1
NUTS-3 Southeast Drenthe	13.1	7.4	7.0	17.9	3.6

Source: Statistics Netherlands/ UWV, 2010

Reasons for the high levels of unemployment are partly the weak labour demand, but also the characteristics of the labour force. The education level of the labour force in the areas in Groningen and Drenthe is on average lower than the national average, as can be observed from Figure 27. Furthermore, it is known that those who are lower educated are less mobile than higher educated (SER, 2011) and less flexible in looking for jobs further away. The level of the Province of Groningen as a whole is comparable to the national level due to the city of Groningen, which attracts higher educated people. Younger and higher educated people move to urban areas because higher-skilled jobs are concentrated there and because amenities are present that are appreciated by these groups. This selective migration means that the more peripheral regions end up with a concentration of weak socio-economic groups, often lower skilled and lower educated.

**Figure 27 Education level of labour force in northern areas, 2011**

Source: Statistics Netherlands

In the current economic crisis (and projections for the coming three years) this problem of inactivity becomes highly problematic. For the three northern Provinces, the number of social assistance recipients, disability recipients and people who make use of sheltered employment comprise almost 90 000 persons. Recent research (Gardenier et al., 2012) estimates that (only) 14 000 within this group are ready for work. The rest can be divided into two parts. Between 37 000-50 000 people have some form of bridgeable distance to the labour market, but need assistance in terms of guidance, job coaching, re-integration and so on. For between 26 000 and 39 000 people, entry into the labour market is not a realistic option due to low productivity.

3.2.2 Labour demand

With respect to the demand side of the labour market, only a small growth rate in employment for the next three years can be expected (UWV, 2012a, 2012b; CAB, 2012). The job openings and vacancies that arise are mainly the result of replacement. Ageing has important consequences for the personnel in industrial sectors as well as for the future supply levels within the labour market. The Administration Office of Unemployment Assurances (UWV) predicts that in the coming decade about 31 400 in Groningen and 29 000 people in Drenthe will leave the labour market, due to reaching the retirement age (UWV, 2012). Figure 28 shows the sectors with the highest current numbers of older workers. In both provinces, the (health) care sector has the highest number of older workers. In relative terms, government and education sectors will face a high outflow of workers in the coming years. As these jobs will be mainly within the higher skill levels, a matching problem might be expected.

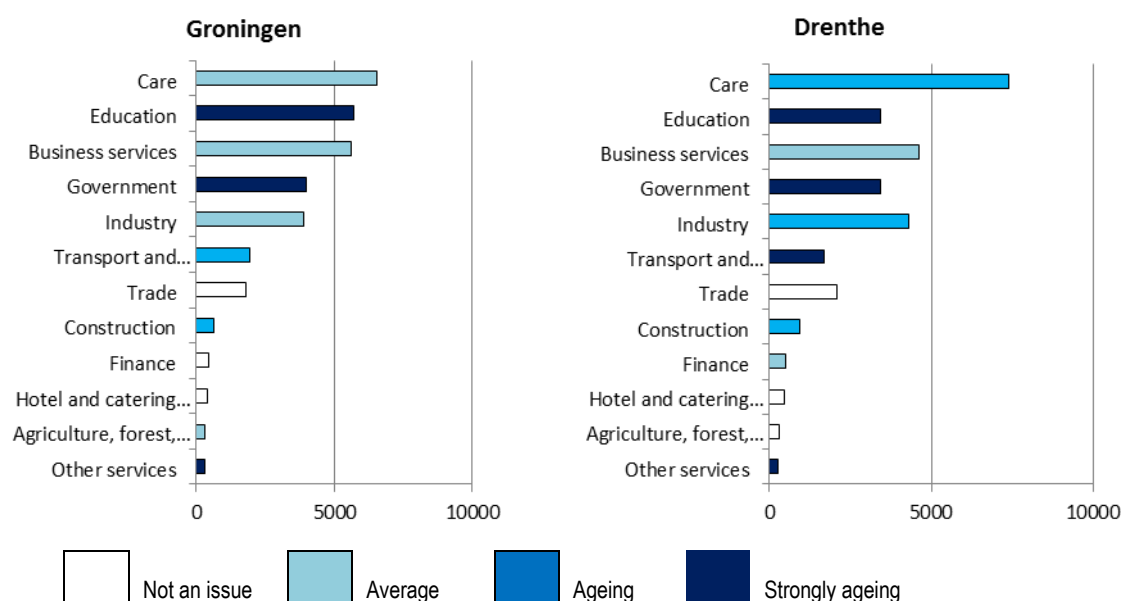


Figure 28 Total number of 55-65 year olds in industrial sectors and those aged 55-64 in total employment
Source: UWV, 2012

In Figure 29, the total number of expected vacancies for the period to 2016 is provided, with a distinction made in job levels. For elementary and lower skilled jobs, a total of 100 000 vacancies can be expected for the three northern provinces. For these jobs, those currently unemployed must compete with school-leavers and other jobseekers.

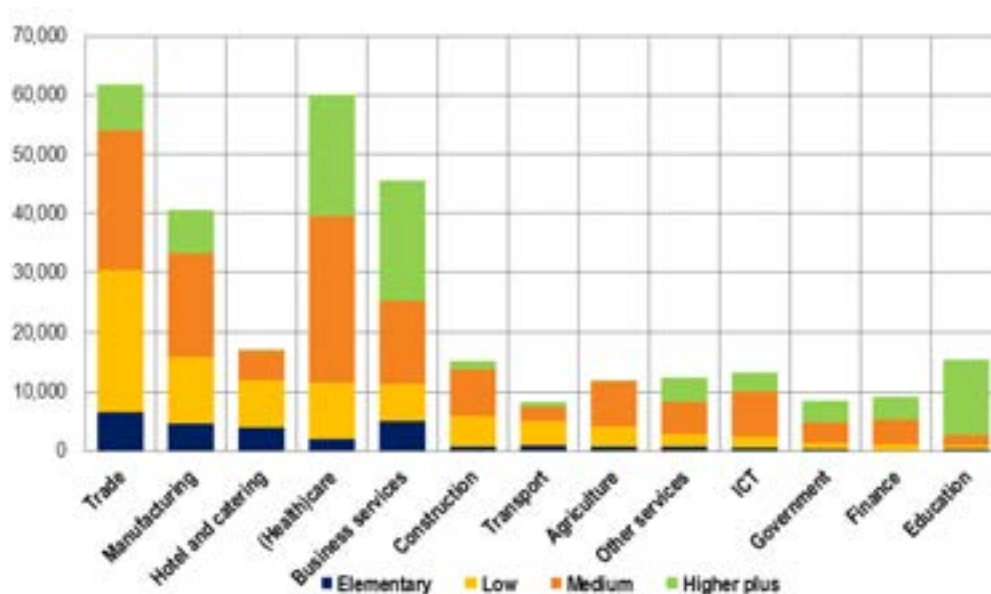


Figure 29 Expected vacancies for northern-Netherlands, 2012-2016, by industrial sector and job-levels

Source: UWV, CAB, 2012

To compensate for the lack of employment, the local government organises sheltered employment (Table 7). These high shares of inactivity are not only a result of today's regional business cycle, they are also a heritage from the past ('a culture of unemployment', 'intergenerational unemployment') as previously mentioned, and are a result of institutional arrangements that are locked into unemployment and income-arrangements (Broersma, Edzes and Van Dijk, 2011).

To conclude, the weak socio-economic characteristics of shrinkage areas cause high unemployment rates and low employment rates. On average, the income levels and educational levels are low compared to the regional and national averages. From the perspective of the labour force, both quantitative (too few jobs) as well as qualitative (a mismatch between jobs and skills) insufficiencies are present, leading to people's out-migration and unemployment. Besides the socio-economic consequences, this situation is also alarming because Dutch reforms in social-security and disability arrangements are aiming at further decentralisation of (financial) responsibility for social assistance benefits, disability arrangements and sheltered employment to municipalities. The 2012 proposed Participation Law has merged several income arrangements for unemployed and working-age disabled and at the same time budgets have been severely cut. High inactivity and unemployment is not only a social problem, it also becomes a financial risk for municipalities.

The Social-Economic Council Northern Netherlands (2012) concluded recently that especially for people needing to bridge a gap to the labour market, the chance that they can get a job is only realisable with a policy that focuses more on creating labor-intensive low-skilled work and with a policy directed towards custom-made labour demand by employers (job carving). For those with an unbridgeable distance to the labour market, stimulating active participation in society plays a central role while the chance for a regular job is virtually zero. Only an extension of the number of sheltered jobs is a real possibility to keep people active in the labour market.

3.3 Skills ecosystems for ageing and lifelong learning

As already became clear from the previous sections, the most important issue for shrinking areas in the northern Netherlands from a labour market perspective is the ageing of the labour force and the high share of inactive, lower educated unemployed labour. Because of the fall in the number of births and the rise in life expectancy due to better health conditions, the major demographic trend is

that of an ageing population. As elderly people are less mobile and the out-migration of younger people is not compensated by the inflow of (young) families, the population in shrinkage areas in Groningen and Drenthe is ageing faster than in other areas. It was shown that certain sectors currently have a lot of older workers who will retire in the near future, which brings challenges for the labour market and opportunities for those who are currently unemployed. Moreover, in conjunction with faster changing technological developments and innovation, the skill base of the labour force needs periodic upgrading.

With respect to labour participation, Table 5 showed already that in general the employment rate of elderly people has increased in recent years, however, the northern areas seem to be falling behind. With respect to learning, there is not much clear regional information regarding investments in lifelong learning of employees. Table 8 shows the percentage of people enrolled in education for different age groups in 2006 and 2011. What becomes clear is that although the share of younger people being enrolled in education has increased, the percentage of older people (aged 35+) undertaking education is quite stable and low. In general, the differences between the regions are small. The high share of people enrolled in education in the Province of Groningen is largely due to the presence of the university and schools in the city of Groningen.

Table 8 Percentage of people in education, as a percentage of total age group

	15-19		20-24		25-29		30-35		35-40		40+	
	2006	2011	2006	2011	2006	2011	2006	2011	2006	2011	2006	2011
The Netherlands	86.8	88.3	45.2	49.8	11.2	13.1	3.1	3.7	2.0	2.0	0.6	0.7
Province of Groningen	88.5	89.3	61.1	64.3	17.6	20.0	4.0	4.8	2.5	2.4	0.7	0.8
Province of Drenthe	88.2	92.3	37.2	39.4	7.3	9.5	2.5	3.2	2.1	2.0	0.7	0.9
NUTS-3 Northeast Groningen	87.7	90.7	39.1	41.6	8.8	9.8	3.4	2.9	2.4	2.4	0.9	0.8
NUTS-3 Southeast Groningen	86.7	90.6	34.2	36.3	6.7	7.7	2.6	3.3	2.1	2.4	0.6	0.8
NUTS-3 Southeast Drenthe	85.6	90.9	35.2	37.7	7.4	9.0	2.5	3.3	2.2	1.9	0.7	1.0

Source: Statistics Netherlands

Borghans, Fouarge and De Grip (2011) also concluded on the basis of a nationwide survey that the participation in education of employed and unemployed has almost remained the same. The participation of older workers in education has grown between 2004-2010. Higher skilled workers participate more in education than other skill groups. In contrast, there is a core of inactive, unemployed and low-skilled persons that have never completed a course or undertaken training in their life. Knowledge development of elderly people more often takes place in a working environment. For youngsters, the trend is the opposite. Unfortunately, there is no information regarding whether or not these trends and conclusions vary by region.

The skills ecosystem in the Netherlands can be divided into initial education (the first educational career before someone enters the labour market) and post-initial education (all the educational activities during someone's labour market career). The Dutch Social Economic Council (2011) concluded that the supply of education services for post-initial education is provided by a large number of mainly private and commercial providers and is very diverse. Qualifying education (focused on obtaining a recognised diploma) is now mainly provided by funded institutions but also, and increasingly, by private providers.

The public educational infrastructure in the shrinking sub-regions in the north consists of primary schools, several schools for general secondary and pre-university education, branches of four

competing organisations (pre-vocational secondary) for vocational education who operate from the cities of Groningen and Emmen, two organisations for higher professional education and one university. There is no regional overview available of commercial providers of education.

The Socio-Economic Council Northern Netherlands (Sociaal Economische Raad Noord Nederland, 2011) recently concluded that lifelong learning is mainly focused on already employed personnel. To bring the unemployed and non-participating elderly to the labour market, more investments must be made in additional educational activities. The Council indicates two main problems. First, these groups are financially not able to invest in their own education. Nevertheless, there is a public interest in prevention of unemployment and reintegration of those who can participate but who do not have the skills to fulfil vacancies. The Council suggests that municipalities should take a more active role in facilitating post initial education.

The second problem has to do with the supply of educational services and vocational training. Due to a low population density, it is hard to keep a sufficient supply of educational organisations and programmes. Because of economies of scale, educational organisations will concentrate their infrastructure in population dense areas. The advice of the Council is twofold. First, there is a need for more co-operation between educational organisations to establish a full package of all kinds of education. Second, where this is not possible, more has to be done in facilitating travelling. In general, the Socio-Economic Council pleads for creative solutions whereby (local) businesses, public and private educational organisations and governments should work together (Box 16).

Box 16 Advice on post-initial education from the Socio-Economic Council Northern Netherlands (2011)

In 2011, the Socio-Economic Council Northern Netherlands outlined necessary actions for stimulating post-initial education. They suggested the following:

1. The chance that job seekers will find regular work through schooling is still low. This is particularly true for job seekers with low education levels, and job seekers that are limited in their trainability. For job replacements due to an ageing population it is more effective to adapt tasks and vacancies to suit the abilities of job seekers. Short educational and training activities that are supported by government, educational institutions and business can provide solutions.
2. As a result of the flexibility of the labour market, job seekers at the lower end of the labour market have problems to get over. Additional training is needed to make and keep them employable across several industrial sectors.
3. Employers can also use post-initial education to improve the employability of their workers, so they are more suitable for new jobs.
4. The current skills ecosystem focuses on the training of workers in their existing work. However, it is especially important for workers at the lower end of the labour market to be able to function within the broader labour market. To prevent future unemployment and to increase their employability in a broad sense, it is important that these workers should be eligible for extra training. The Council advises municipalities to stimulate and facilitate this group by means of post-initial education.

Due to the low population density in the north, the physical distance to education is increasing and the supply of local educational programmes is decreasing. The risk is that pupils will choose training because it is close to home, whether or not it is suboptimal, and not to the level they require. Therefore, the Council suggests the following:

1. In sparsely populated areas, (competing) organisations of (pre-vocational secondary) vocational education could combine unprofitable initial and graduate programmes. In doing so they may wish to actively seek co-operation with the local and regional business community.
2. It is better to re-organise education rather than hold on to the existing educational programmes. The problem of physical distance can be solved by better organising the transportation of students. The local government can provide support in this area.
3. Employers, educational institutions and government institutions should try to come up with creative solutions to ensure that a particular educational offer can exist.

The timeframes for both short and long term solutions are an important theme to address. For instance, regional experts have outlined the problem that stimulating labour participation at an older age, which could be beneficial for ageing industrial branches (Figure 29), restricts job opportunities for people who are currently unemployed. How then to prevent a lost generation from developing? Another dilemma is the qualification mismatch. Presumptions that everyone is trainable to higher skill levels are easier said than done and sometimes not possible. The only route in this case is to stimulate employment that fits with the often low productivity characteristics of inactive or disabled persons. However, this may conflict with the regional investments in innovative and high productivity top sectors (Box 15).

3.3.1 Silver, white and green economies as new sources of economic growth

The human capital challenges resulting from population ageing cause problems in the labour market such as labour shortages. Also, ageing might have financial consequences as the demands for care services have to be paid for by insurance companies.

However, an ageing population also brings new economic chances. On the supply side, elderly people have valuable knowledge and experience, which they can use to guide younger workers. In addition, they can be active in society-focused activities or in voluntary work. On the demand side, the presence of an ageing population leads to an increase in demand for specific goods and services. One aspect is the increasing demand for care and health related facilities, which will raise the share of care-related labour (Nijdam, 2011). Moreover, the current baby boom generation that increasingly enters retirement now, is more active and richer than previous cohorts. This might create a potential demand for more leisure related products.

Additionally, the increase in the number of elderly will lead to a specific demand on the housing market in terms of the types of houses and accessibility to neighbourhood facilities. In shrinkage areas in Groningen and Drenthe there is an issue in this respect as facilities will disappear in these areas because of a decrease in the number of consumers. However, current research shows that the distance to facilities in the Province of Groningen may not be that important and that people in the northern parts of Groningen are satisfied with this status quo (Gardenier, 2012). In addition, the ageing population may create an increase in demand for recreational and leisure activities. The areas of Groningen and Drenthe offer potential opportunities for this. According to LEI (2012), the leisure and recreation sector in the Northeast of Groningen is currently relatively unimportant. However, they conclude that these sectors in Groningen are currently mainly focused on people from the area itself. However, the space and the historical landscape provide a potential for growth in that sector.

A change in perspective from seeing problems to seeing chances is necessary in order to challenge the future demographic developments. The elderly are not just the helpless and needy, but instead are more and more often active, healthy and often have meaningful purchasing power, due to generous pension schemes and individual saving arrangements. The abounding potential of an elderly population can be seen as being an economic strength and the economic driver of a silver economy.

3.4 Key regional topics – study visits/workshops and questionnaires

The analysis in the previous sections was presented and discussed in an international workshop on 5-6 November 2012, preceded by a study visit (Box 17). The discussion pinpointed four key regional topics that are crucial to the policies and strategies for sustainable development, skills and employment. These are: opportunities for cross-border activities; intergenerational challenges of demographic transitions in labour markets; accelerating skills development; and new sources of economic growth. Before these topics are discussed, a general overview is first given of the quality of the region as a working place for the elderly and the quality of the region as an elderly-friendly place to live.

Box 17 Study visit OECD-experts 5-6 November 2012

The field trip illustrated some of the problems outlined in the previous sections. The OECD-experts visited the Seaports of Xperience Centre at Farmsum, which is a non-profit organisation promoting occupational and educational opportunities for school-leavers, students and youngsters aged 12-18 in industry branches such as chemical, transport and logistics, shipping, construction and energy in the Ems Delta-region. Companies and employers are working together to promote educational opportunities instead of competing with each other for personnel. The Seaports Xperience Centre (SXC) is considered to be an excellent example of how to get students interested in 'dry' technical professions, by allowing them to approach these activities in a modern and more playful way. Moreover, many of its computer devices were designed by more mature students, which is another way of linking different fields. The overall goal of the SXC is to get a larger number of young people interested in technical professions, as companies from the region are faced with a substantial ageing of their workforce, which endangers their overall skills profile.

The field trip also included a visit to Homecare Oosterlengte, a foundation in East-Groningen that is dedicated to delivering care for the elderly. Homecare Oosterlengte has a deliberate strategy focused around being an attractive employer by creating an internal qualification unit that aims to stimulate on-the-job learning, offering young people a contract and giving them the opportunity to follow an education. Along these lines, recruitment for jobs in the care sector is stimulated because there is an increasing demand for services in an ageing sub-region.

3.4.1 Older Workers Friendly Places to Work

Regional experts were asked to give their opinion on the qualities of the region as a working place for the elderly. Overall, the outcome of the Older Workers Friendly Places to Work (OLWOF) index for a score out of 5, where 1 is poor and 5 is good, is 2.6 (Figure 30). This index indicates that Groningen/Drenthe is just below average (3 being average) for older worker friendly places to work. Of note is the below average rating received in the areas of recruitment (2.2), work culture and opportunities (2.7), and training and skills development opportunities (2.5). However, more significant is that the overall importance rating for the OLWOF was just above average (3.5), this indicates that according to the participants, the region being an older work friendly place to work is not of particularly high importance, which is quite significant due to the population ageing that is occurring, and the need for more older workers in the workforce. However, there is still a significant policy gap between what is occurring and what should be occurring.



Figure 30 Older Workers Friendly Places to Work (OLWOF) northern Netherlands, 2010-2040 (N=18)

Source: OECD, 2012

The outcome is surprising although also difficult to interpret. For instance, it is not clear whether or not a low importance rating suggests that in absolute terms it is not felt necessary to pay attention to an elderly friendly working environment, or simply because the current situation is

considered to be sufficient and therefore needs less attention and hence is of less importance as a policy imperative. More lessons can be drawn regarding the policy gap between what is considered to be important and what is actually done. In that case, the main gap is the training and skills development policies for older workers and work culture and opportunities.

3.4.2 Elderly friendly places to live

Regional experts were asked also to indicate their opinion of the region's qualities as an elderly-friendly place to live. Overall, the Elderly Friendly Places to Live (ELFRI) index (1 is poor, 3 is average and 5 is good), is 3.1 out of 5. This index suggests that Groningen/Drenthe is an average elderly-friendly place to live. Of note is the slightly poor result for civic participation and employment (2.5), and communication and information (2.9), which was below the overall index rating. However, the overall importance rating for the ELFRI was 3.81; this indicates that according to the participants the region being an elderly-friendly place to live is fairly important. Again, there are some policy gaps between what is occurring and what should be occurring, especially relating to civic participation and employment.

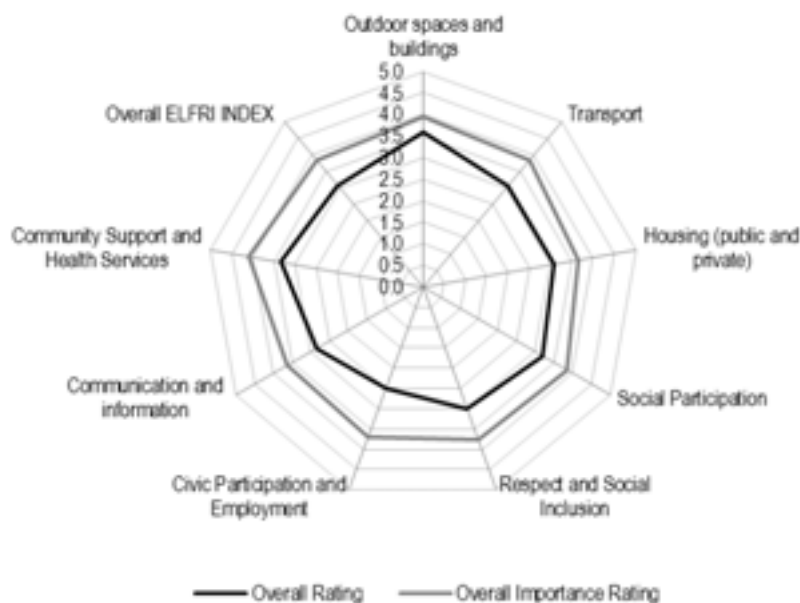


Figure 31 Elderly friendly places to live (ELFRI-Index) northern Netherlands, 2010-2040 (N=20)

Source: OECD, 2012

3.4.3 Cross-border opportunities

The location of the three shrinking sub-regions near to the German border opens up opportunities for cross-border activities, particularly in a situation where employment growth and job opportunities in northeast Germany seem to be much better placed than in the shrinking areas in the Netherlands. Although an empirical analysis of cross-border labour market prospects is beyond the scope of this chapter, it is the common opinion of stakeholders and experts that one way or another, regions on both sides of the border can benefit from close co-operation. Even so, although there are no exact figures on the total amount of cross-border labour market movements (commuting etc.), the general expert's opinion is that this is only a small number. Only highly qualified and educated workers and students seem to be able to navigate cross-border activities.

There are, nevertheless, several initiatives to stimulate cross-border commuting and co-operation between labour market institutions on both sides, but these are in a beginning stage, see Box 18.

Box 18 Cross-border initiatives: Two examples

The Ems Dollart Region (EDR) is the most northerly European border region along the Dutch-German border. It was established in 1977. The organisation is based in the Dutch border village of Bad Nieuweschans. The office has developed into a Dutch-German meeting point, where cross-border meetings and other activities occur, as well as providing a launching point for many exciting cross-border projects. The association consists of approximately 100 members, including public institutions from the provinces of Groningen, Drenthe and Friesland, as well as from East-Frisia, the Emsland, the Cloppenburg region and other bordering regions.

Throughout the years, numerous contacts and networks have been established between the people, businesses and organizations on both sides of the European inner-border. As a result of this closer interaction, participants realise that there remain significant obstacles to overcome. Differences in legal systems present the most significant obstacle to cross-border co-operation, but differing cultures and customs can also add to the difficulties of cross-border action. The EDR has established itself as the primary source in the region when dealing with questions of cross-border co-operation. In the future, the advantages of an ever-closer union need to be recognised and utilised.

EDR launched the EDR-Jobroboter in November 2012, a jobsearch web application for vacancies across the border. With the rising unemployment, the site should be the answer to the Dutch and the Germans who find a job across the border. http://www.edr-jobroboter.eu/index.php3?menu_sprache_select=3

A second initiative is called 'Work across the border' (Aktiv über die Grenze) and is a joint project of Dutch organisations (Stimulanz Foundation, Divosa and Work centre) and one German (Con_Sens). The project came about with the support of the European Union and is directed towards a better understanding when someone considers working across the border: rules and regulations, culture and institutions, labour market information and so forth. <http://www.werkoverdegrens.nl/>

A recent attempt of the Dutch Public Employment Agency (UWV) to gather German vacancies and fill them with Dutch job seekers has led to disappointing results. However, it highlights the obstacles that need to be overcome to make cross-border labour markets a success.

First, in order to effectively use the possibilities offered by cross-border commuting requires better *exchange strategies between labour market institutions on both sides*, but also the smooth functioning of a number of formal issues, including the recognition of diplomas and, more generally, the mutual acceptance of education and training results. Other issues are: tax; social security and pension problems; and infrastructure that limits or discourages mobility. These matters are often beyond the jurisdiction of provincial governments or other institutions working close to the border (e.g. employment offices) and requiring the approval of central ministries or changes in national policies. This situation can nonetheless be facilitated by the close collaboration of institutions on both sides of the border, e.g. when employment offices find a way to exchange information on vacancies, and learn to better understand qualification certificates from the other side of the border.

Second, stimulating cross-border labour market movements starts with *information and communication about possibilities and opportunities*. For instance, cross-border vacancy sites can help companies and job seekers to find each other. Promotional campaigns and educational exchange can help to overcome cultural barriers (Box 18).

Third, cross-border labour market agencies, educational organisations and regional authorities should work closely together to *remove (institutional) obstacles, monitor cross-border labour market movements* and invest in knowledge development to stimulate a real and natural regional labour market without country barriers.

3.4.4 Intergenerational challenges

Intergenerational challenges arise around the important dilemma of how to raise productivity demands as the main engine of economic growth for the large shares of older people and less productive people, i.e. those with physical and mental disabilities in declining regions. This raises the question of how to invest in future employment growth where options must be offered to both older and more vulnerable groups on the regional labour market, now and in the near future. There are simply no clear answers except for general appeals for skills upgrading by investments in education (see section 5) and otherwise adapting jobs (job carving) to the available skills of the lower educated workforce. Nevertheless, experts mentioned institutional obstacles that also hinder quick solutions. Therefore, the discussion addressed the necessity of coming up with original solutions by thinking outside the box. Ideas can be put into three categories:

1. A general call has been made for regional and sub-regional policies and solutions by bending national law and regulations. For instance, to allow for a temporary change in the retirement age, i.e. lowering the retirement age in specific regions to allow youngsters to start their career, to make regional collective labour agreements (CAOs) possible, to suspend statutory minimum wages for five years in areas with high unemployment on the condition that more jobs are created etc.
2. Linking people at the start of their career with people at the end of their working lives might be something to think through. For instance, co-worker or master-apprentice relationships; encouraging entrepreneurship among young people by providing support from older entrepreneurs; targeted training combined with an employment contract (apprenticeship); and combining starter jobs with possible job extensions.
3. Simulate activities to raise awareness. Promote the concept that jobs are no longer for life. This is a change in the cultural paradigm that should change people's attitudes towards lifelong learning. Encourage the idea that gentle approaches are out of date; the labour market dictates where you go. Further activities: appoint young people from the region as ambassadors for their region; start a spatial and inter-industrial mobility offensive; start a cultural shift in education, starting in primary schools.

3.4.5 Accelerating skills development

Accelerating skills development include topics like: How to make education correspond with the demand for labour?; How to tackle the shortage of skills?; How to prevent skills becoming out of date?; How to ensure that young people choose courses that will qualify them to fill gaps in the labour market? The previous section analysed the main developments and obstacles in the shrinkage areas. Skills development is especially difficult in situations in which people are not considered trainable due to low education levels or disability. On the other hand, better co-operation between employers, educational institutes and local governments can improve educational facilities and foster a sufficient supply of educational programmes. On top of this, workshop discussions highlighted several points of recommendation that can form important policy guidelines in the years to come.

First, do not just focus on young people, but on older people too. For the latter group it is important that they have enough skills to remain in the labour market, or if they become unemployed, can find their way back.

Second, invest in certain key skills or competencies that are important in all jobs and that need to be addressed at all levels of education as well as in initial or post-initial education. Such skills or key competencies are problem-based skills, communication skills, motivation, creativity, discipline and attitude. The central proposition is that once these skills are adequately learned, everyone is

trainable in or outside the job or occupation. Regional educational programmes should therefore focus much more on the key competencies because occupational skills can be learned on the work floor.

Third, provide valid and reliable information on labour market perspectives and occupations in the early phases of school careers. The premise is that it is easier and more effective to influence occupational choices through information than by coercion.

Fourth, acknowledge that not everyone learns in the same way. Older workers in particular learn differently to younger people. Higher educated people learn differently to those who are lower educated. Learning and training methods should therefore be more flexible and tailored.

Fifth, adjust jobs in a way that will ensure they fit in with the productivity and learning capacities of labour supply. When it is not possible to adjust and train job seekers for current and future jobs, then jobs have to be adjusted, for instance through job carving.

3.4.6 New sources of growth

Shrinkage areas in the northern Netherlands have a weak economic structure. Employment prospects are, on average low, thus causing higher educated people to search for opportunities elsewhere. This raises the question of how to curb the outflow of people by encouraging new sources of economic growth in order to increase employment opportunities in the region. Following the top sector-approach (Box 15), economic growth potential is found in industrial sectors such as energy, healthy ageing and agri-business. The possibilities for a bio-based economy (BBE) are also discussed, because the sub-region has all the ingredients and conditions to make BBE a success. The sub-regions include, for example, the presence of a harbour, chemical industry, agricultural hinterland, energy power-plants and knowledge centres in the city of Groningen: Hanze University of Applied Sciences and the University of Groningen.

From a labour market perspective, two questions are addressed. First, how to get young people enthusiastic to choose technical studies? Again, the answer lies in closer co-operation between employers, educational organisations and local governments. For instance, the Xperience Centre is a good initiative designed to motivate youngsters to embrace these kinds of jobs. In the Xperience Centre, companies and employers are working together to promote educational opportunities instead of competing with each other for personnel. The Xperience Centre build bridges between demand and supply in the labour market and all the actors involved (Box 17). Furthermore, youngsters as well as parents should be more informed about the job opportunities when a technical education is chosen.

Second, it is important to *stimulate entrepreneurship*. To facilitate entrepreneurship or self-employment in the region, business coaching should be started earlier, maybe even in primary school. For instance, in Scotland, specific classes for entrepreneurship were provided in an earlier phase of the school career, resulting in the number of starters doubling compared to the period before. Also, to stimulate young people to make something out of their life and become entrepreneurs, exchange programmes for students abroad would be beneficial. By being abroad, students will come into contact with new ideas and they can then use this creativity when they return to the Netherlands.

3.5 Conclusions and policy themes

Population decline in some of the northern areas seems to be driven less by negative natural growth rates than by economic-geographic concentrations in production and employment towards urban and economic core regions that result in outward migration behaviour. The main reason for this is that there is a concentration of education and job opportunities in cities. The population in the northern region as a whole will continue to grow in the coming years, but selective migration patterns will cause regional differences and sometimes population decline in rural areas. Because the urban

areas in which most of the jobs are concentrated are within reasonable commuting times, current policy measures and programmes are much more focused on liveability, housing, services and education and less on labour market issues.

The lack of economic and employment opportunities in declining regions causes selective outmigration of higher skilled labour and opportunity seekers towards urban centres and economic core zones. The less mobile, lower educated and inactive job seekers that stay behind mean shrinking areas are left with relatively high stocks of unemployed and/or disabled persons. In the current situation this creates a heavy burden on local governments, who are (partially) financially responsible for income provision and engagement policies designed to lead to the re-integration of these groups into regular jobs. The present crisis will further deteriorate the economic opportunities in these areas, so there is a risk of a lost generation. *Keeping this unemployed labour supply active and skilled for the years to come is the main policy challenge of today.*

For the near future, ageing is the central labour market challenge. Although the total population in the region will grow, the labour force will decline. On the demand side, ageing of personnel in industrial sectors will cause a high replacement rate in the years to come when the economic crisis is over. On the supply side, the inflow of new, young workers will diminish. Thus, shortages can be expected in the coming decade.

The expected shortages in the labour market, together with investments in innovative economic sectors requiring highly skilled labour, such as energy, healthy ageing and agri-business, *conflict heavily with the stocks of less productive and inactive unemployed labour force.* To solve this matching problem, skills upgrading and job carving as well as enhancing geographical mobility should have the highest priority.

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CHAPTER 4**LIMBURG PROVINCE: POPULATION STAGNATION AND AGEING - THE CHALLENGES OF REVITALISING THE REGIONAL ECONOMY**

In Limburg, population growth stagnated a decade ago due to both a low fertility rate and migration. This particularly holds true for South Limburg. Moreover, further population decline is to be expected in the coming decades. Moreover, the population is rapidly ageing. However, unlike most other regions that face population shrinkage, population density in Limburg is still very high. Employment growth in Limburg lags considerably behind the Dutch average, but the development of labour participation is rather similar. The unemployment rate in Limburg is structurally higher than the Dutch average although the difference is not that large. However, there are still occupations with severe labour shortages. The low rate of economic growth sets the agenda for public policy, with a clear focus on revitalising the economy as a means to cope with population shrinkage. Three policy fields can be defined:

- Increasing labour demand by revitalisation of the economy.
- Increasing labour supply.
- Improving the match between labour demand and supply

4.1 Local demographic conditions

Limburg is one of the twelve provinces in the Netherlands. It is situated in the south-east of the country and is bordered by both Belgium and Germany (Figure 32). Limburg occupies 2 209 km² and has over 1.1 million inhabitants, which equals 6.6% of the Dutch population, with 54% of the inhabitants living in the urbanised southern part of the province. The capital city of the province is Maastricht, which is best known for the Treaty of the European Union, which was signed in this city in 1992. The geographical distribution of the municipalities is illustrated in Annex 3.



Figure 32 Location of the province of Limburg in the Netherlands

Source: NVDO, 2012

4.1.1 Population decline

Like all European countries, the Netherlands is facing a demographic transition in terms of stagnating population growth and an ageing society. Since 1972, total population has increased by 25.5 % (Figure 33). This increase is expected to continue up to 34% (relative to 1972) in 2035 when the Dutch population is expected to stabilise around 17.8 million. However, as the figure shows, at the regional level, differences are substantial. The development of the population of the province of Limburg shows an entirely different tendency. Whereas the total Dutch population has gradually increased in the past decades, in Limburg this was only the case until a decade ago. Moreover, the three underlying NUTS-3 regions in Limburg exhibit very different population growth paths. In North and Mid Limburg, the population has grown steadily since the 1970s, although in the last decade there was very little further population growth in both regions. Conversely, the population in South Limburg reached a peak in 1998 and has been declining ever since.

Remarkably, between 1972 and 2011, the growth rate for the female population has been slightly larger than for the male population. This holds true for the Netherlands as well as the three sub regions in Limburg. However, the relative growth of the female population compared to the male population in Limburg (3.4%-points) exceeded the Dutch average of 2.2%-points. This particularly holds true for south Limburg, at 3.9%-points (see tables Annex 4).

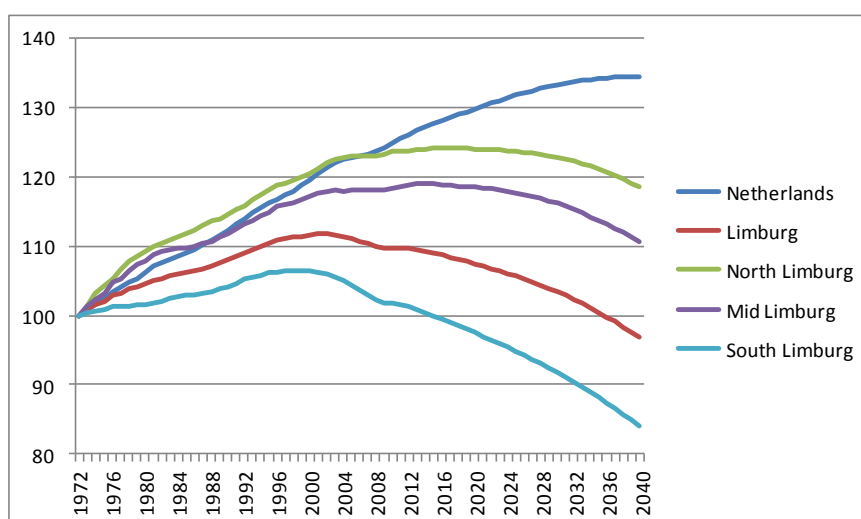


Figure 33 Total population (registered data 1972-2011, forecasts for 2012-2040; 1972=100)

Source: CBS, 2012

More precise data show the diverging demographic developments in the last decade. Whereas in the period 2000-2011 population growth in the Netherlands was positive (+5.0%), Limburg experienced a small population decline (-1.6%). However, in North Limburg (+2.6%) as well as Mid Limburg (+1.2%) population growth was still positive, whereas South Limburg faced a population decline (-4.5%). Moreover, population forecasts up to 2040 show that the divergence in population growth will increase. While the Dutch population will still be growing steadily, in Limburg a substantial population decline is to be expected. This particularly holds true for South Limburg.

Data at the municipality level show that the divergence in population development is even much larger than the data at the NUTS-3 region level suggest. This is for instance the case in South Limburg, which can roughly be divided into three types of sub regions: the old mining city agglomeration of Parkstad exhibiting a severe population decline, the city of Maastricht with growing population, and a rural region in between. Table 9 shows the ten municipalities in Limburg with the largest population decline between 2000 and 2011. In this period, the municipality of Vaals suffered from the largest population shrinkage (-9.4%), followed by Kerkrade and Landgraaf. Other municipalities in Limburg with a relatively strong decline in the number of inhabitants are Heerlen, Gulpen-Wittem, Nuth, Onderbanken, Valkenburg a/d Geul, Meerssen, and Eijsden-Margraten. All these municipalities are situated in South Limburg. The map in Annex 3 shows the location of these municipalities in South Limburg.

Table 9 Municipalities most affected by demographic decline, 2000-2011

Municipality:	Population change (%) 2000-2011
1 Vaals	-9.4
2 Kerkrade	-7.9
3 Landgraaf	-6.9
4 Heerlen	-6.2
5 Gulpen-Wittem	-6.2
6 Nuth	-5.8
7 Onderbanken	-5.5
8 Valkenburg a/d Geul	-4.8
9 Meerssen	-3.8
10 Eijsden-Margraten	-3.8

Source: CBS, 2012

4.1.2 Age structure of the population

Table 10 shows the development of the age structure between 1988 and 2012 in the three Limburg regions compared to the Dutch average. The table distinguishes between the youngsters (0-14 years old, the potential working population (15-64 years old) and the older population (65+). The table pops up some remarkable findings for Limburg. Whereas in 1988, the share of elderly in Limburg was below the Dutch average, in 2012 the 65+ population in Limburg exceeded the Dutch average by three-percentage points. This shows that the greying of the population in Limburg went much faster in Limburg (7.7 percentage-points increase) than in the Netherlands (3.7 percentage-points increase). Conversely, the share of young ones in Limburg in 2012 (14.6%) is much lower than the Dutch average (17.3%). Although the number of children below 15 in Limburg was already lower in 1988, Limburg also faced a more rapid decline in the share of young people (-2.6 percentage-points compared to -1.2 percentage-points) in the period 1988-2012. In absolute numbers this resembles a decline of over 24 000 youngsters, which means that there are now less than 164 000 people in this province who are younger than 15 years old. The development of the shares of the three age groups in the three sub regions in Limburg has been rather similar. However, in South Limburg the share of the 65+ population was already at a higher level than in Mid and North Limburg in 1988. This makes that in South Limburg the greying of the population still exceeds that in the other two sub regions.

Table 12 Population shares by age cohorts, 1988-2012

	1988	2012	Change (%-points)
Netherlands			
0-14 (%)	18.5	17.3	-1.2
15-64 (%)	69	66.5	-2.6
65+ (%)	12.5	16.2	3.7
Limburg			
0-14 (%)	17.2	14.6	-2.6
15-64 (%)	71.3	66.2	-5.1
65+ (%)	11.6	19.2	7.7
North Limburg			
0-14 (%)	19.2	16.5	-2.6
15-64 (%)	70.7	66	-4.7
65+ (%)	10.1	17.5	7.3
Mid Limburg			
0-14 (%)	17.8	15.2	-2.6
15-64 (%)	71.4	65.9	-5.5
65+ (%)	10.8	18.9	8.1
South Limburg			
0-14 (%)	16.2	13.5	-2.7
15-64 (%)	71.4	66.4	-5.1
65+ (%)	12.4	20.2	7.8

Source: CBS, 2013

4.1.3 Population density

It should be noted that Limburg is not suffering from a very low population density as other regions usually do that face a shrinkage of their population. Figure 34 shows that population density in Limburg with 522 persons per km² is actually somewhat higher than the Dutch average of 494 persons. Moreover, this higher population density is due to the remarkably high population density in South Limburg. In this sub region, there are no less than 933 inhabitants per square kilometre, which is almost twice as much as the average population density in the Netherlands. This high population density illustrates that South Limburg is actually a highly urbanised area with two poles: Parkstad (including the city of Heerlen) and Maastricht. The population density of South Limburg actually even approximates the highly urbanised western part of the country, which is the economic centre of the Netherlands with the four largest cities of the country: Amsterdam, Rotterdam, The Hague and Utrecht.

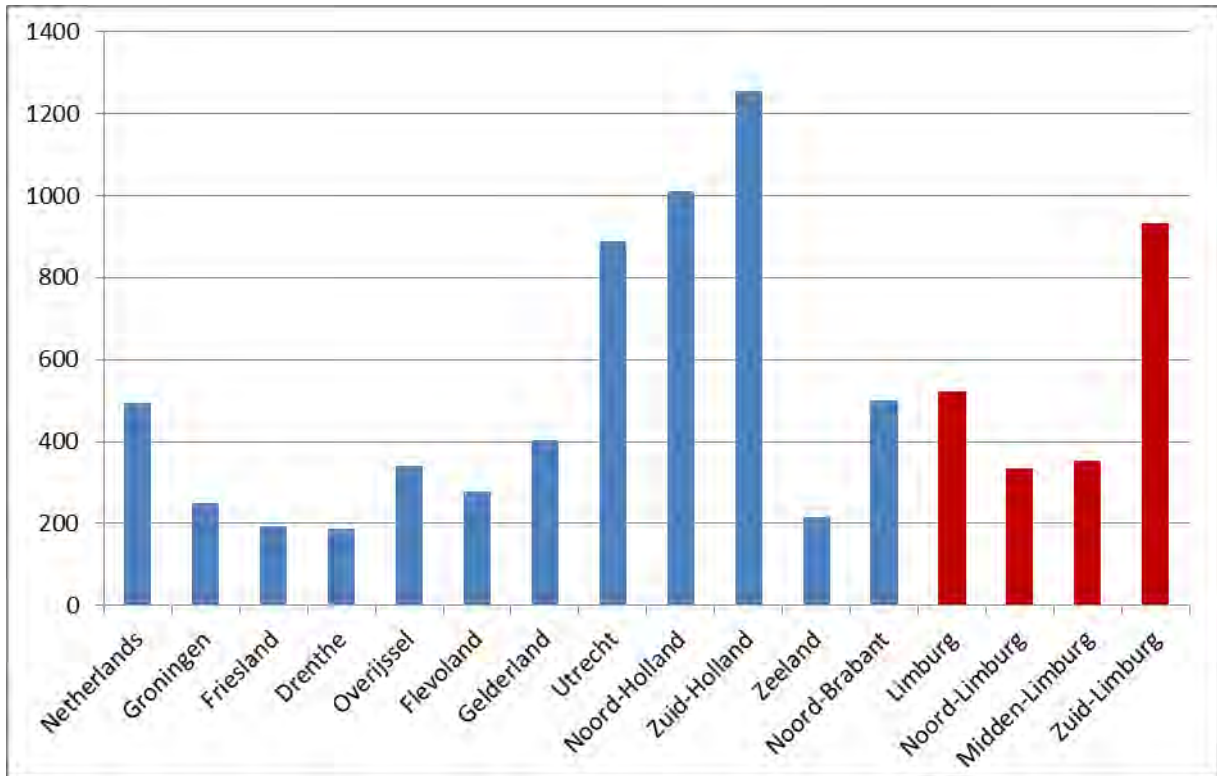


Figure 34 Population densities; persons per km² (2011)

Source: CBS, 2012

4.1.4 Fertility rates

A decreasing fertility rate is usually one of the two major drivers of population decline. Figure 35 shows that since 1988 the fertility rate in Limburg is lower than the average fertility rate in the Netherlands.

an upward trend in fertility in the last two decades. The figure also shows that the fertility rate in South Limburg is much lower and far below replacement level. This emphasises that it is this sub-region where the potential problems related to population shrinkage are most severe.

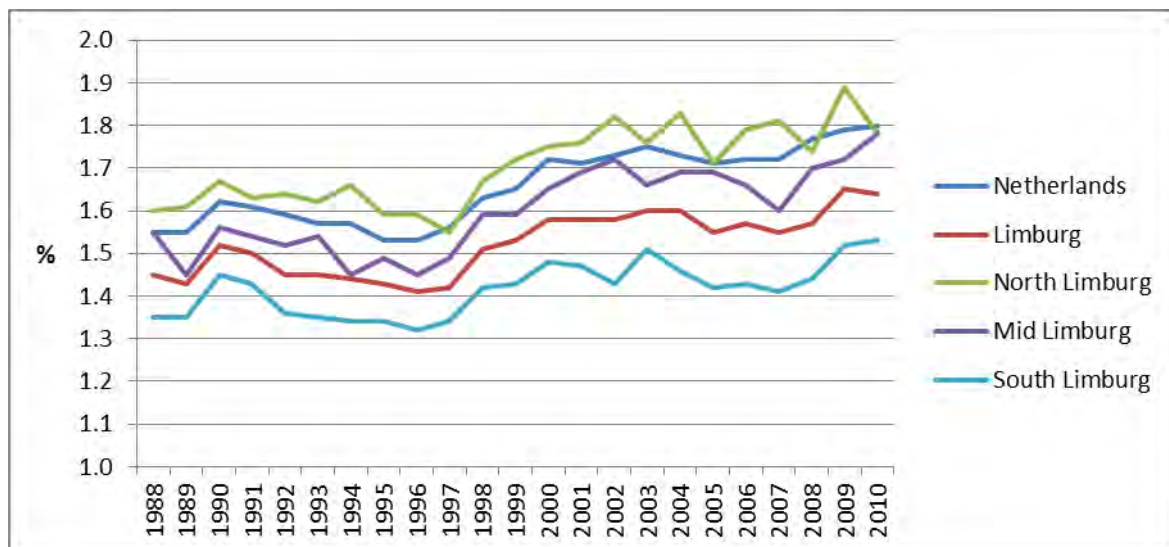


Figure 35 Fertility rates, 1988-2010

Source: CBS, 2011

Figure 36 shows the development of the birth and death rates of the province of Limburg and compares these to the Netherlands. The figure illustrates that the decline of the birth rate drives the decline of the natural growth of the population. This holds true for Limburg as well as for the Dutch average. However, the Figure also clearly illustrates that in Limburg all through this period the annual birth rate is lower than the Dutch average. Compared to the birth rate the development of the death rate is rather flat, although in Limburg the death rate gradually increases due to the greying of the population. The figure also shows that in 2005 the natural growth of the population in Limburg becomes negative. Recently, this negative natural growth has slightly increased.

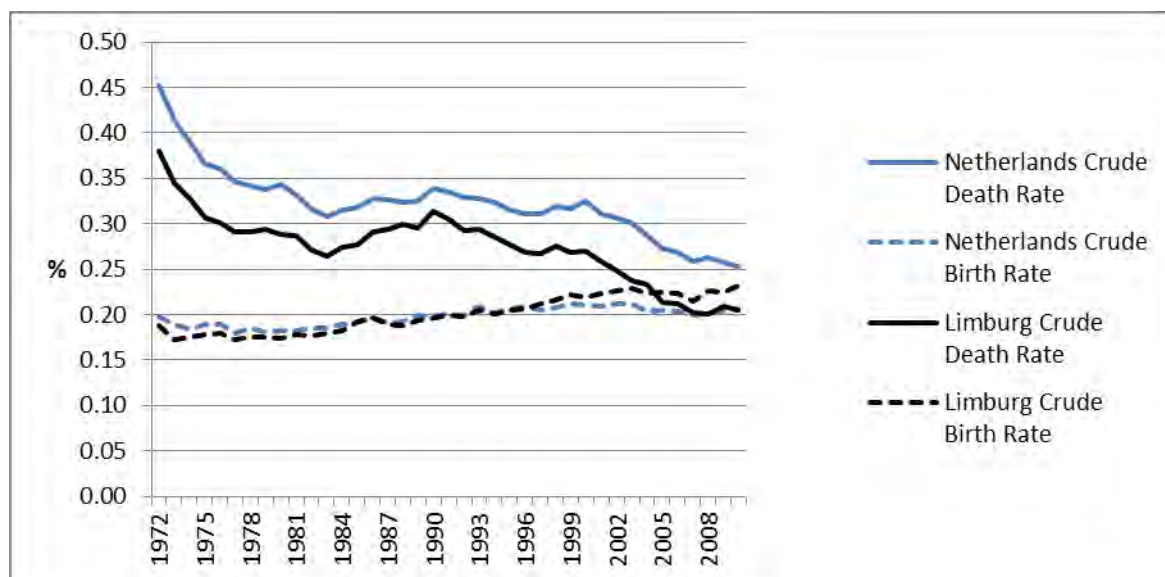


Figure 36 Crude birth and death rates, 1988-2010

Source: CBS, 2011

4.1.5 Greying of the population

The ageing of the Dutch population is caused by the large number of baby boomers, i.e. people born during the post-World War II years. Whereas in 1972 the median age in the Netherlands was 28 years, this has sharply increased to 40 years in 2011 (Figure 37). In Limburg the median age of the population increased even more; from 27 years in 1972 to 44 years in 2011. In South Limburg, the median age has increased most heavily during this period up to 45 years in 2011. Yet, also North and Mid Limburg have increased considerably and above-average. In North Limburg the median age in 2011 was 43 years whereas in Mid Limburg it was 44 years.

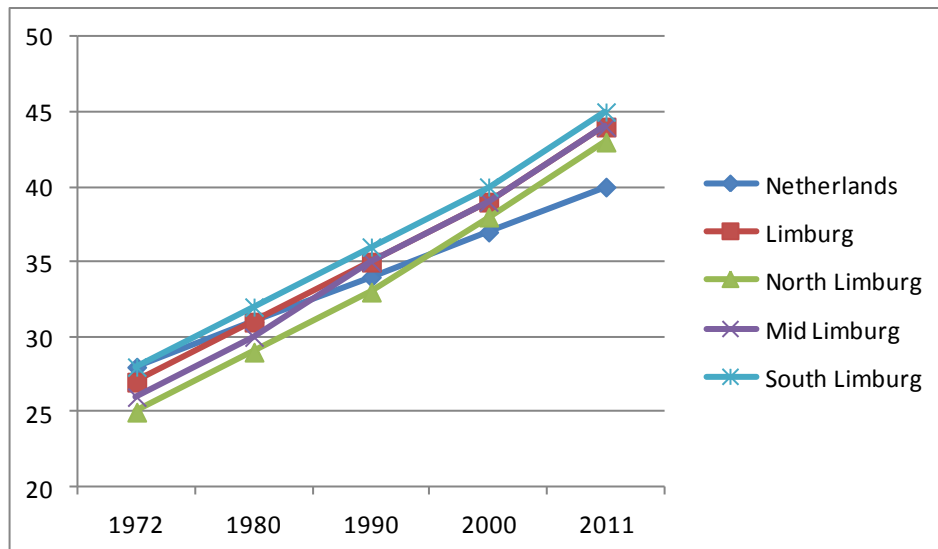


Figure 37 Developments median age population, 1972-2011

Source: CBS, 2012

Moreover, the size of the age cohort above 65 years has grown rapidly over the last decades. Figure 38 illustrates the increase of the population aged over 65 in the period 1972-2011. Compared to the Netherlands, the group of elderly in Limburg has grown more rapidly. Furthermore, the higher share of elderly in Limburg (18.6%) is higher than the country's average of 15.6%. Particularly in Mid and North Limburg the population aged over 65 has increased relatively rapidly during last decade. However, in 2011 by far most of the 208 000 inhabitants of Limburg aged over 65 live in the most urbanised sub region: South Limburg (118 900). Also the share of those aged over 65 in 2011 is highest in South Limburg. In this sub region 19.6% of all inhabitants are 65 or older. In North Limburg (16.7%) and Mid Limburg (18.2%) the share of elderly is slightly less.

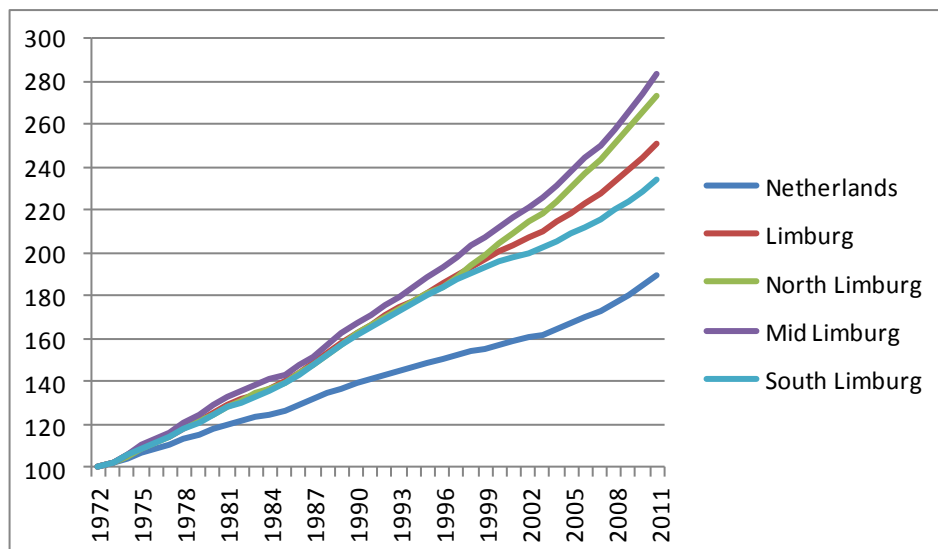


Figure 38 Developments of 65+ population, 1972-2011 (index: 1972=100)

Source: CBS, 2012

The ageing of the population *requires an upgrading of the quality of health care* by concentration and differentiation focusing on *innovation that stimulates prevention as well as self-reliance*. Furthermore, the greying of the population increases the need for *improving living opportunities for the elderly* by means of housing for seniors, retirement apartments, eldercare at home

and other facilities for the elderly population. Active policies in this field might also encourage retirees from other regions to visit or even migrate to the region.

Table 11 gives an overview of the top ten municipalities in the province of Limburg with the largest growth of the 65+ population during the period 2000-2011.⁴³ The table outlines that six of the top 10 municipalities with a growing elderly population are located in North Limburg with growth rates of the 65+ population of 40-50%: Mook en Middelaar, Peel en Maas, Venray, Beesel, Horst aan de Maas, and Gennep. However, the population over 65 has increased most heavily in Nederweert, which is located in Mid Limburg. Between 2000 and 2011, in Nederweert the 65+ population has grown with almost 60%. In South Limburg two municipalities are among those with the largest increase of the 65+ population: Schinnen and Eijsden-Margraten.

Table 11 Municipalities with most rapidly growing population over 65 (%), 2000-2011

Municipality	% change	
	2000-2011	
1 Nederweert	58.2	
2 Mook en Middelaar	50.2	
3 Peel en Maas	49.1	
4 Venray	46.8	
5 Beesel	43.3	
6 Horst aan de Maas	43.2	
7 Schinnen	41.9	
8 Gennep	40.9	
9 Eijsden-Margraten	40.5	
10 Weert	39.8	

Source: CBS, 2012

4.1.6 Greying of the working population

The general ageing of the Dutch population is obviously also reflected by the increasing share of older workers in the Dutch labour force. In Limburg, the employment share of workers in the age group of 55-65 years old was in 2011 almost three times larger than in 1996. This is in line with the increase of older workers at the national level. The ageing of the workforce is actually due to two developments: (1) the greying of the large post-war baby boom generation, and (2) the increasing labour market participation of 55-plus workers related to the postponement of retirement. In Limburg, the employment rate among people aged 55-65 years has nearly doubled from 25% in 1997 to 43.7% in 2011. However, this is still slightly lower than average participation of this age cohort in the Netherlands which increased from 27.9% in 1997 to 48.9% in 2011.

The greying of the working population might have severe consequences for the performance of firms because older workers might more often face skill obsolescence as they have fewer incentives to invest in further training (Fouarge *et al.*, 2011). Moreover, in the Netherlands age-earning profiles are relatively steep which may create a productivity-wage gap for older workers (Cörvers *et al.* 2011). Finally, the greying of the working population might in the coming years lead to severe shortages in various segments of the labour market when the large baby boom generations retire (See Section 4). In order to improve labour participation of older workers *firms should invest more in training of their older workforce and improve the learning culture in their organisation* (See Sections 6 and 7).

⁴³ Annex 3 shows where the various municipalities are located in Limburg.

4.2 Regional labour market

4.2.1 Employment

In 1996, Limburg's share of total employment in the Netherlands was 7.1%. In 2011 the share of Limburg in total employment was slightly smaller: 6.5%. In that year, in Limburg 505 000 persons were employed. Whereas from 1996 to 2011 total employment in the Netherlands increased by almost 17%, in Limburg the increase of employment in that period was merely 5.9%. This lower rate of employment growth has two major reasons. First, it reflects the centralisation of employment within the Netherlands in the Randstad. Second, it is related to the traditional over-representation of the manufacturing and agricultural sector in Limburg. These two sectors in which employment has been decreasing for many decades because of the continuous increase of labour productivity in these sectors and the shift of low-skilled employment to low-wage countries in Asia and Central and Eastern European countries.

Figure 39 gives an overview of the sector structure of the three regions in Limburg compared to the average sector structure of employment in the Netherlands. In the Netherlands the vast majority of the workers are employed in the service sector (83.1%). In Limburg the employment share of the service sector is lower: 78.8%. In Limburg, particularly the manufacturing sector is overrepresented: 19.1% of the employees work in the manufacturing industry compared to 15.7% on average in the Netherlands. The remaining 2.1% finds employment in the agricultural sector. At the more specific regional level, the urbanised area of South Limburg occupies the largest share of workers in the service sector, resembling the average share of service sector employment in the Netherlands. However, in Mid and North Limburg relatively many people are employed in manufacturing. This shows that these regions are still among the most industrialised regions of the Netherlands. Furthermore, in North Limburg the share of employment in agriculture (6.2%) is almost five times larger than the country's average.

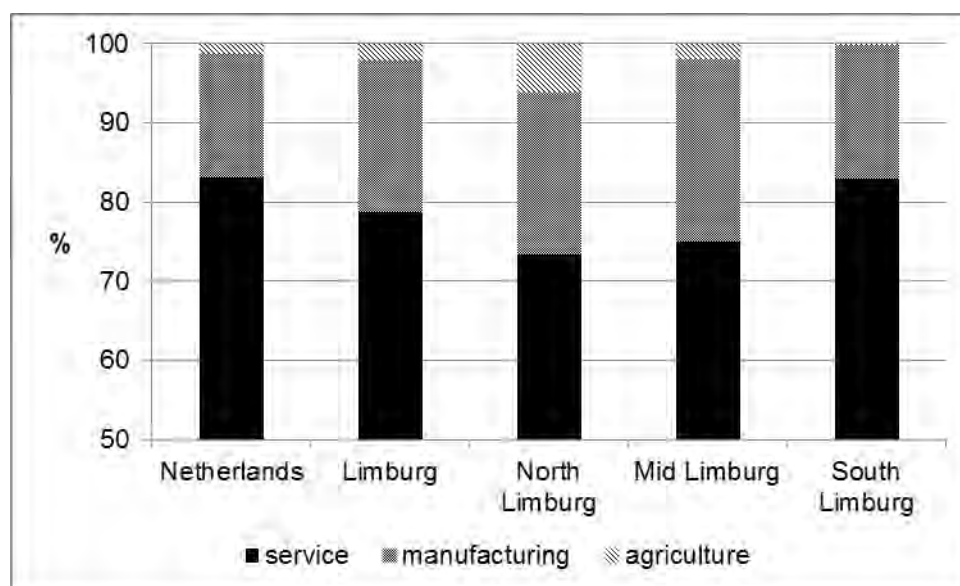


Figure 39 Employment structure by sector of industry in Limburg and the Netherlands (average 2008-2010)

Source: CBS, 2011

4.2.2 Labour participation

It is difficult to say whether the lower employment growth in Limburg compared to the Netherlands is due to a lower growth in labour demand or due to a stagnating growth of the labour

forces. Nevertheless, when shrinkage regions could enlarge the participation rate of their work force this might mitigate the problems they face concerning the scarcity of workers. Data show that between 1996 and 2011 the total employment rate in Limburg has increased by eight percentage points from 56.7% in 1996 to 64.7% of the potential labour force in 2011 (see Annex). However, the average employment rate in the Netherlands is somewhat higher and has increased by 8.5 percentage points from 58.7% in 1996 to 67.2% in 2011.

4.2.2.1 Male and female participation rates

Figures 40 and 41 show the development of male and female participation rates between 1996 and 2011, respectively. Figure 40 illustrates that in this period in both the Netherlands and the three regions in Limburg, the male participation rate has been quite stable. Furthermore, the figure shows that South Limburg is the only region in Limburg where the male participation rate is below the Dutch average level.

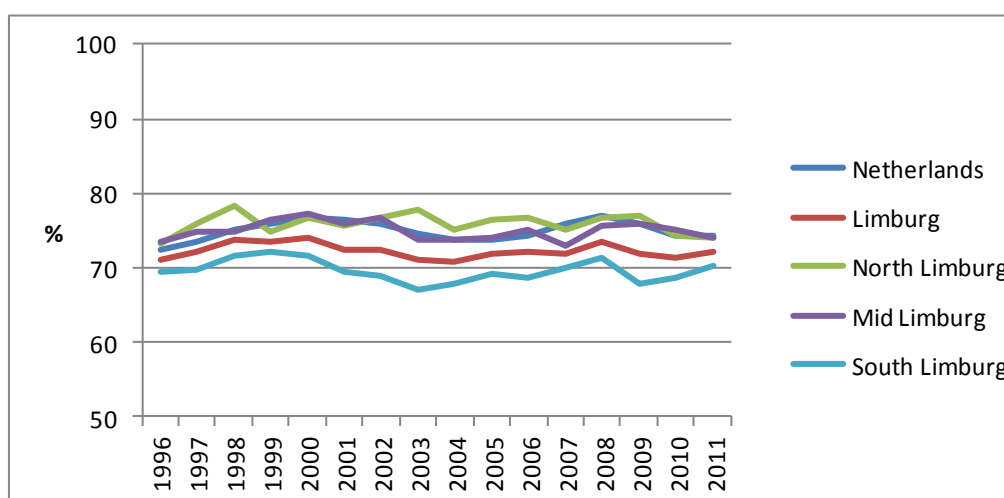


Figure 40 Male participation rate, 1996-2011

Source: CBS, 2012

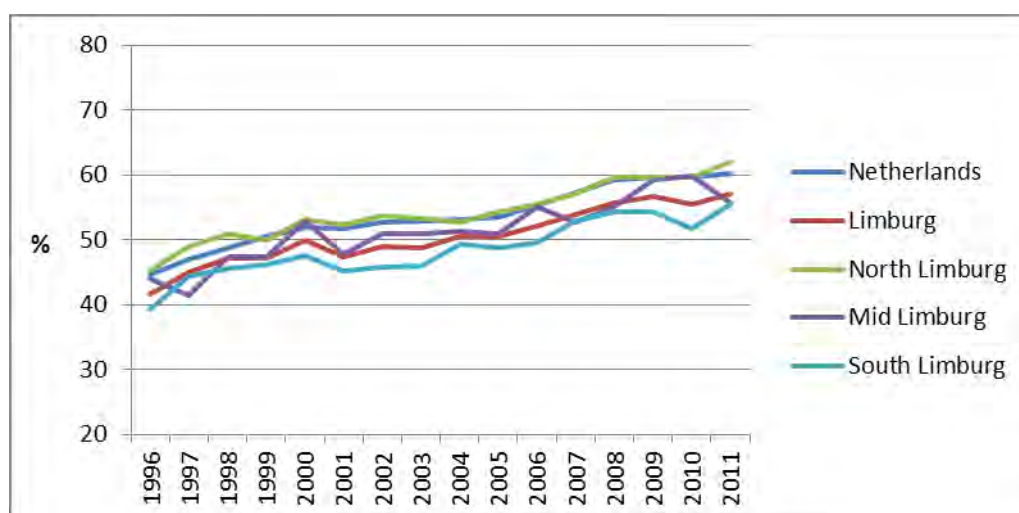


Figure 41 Female participation rate, 1996-2011

Source: CBS, 2012

Whereas the male participation rate has been quite stable, the female participation rate shows a clear upward trend, leading to an increase of about 15%-points (Figure 41). This holds true for the average female participation rate in the Netherlands as well as for the province of Limburg. Again

South Limburg is the only region in Limburg where the participation rate is clearly below average. The low participation rate of both men and women in South Limburg reflects a lack of employment opportunities in this region, particularly for low-skilled workers (See also Section 4.3.3). This shows that *public policy should aim to increase employment opportunities*, particularly in South Limburg, in order to *prevent socially depressed areas and mitigate migration to other regions* in the Netherlands (See Sections 5 and 6).

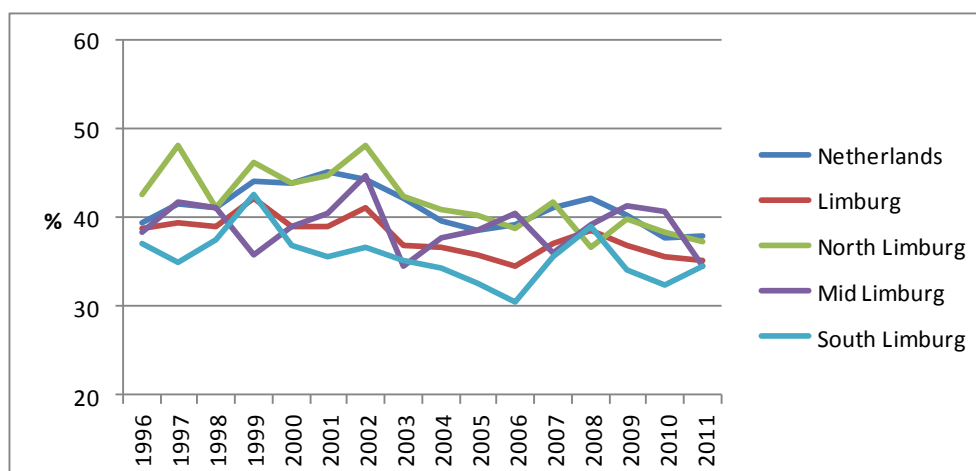


Figure 42 Youth (15-24) participation rate, 1996-2011

Source: CBS, 2012

4.2.2.2 Participation rates of young and older workers

Figure 42 shows the development of the youth participation rate since 1996. The figure shows that labour participation of young people is remarkably lower as many of them are still attending school and tertiary education (See Section 4). Moreover, the participation of young people is much more subjective to fluctuations. Generally speaking, youth participation in Limburg follows the fluctuations in the Dutch average. However, in Limburg labour participation of young people appears to be structurally lower than the Dutch average. Whereas in North Limburg the youth participation rate more or less reflects the Dutch average, it is again the Southern part of Limburg where labour participation is lowest. Largely, this holds for both males and females (see Annex). To some extent the lower youth participation rate in South Limburg will be due to the large share of university students in this region. However, it also reflects the low labour participation rate of the low-skilled youngsters in this region due to a lack of employment opportunities. Again, this shows how important it is to increase employment in South Limburg.

Figure 43 shows that the participation rate among older workers (55-64 years) has increased considerably since 1996. Most probably, this is mainly due to fiscal policies aiming at an increasing retirement age (Fouarge *et al.*, 2011). Although the participation among older workers in Limburg appears to be structurally below the Dutch average, also in Limburg labour participation of workers in the age of 55-64 has increased sharply. Definitely, this will also be due to fiscal policies aiming at an increasing retirement age. Whereas the participation rate of older workers in North Limburg resembles the Dutch average, in both Mid Limburg and South Limburg labour participation of the population in the age of 55-64 is at a substantially lower level. In 2011, labour participation of 55-64 year old workers in South Limburg is 6.5 percentage-points lower than the Dutch average. Again, this lower participation rate will be due to a lack of employment opportunities, particularly for low-skilled workers.

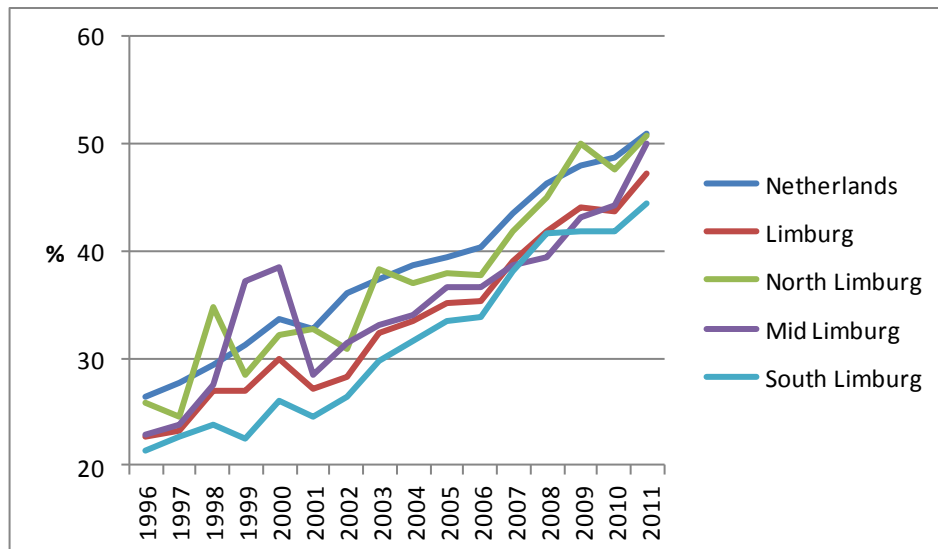


Figure 43 Participation rate of older workers (55-64), 1996-2011

Source: CBS, 2012

Annex 7 shows that, although labour participation among both older males and females has increased substantially during these years, the participation among males of 55-64 is still much higher than for females in the same age group. Actually, the participation rate of female older workers in 2011 is approximately at the same level as the participation rate of male older workers in 1996. This holds for both Limburg and the Netherlands, and reflects the traditional division of labour within the household in these cohorts.

4.2.3 Unemployment

The slower pace of employment growth in Limburg would mainly be due to a lower growth in labour demand instead of a lower growth of labour supply, this would most probably be reflected in a higher unemployment rate. **Error! Reference source not found.** Figure 44 shows the development of the unemployment rate between 1997 and 2011 for the province of Limburg, the three regions within Limburg, and the Netherlands. The figure shows that cyclical fluctuations in the unemployment rate in Limburg hardly differ from the average developments in the Netherlands. However, in all stages of the business cycle, the unemployment rate in Limburg is above the Dutch average. Between 1997 and 2011 the unemployment rate in Limburg is on average 5.6%, which is slightly higher than the 5.0% on the national level. With an unemployment rate of 4.5% North Limburg is the only region within Limburg that outperforms the country's average. Conversely, in South Limburg the unemployment rate is above average in all stages of the business cycle. Moreover, the difference in the unemployment rate between North and South Limburg is substantial: 1.7 percentage-points over the entire period. This suggests that South Limburg suffers from a relatively high structural unemployment that is due to a lower labour demand as well as a mismatch between the skills of the unemployed workers and the skills demanded in the labour market. This shows how important it is to *develop policies that aim to increase labour demand as well as policies that aim to adapt students' choice of vocational education and retrain adult workers for occupational fields with good job perspectives* (See Section 4.2.5).

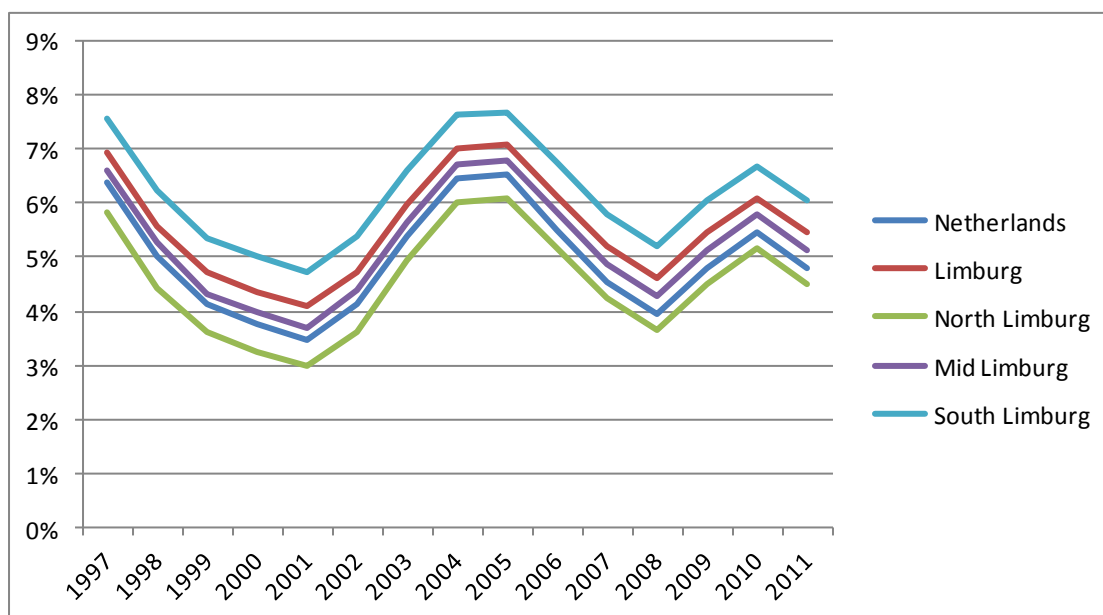


Figure 44 Unemployment rate, 1997-2011

Source: CBS, 2012

When comparing the unemployment rates of males and females (see Annex), the same business cycle fluctuations can be noticed, and the differences between the three sub regions in Limburg are rather similar for males and females. However, unemployment among female workers is higher in all subsequent years. On top of that, the discrepancies between males and females are larger in Limburg.

Annex 10 illustrates the high unemployment rates of younger persons (15-24 years). In Limburg, the unemployment rate of young people is on average twice as high as the total unemployment rate. Although average youth unemployment in the Netherlands is also considerably higher than the total unemployment rate, young people in Limburg are worse-off, as they are unemployed considerably more often than youngsters in the Netherlands on average.

In Limburg, also workers in the age of 55-64 are more often unemployed compared to the average unemployment rate of the older workers in the Netherlands (see Annex 11). Mid Limburg is the exception since the unemployment rate among the population in the age of 55-64 is at the same level as the average unemployment rate for older workers in the Netherlands.

4.2.4 Labour Migration

Migration is the other major driver of population decline. As Figure 45 shows, the development in population in Limburg can be explained to a large extent by foreign migration. The sum of natural growth (i.e. births minus deaths) and the domestic emigration surplus has considerably decreased in the last two decades (red line). After 2002, this domestic 'population outflow' is positive, meaning that apart from foreign migration flows, the population in Limburg decreases. However, foreign immigration flows appear to be very volatile: immigration net of emigration (blue line) shows a sharp decrease in the first years of this century, followed by a remarkable recovery in the last five years. As a result of this development, total population in Limburg increased to 2001 because of natural growth as well as foreign immigration, and fell between 2002 and 2008. From 2009 onwards, the positive effect of net immigration and the net effect of domestic decline are more or less in balance. In 2011, net immigration is even larger than net domestic population growth, resulting in a small growth of the population in Limburg.

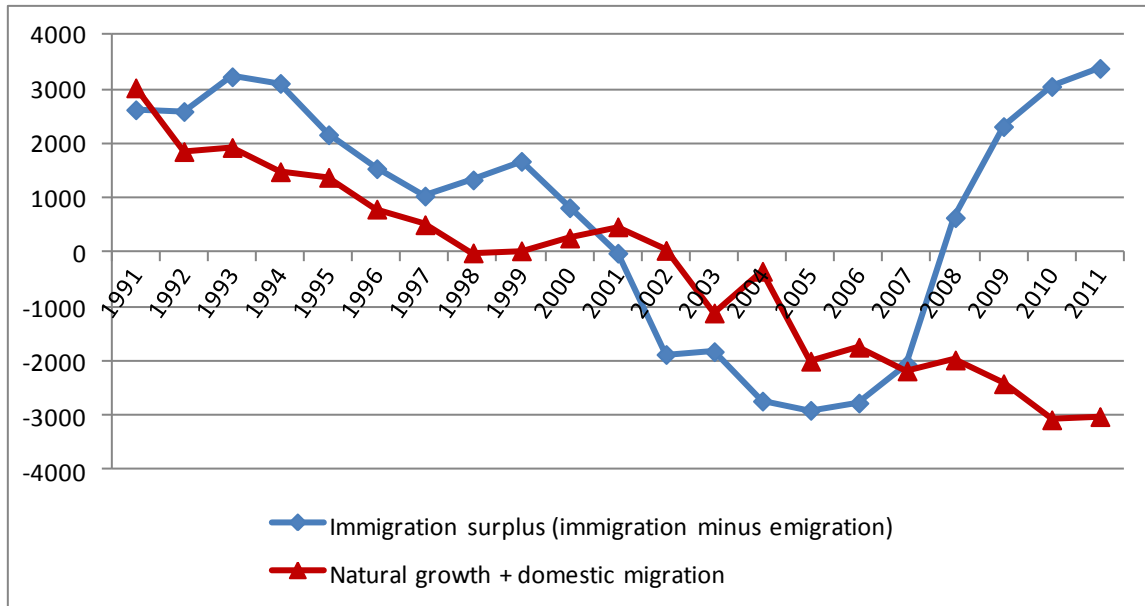


Figure 45 Population changes due to migration and mortality in Limburg, 1991-2011

Source: CBS/calculations by Cörvers and Liefierink (2012)

4.2.5 Labour Market Forecasts

Recent forecasts by *VWL Samenwerkend Limburg* (2012) regarding the expected labour market developments in Limburg, by type of education and occupational group, show that the match between supply and demand is not optimal. Table 12 outlines that in general the labour market perspectives up to 2016 for several studies are good to very good, whereas for other studies graduates' perspectives are moderate to reasonable. These forecasts resemble to a large extent the labour market forecasts for the Netherlands. At all levels particularly the labour market perspectives for graduates in engineering studies are good. Moreover, at the intermediate vocational education level labour market perspectives are good for agriculture, and at higher vocational education level also for graduates of teacher training and (para) medical studies. On the other hand, graduates of business and administration studies or community care at the higher vocational level are expected to be worse-off in the near future.

Table 12 Job prospects for school leavers by type of education in the Netherlands and Limburg, to 2016

Type of education	The Netherlands	Limburg	Limburg: employment 2010
<i>Preparatory secondary vocational education</i>			
junior general education	good	good	37 200
agriculture	moderate	reasonable	4 600
engineering	good	good	37 500
business studies and administration	moderate	reasonable	11 400
care and welfare	good	good	18 600
<i>Senior general education</i>			
	moderate	moderate	36 100
<i>Intermediate vocation education</i>			
agriculture	good	good	10 700
engineering	good	good	61 300
community care	good	reasonable	17 800
health and welfare	moderate	reasonable	16 600
business studies and administration	moderate	reasonable	59 300
<i>Higher vocational education</i>			
teacher training	good	good	21 400
agriculture	reasonable	reasonable	2 600
engineering	good	good	20 200
paramedical services	good	good	13 800
business studies and administration	moderate	moderate	26 900
community care	moderate	moderate	17 800
<i>University education</i>			
arts and social sciences	reasonable	*	*
agriculture and environmental science	moderate	*	*
science and engineering	good	*	*
pharmacy	very good	*	*
business studies	moderate	*	*

Source: ROA: Netherlands; RAIL: Limburg

Note: At the level of university education, only national job prospects are presented because of the high geographic mobility among university graduates.

The reverse side of the good labour market perspectives for graduates is that firms will suffer from labour shortages. Table 13 gives an overview of the occupations for which employers are expected to face severe labour shortages up to 2016. The table shows that in Limburg shortages are to be expected at all job levels. This holds for all three sub regions. For technical occupations, firms will face shortages at all job levels in the coming years. Remarkably, at the lower level, labour shortages are expected for jobs in various fields. As the labour market participation in Limburg is relatively low, this signals the importance of improving labour market participation of lower skilled people. At the intermediate level, labour shortages are mainly expected in occupations in the field of agriculture and technical occupations, whereas for higher level occupations, the most severe labour shortages are expected in the teaching profession. Moreover, at the occupational level, shortages are expected for the technical and transport professions. This mismatch between, on the one hand, occupations with severe labour shortages and on the other hand the relatively high unemployment rate in Limburg (See Section 6.3.3) shows the need to *adapt students' choice of vocational education to labour demand* in the various occupational fields by *more adequate study and career counselling practices*. Moreover, adult workers who are unemployed or at risk of losing their job should be *motivated to be re-skilled* for occupational fields with good job prospects.

Table 13 Occupational shortages at lower, intermediate and higher vocational levels, to 2016

Occupations	The Netherlands	Limburg	North Limburg	Mid Limburg	South Limburg
Elementary occupations	some	large	large	large	large
Lower agricultural occupations	large	large	large	large	large
Lower technical and industrial occupations	some	large	large	large	large
Lower construction and installation occupations	large	large	large	large	large
Lower metal and electronics occupations	large	large	large	very large	large
Lower remaining industrial occupations	large	large	large	large	large
Lower transport occupations	large	large	large	large	large
Lower (para) medical occupations	large	large	large	large	large
Lower administrative occupations	large	large	large	large	large
Lower commercial and sales occupations	some	large	some	large	large
Lower security occupations	some	large	large	large	large
Lower caring occupations	large	large	large	large	large
Lower service occupations	some	some	some	large	some
Intermediate agricultural trades	large	large	large	large	large
Intermediate technical trades	large	large	large	large	large
Intermediate construction trades	large	large	large	large	large
Intermediate metal and electronics trades	large	large	large	large	large
Intermediate remaining industrial trades	some	large	large	large	large
Intermediate transport trades	some	some	some	large	some
Higher teaching professions	very large	very large	very large	very large	very large
Higher technical and industrial professions	large	large	large	large	large
Higher construction professions	large	large	large	large	large
Higher metal and electronics professions	large	large	very large	large	very large
Higher transport professions	some	large	large	large	large

Source: ROA: Netherlands; RAIL: Limburg.

Note: Only those occupational groups are presented for which a large labour shortage is forecast in at least one region within Limburg.

4.3 The Educational Ecosystem and Lifelong learning

4.3.1 Students enrolled in education

Figure 46 shows that student enrolment in education as a percentage of the total population in Limburg is below the Dutch average. This reflects about a 3 percentage-points lower share of youngsters in the total population in Limburg, as shown in Table 10. In Limburg, there are approximately 227 000 students on a total population of over 1.1 million. This means that in Limburg one out of every five persons is enrolled in education. Although the student enrolment rate in North Limburg is below the Dutch average, this sub region outperforms the two remaining sub regions in this field due to the larger share of youngsters in total population.

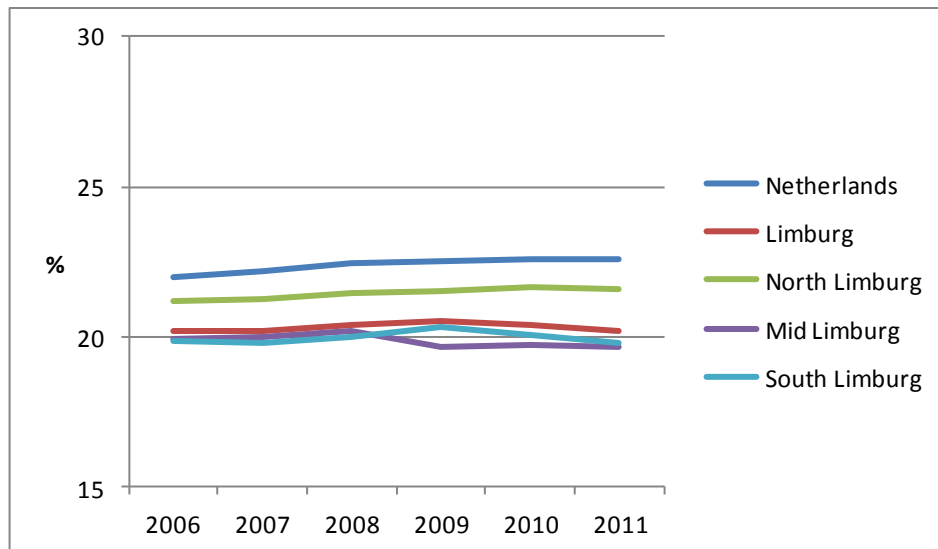


Figure 46 Students enrolled in education as percentage of total population, 2006-2011
 Source: CBS/ABF, 2012

4.3.2 Students in university education

In the province of Limburg, university education is offered by Maastricht University.⁴⁴ This university has the most diverse student population in terms of foreign background of Dutch higher education. Nearly half of the students at Maastricht University come from abroad (44%), whereas the average percentage of foreign students for higher education institutions in the Netherlands is 11%. Because of its location in the Meuse–Rhine Euregion, many international students come from Germany and Belgium, but there is an increasing inflow from students coming from other EU Member States and non-EU countries.

Figure 47 shows that from its start in 1976, the number of students gradually grew to almost 16 000 students in 2011. Given that many students come from abroad, Maastricht University appears to be a pathway for immigration into the region as well as a means to increase the level of education of the Limburg population. Not only by employing a staff of 4 000 high-skilled employees but also by contributing to the labour market inflow of university graduates in Limburg. Moreover, 12% of all foreign graduates of Maastricht University find employment in Limburg after their graduation. The same holds for 20% of the students who were born in other provinces of the Netherlands. In these ways, Maastricht University could counterbalance the outflow of youngsters born in Limburg to other regions in the Netherlands. Public policy could aim to *increase of the number of international students at Maastricht University as well as encourage them to apply for a job in the region*. Such a policy could not only increase the inflow of youngsters in South Limburg but also *increase the skill level of the working population in Limburg*.

⁴⁴ Also the Open University Netherlands is located in Limburg. However, due to its focus on distance learning the students of this university are living all over the Netherlands and abroad.

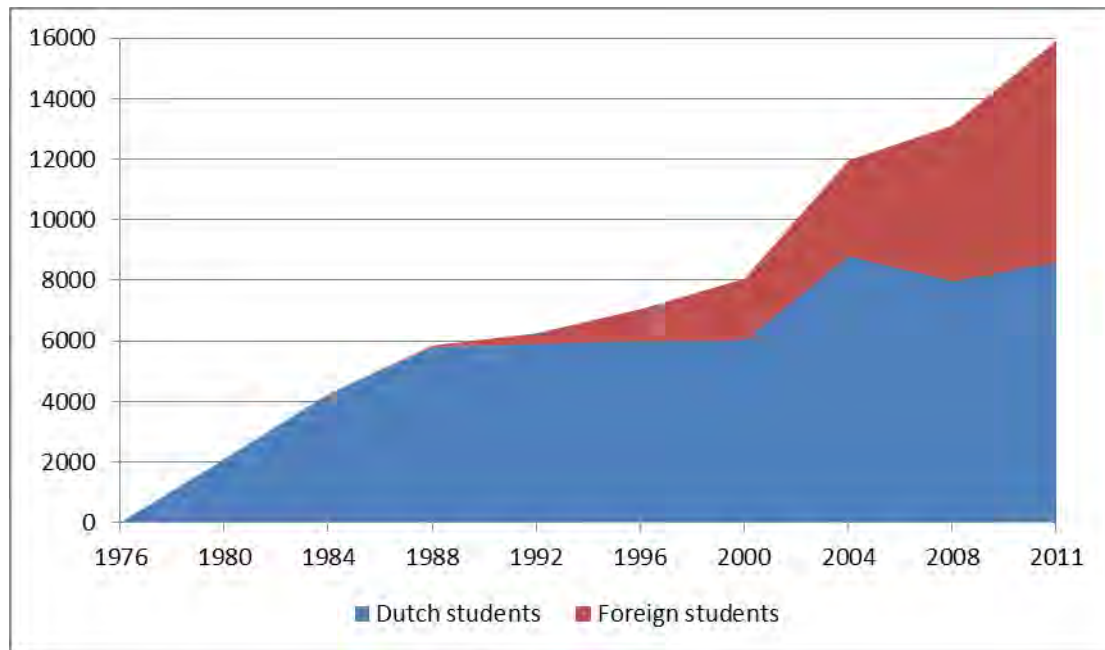


Figure 47 Developments in student enrolment at Maastricht University, 1976-2012

Source: Maastricht University, 2013

4.3.3 Lifelong learning

With an ageing population and shortages of labour supply at hand in various segments of the labour market, it is not only important that older workers are willing to postpone their retirement, but also crucial that these older workers remain productive. This sets the *agenda for lifelong learning*, encouraging both training participation and opportunities for informal learning in the workplace (Borghans *et al.*, 2011).

Figure 48 illustrates the development of the training participation of those aged 25-64 years old. The data refer to the Dutch labour force survey in which respondents are asked whether they participated in a training course in the last four weeks.⁴⁵ The figure shows that although Limburg exhibits a similar upward trend in training participation as the Netherlands, training participation in Limburg is substantially lower than the Dutch average training participation rate. Only South Limburg resembles the Dutch average, whereas both Mid and North Limburg lag considerably behind the Dutch average. This pattern more or less holds true for both males and females, although in South Limburg only male workers have a training participation rate that resembles the Dutch average (see Annex 12). This training gap shows the need for *improving the learning culture* among adult workers in Limburg by facilitating lifelong learning.

⁴⁵ Therefore, the participation rates measured are lower than measured by standard indicators that ask for training participation in the last year.

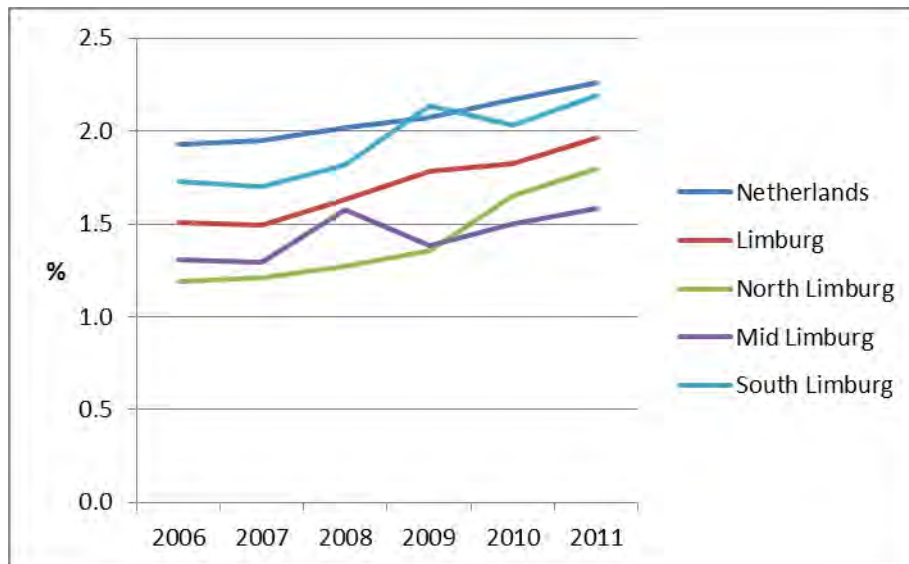


Figure 48 Participation in adult education and training, 25-64 years old, 2006-2011
Source: CBS/ABF, 2012

4.4 New Sources of Economic Growth

The development of the gross domestic product (GDP) is one of the most widely used indicators of overall economic development. Data show that the share of the province of Limburg in total Dutch GDP has declined. Whereas in 1995 Limburg accounted for 6.4% of total Dutch GDP, in 2009 this share in the national GDP had diminished to 5.9% (see Annex 5). This decline actually reflects the lower population growth rate in Limburg as shown in Figure 33. This means that there has not necessarily been a relative decline in prosperity in Limburg. However, Figure 49 shows that GDP per capita in Limburg is lower than the Dutch average. However, in line with the development of GDP per capita in the Netherlands, GDP per capita in Limburg increased steadily in the years 2000-2008. After that, a drop can be noticed in 2009 which can be attributed to the current economic crisis. The figure however also shows some divergence in the growth of GDP per capita between Limburg and the Dutch average. Whereas in 2000, the GDP per capita in Limburg was 11.4% below the Dutch average, in 2009, the GDP per capita in Limburg was 13.3% below average. This indicates that economic growth in Limburg lags behind average economic growth in the Netherlands. Section 4.6 discusses the framework of possible policy interventions that could revitalise the Limburg economy.

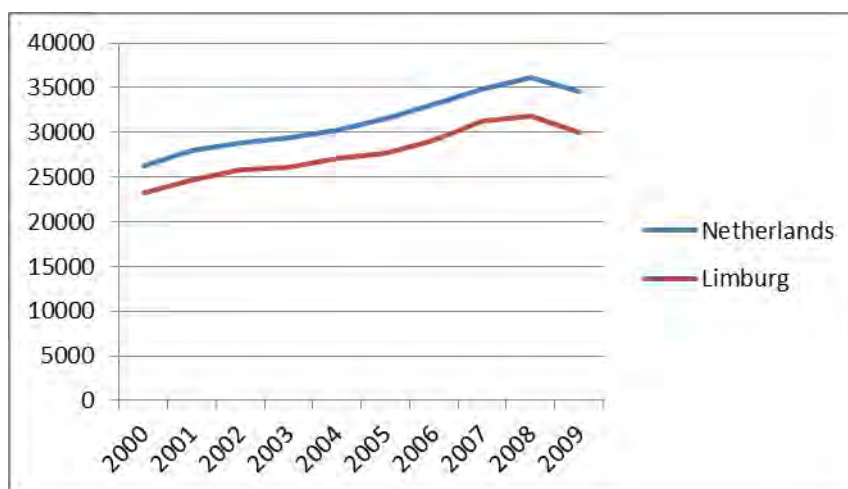


Figure 49 Development of GDP per capita in the Netherlands and Limburg, 2000-2009

Source: Eurostat, 2010

4.4.1 Number of company establishments

Altogether, 80 170 company establishments were located in Limburg in 2011. From 2001, the total number of company establishments in Limburg has increased by 36.5%. In 2011, the total number of company establishments in Limburg has increased by 3.6% compared to 2010. Behind this net increase in Limburg was a larger business dynamic, with 7 440 new company establishments founded and 4 750 terminated. Moreover, in the period 2010-2011, 1 090 company establishments came from outside Limburg to this province, whereas about 1 000 company establishments were relocated from Limburg to elsewhere. In this period, all three distinct areas in Limburg exhibited an increase in the number of company establishments. The regions of Maastricht and Mergelland showed the strongest net increase, of 4.6%, whereas in North Limburg and the agglomeration of Parkstad the net increase was below average, at 2.9% and 3.2%, respectively (Etil, 2011).

Provisional data of Statistics Netherlands (CBS) on the number of company establishments enable us to exclude the large number of self-employed in the above data by indicating the developments of firm establishments with at least two or more employees and company establishments with at least ten employees. Table 14 shows that in Limburg there were over 23 000 establishments with two or more employees in 2012. This means an increase of 5.9% compared to the number of company establishments with at least two employees in 2010. The table shows that this growth is slightly below the Dutch average (6.7%). With respect to the growth of the number of company establishments with ten employees or more, Limburg also performs somewhat below average, with a growth of 3.4%, compared to an average growth in the Netherlands of 4.6%. The smaller growth of company establishments with ten or more employees shows that most new establishments are small-sized, i.e. employing less than ten employees. According to Etil (2011) the average company size of the new company establishments founded between 2010 and 2011 resembles 1.6 employees. Public policy should encourage incubator sites, which are designed to increase the development of new SMEs. A very interesting example in this respect is Carbon 6, which aims to cluster start-up firms in a way that also contributes to urban renewal (Box 19).

Box 19 OECD study visit: Carbon 6

Carbon 6 is a very recent project of the *World of Walas*, a company that develops highly innovative urban renewal projects. Carbon 6 is located in the former offices of Statistics Netherlands (CBS) that recently moved to a new building in the city of Heerlen in South Limburg. It aims to cluster start-up firms in the building offering them real estate without asking any rent in the first years as well as organizing events and a flourishing craft market area that attract public to the building. Recently, a firm focusing on urban farming as well as a coal mine museum started in the building.

Table 14 Number of companies established in 2012, and % change 2010-2012

	Netherlands		Limburg		North Limburg		Mid Limburg		South Limburg	
	2012	% change 2010-2012	2012	% change 2010-2012	2012	% change 2010-2012	2012	% change 2010-2012	2012	% change 2010-2012
Establishments with:										
2 or more employees	356 770	6.7	23 015	5.9	5 820	5.1	5 640	7.8	11 550	5.2
10 or more employees	71 260	4.6	4 445	3.4	1 230	2.1	1 050	8.2	2 165	1.9

Source: CBS, 2012

Note: Company establishments in agriculture are excluded, as these data are available for 2012 only.

4.4.2 Innovation

Innovation traditionally deals with (the research and development (R&D) required for) developing new products (product innovations) or new modes of production (process innovation). In Limburg, total R&D⁴⁶ expenditure in 2009 added up to 603 million euro. In comparison with 2003 (652 million euro), this was a decrease of 7.5%. Conversely, during the same period, total R&D expenditure in the Netherlands has increased by 14%. This diverging trend is to a large extent due to a large decrease of companies' R&D investments in Limburg, to 24% or merely 354 million euro in 2009, whereas in the same period companies' R&D investments in the Netherlands increased by 2% (Source: CBS). This highlights the importance of *stimulating new innovative communities* such as the *Chemelot Campus* and the *Maastricht Health Campus* (See Section 4.4.3).

The *INSCOPE Competitiveness and Innovation Monitor* shows that social innovations of the internal and external organisation of companies account for 75% of the success of companies' innovations (Volberda & Bosma, 2011) Figure 50 provides an overview of the average scores of firms in Limburg on the six major aspects of social innovation: strategic orientation; speed of internal adjustment; self-organising capacity for the three sector of industry; talent development; investment in the company's knowledge base; and sustainable employability (NSI/LWV, 2012). The figure shows that measured on 5-point scales, the companies score relatively highly (i.e. point 4) on five of the six aspects of social innovation. Only with respect to the speed of internal adjustments (i.e. decentralisation of decision making, flexibility of labour inputs) do firms appear to be less innovative, particularly in the manufacturing sector. Given the high relevance of social innovation for the success of companies' innovations, public policy should further *support social innovation in order to improve the competitiveness of the Limburg economy*. This particularly holds for the *Chemelot Campus* and the *Maastricht Health Campus* which are the core activities in this field in Limburg.

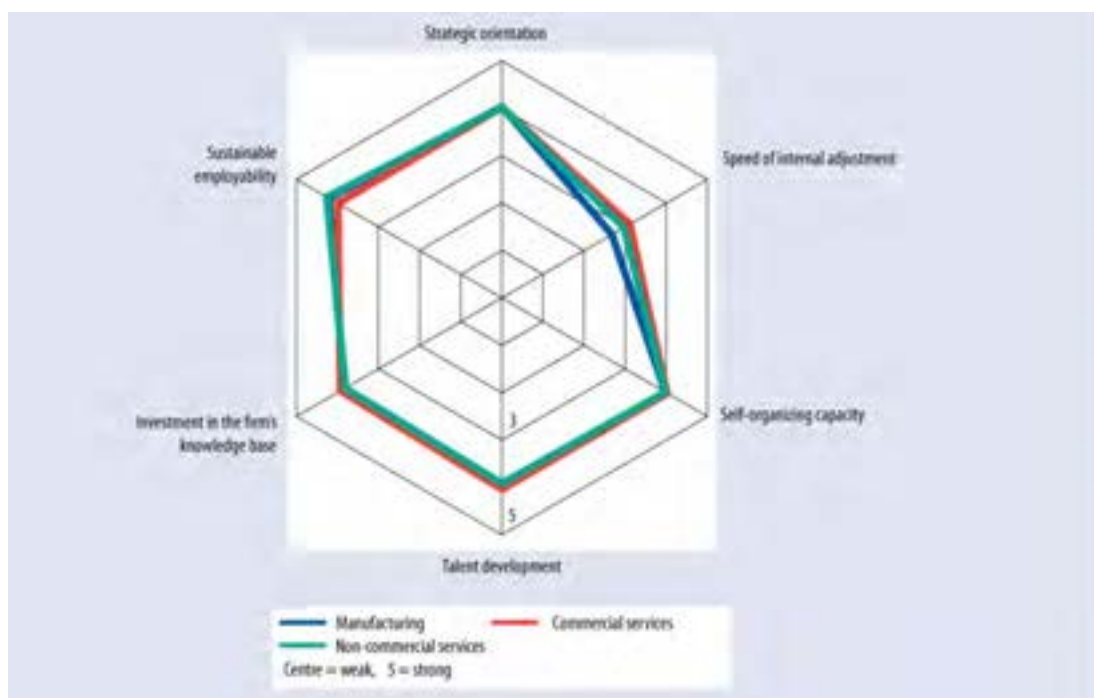


Figure 50 Overview of the scores of firms in Limburg on the six fields of social innovation

Source: NSI/LWV: *Sociale Innovatie Monitor Limburg 2012*

⁴⁶ Total here means: all R&D expenditure by companies, research and higher education institutes.

4.4.3 Top sectors for the Limburg economy

Recently, the Dutch Ministry of Economic Affairs and Agriculture (2011) defined nine top sectors which are seen as vital for the future development of the Dutch economy. The province of Limburg attempt to encourage business development in seven of the nine top sectors in the broader framework of the so-called *Brainport 2020* region that aims to get the South-eastern part of the Netherlands in the top five of knowledge regions in Europe and top 10 in the world by 2020.⁴⁷ Whereas North and Mid Limburg focus on the top sectors Agri-food, Logistic and high-tech materials and systems, South Limburg is particularly strong in the top sectors chemicals, life sciences and energy. It is the *Chemelot Campus* in Geleen, where approximately 5 500 high-skilled knowledge workers are employed in the fields of chemicals and materials, and the *Maastricht Health Campus*, which focuses on business development in the life-sciences, that are the two major initiatives that aim to boost open innovation (Chesbrough, 2003) and knowledge valorisation in the region in close collaboration with Maastricht University (see Box 20).

Box 20 OECD Study visit: The Chemelot Campus

In recent years, the *Chemelot Campus* has been emerged at the premises of DSM chemical plant. Chemelot is one of the most innovative ‘chematerials’ communities in Europe. It attempts to build a chemical innovative community that encourages open innovation. Chemelot includes an industrial park as well as a campus developed in co-operation with Maastricht University and other institutes for higher education, including the German RWTH Aachen University. Currently there are more than 100 companies on the site, from which 70 are new on the site since 2005. Many of these firms are global leaders in their product market combination and currently employ 6,000 people. The Chemelot site also set up the *Chemelot Innovation and Learning Labs* (CHILL) that offer an “open lab” where students as well as start-up firms that lack specific equipment have opportunities for doing research as well as linking up with other firms at the campus.

4.4.4 Recent policy initiatives in Limburg

In February 2011, the Advising Committee on population shrinkage in Limburg (Deetman Committee) published its final report *Ruimte voor waardevermeerdering* (‘Room for Adding Value’). The committee emphasises four focal points for the future perspective of Limburg:

- A vital economy.
- Excellent education.
- A well-functioning housing market.
- Tailor-made health care.

The committee clearly states that having a vital economy is the basic condition for future prosperity in Limburg. This requires an explicit choice to excel in certain areas. The committee suggests six focal points:

- Chemelot Campus;
- Healthcare;
- Financial-administrative cluster;
- Water recreation Mid Limburg;
- Greenport Venlo;
- Innovative small and medium size firms;

⁴⁷ See for more information in Dutch: <http://www.topsectorenzuidlimburg.nl/> or <http://www.brainport2020.nl/home?session=c0d8603h88hj2qubf5j2m17714>.

With respect to creating excellent education the committee suggests creating campuses around institutes of higher education, to stimulate knowledge valour and innovative entrepreneurship. Furthermore, the committee suggests focusing on the physical accessibility of education, decreasing the dropout rate and improving the match between education and the labour market.

To create a well-functioning housing market the committee suggest, among other ideas: (1) integrate the restructuring of the housing market in South Limburg between the three urban municipalities from a long-term perspective that focuses on improving housing quality; and (2) develop adequate housing programmes for the labour migrants in North Limburg.

The ageing of the population requires an upgrading of the *quality of health care by concentration and differentiation, focusing on innovation that stimulates prevention as well as self-reliance*. This innovation of health care might contribute to a ‘silver economy’,⁴⁸ aimed at improving the quality of life for the elderly population, an example is outlined in Box 21.

Box 21 OECD Study visit: The Lückerreide Clinic

The *Lückerreide Clinic* in Kerkrade, which belongs to the Meander group, is a large residential long term care centre for persons with dementia and related mental disorders. The clinic recently introduced an innovative system of cameras and movement detectors in the rooms with dementia clients. This equipment enabled the clinic to reorganize the night shift in a way that is far more pleasant for the staff and saves on labour costs. Moreover, service quality improved in terms of less broken legs and hips of clients who felt out of their bed.

In January 2010, the Ministry of Economic Affairs published the report *Ondernemend met krimp* (‘Entrepreneurship in times of shrinkage’). The report distinguishes three strategies to deal with a shrinking population and economy:

- Fighting the shrinkage by attracting new economic activities and inhabitants;
- Mitigating the effects of shrinkage by re-adjusting the economy and social arrangements;
- Using the opportunities of a lower population density.

Although these three strategies cannot always be clearly demarcated, the Deetman committee particularly emphasises the first and third strategy (“new opportunities to vitalise the economy”), including elements from the second strategy such as restructuring the housing market. Furthermore, the province of Limburg recently concluded the covenant *Koers voor Limburg* with the Dutch government in which they agreed upon a different approach for the three regions in the province. In this covenant there is an explicit focus on South Limburg where the transition is most urgent as reflected in the *Actieprogramma Zuid-Limburg*. This action programme emphasises the importance of intensifying co-operation between the three large communities of Heerlen, Sittard-Geleen and Maastricht, and all relevant other actors in the region. Moreover, the covenant agrees that the Dutch government will attempt to make legislation and funding arrangements “shrinkage proof”. The Action Programme has defined four domains of action: (1) the economy, (2) the housing market, (3) health care, and (4) education. Building on the focal points defined by the Deetman committee, the ‘Triple Helix’ (business, education and research, and regional and local government) organisation Limburg Economic Development (LED) now takes the lead in the agenda on revitalising the Limburg economy with the aim that Limburg will be a fully-fledged member of *Brainport*, which is centred around the city of Eindhoven in the neighbouring province of Brabant, which is currently the top high-technology region in the Netherlands.

⁴⁸ Martinez-Fernandez et al. (2012) define the “Silver economy” as the development of new technologies, products and services designed for the senior population.

However, as the province of Limburg has a clear emphasis on stimulating economic growth, the “population shrinkage dossier” cannot be seen as a completely distinct policy agenda. Instead, it seems to complement the “fighting shrinkage” agenda with initiatives that attempt to mitigate the effects of population shrinkage and – to a lesser degree – with initiatives that attempt to use the opportunities offered by a lower population density. This particularly holds for the housing market and the capacity of initial education.

4.5 Key topics to address

In a regional workshop, more than seventy regional experts, representing different social and professional groups, tried to determine the policies which are most effective for revitalisation of the Limburg economy. The workshop focused on four related fields of policy:

- The cross-border labour market.
- The challenges of demographic transitions on the labour market.
- Developing knowledge and skills for the regional labour market.
- New sources of economic growth.

For all four fields, several policy recommendations were proposed,⁴⁹ of which the most important ones are summarised below.

4.5.1 The cross-border labour market

The removal of border barriers is very important for the development of Limburg as this will lead to better career prospects because more comparable jobs are available. This gives rise to greater flexibility and mobility within the labour market. However, it is important to have a realistic view on the so-called open interior borders of the EU as there are still many thresholds for creating a cross-border Euro-regional labour market. The emergence of a cross-border labour market requires policies in the following fields:

- *Encourage cross-border commuting and migration by:*
 - investing in the teaching and learning of the neighbouring languages (German and French) and cultures;
 - further extending service provision through border information points and expat centres providing tailor-made information on taxes, residence permits, social insurance, etc.;
 - improving cross-border public transport;
 - further harmonisation of labour legislation and regulations;
 - offering more room for manoeuvre for cross-border labour market mediation;
 - facilitating cross-border solutions in case of labour market shortages in a particular field.
- *Improving cross-border collaboration on employment, education, cultural facilities, training, etc. by:*
 - more cooperation between educational institutes and other organisations, following the cooperation between Maastricht University and RHTH Aachen University at the Chemelot site, the cooperation between the University Hospital Aachen and the MUMC, and the joint German/Dutch programme in aircraft technology .
 - more cooperation in the field of cultural events. Becoming the European Capital of Culture 2018, for which Maastricht has applied, backed by the major other cities in the Euregion: Aachen, Liège, and Hasselt, can create an important take-off in this field.
 - offering organisations more room for manoeuvre in this area.

⁴⁹ For an extensive report of the workshop discussions see OECD (Andries de Grip), *Summary of the Limburg Region Seminar*, November 8-9, 2012.

4.5.2 *The challenges of demographic transitions on the labour market*

Demographic shrinkage will not resolve unemployment. The requirements demanded in the labour market and the knowledge and skills supplied by job seekers do not always match. Therefore, certain sectors of the economy are still suffering from a shortage of labour while other sectors have a surplus. Moreover, the standard qualification level required for sustainable employment (i.e. MBO-2 level or HAVO/VWO) remains essential for success in the labour market. Furthermore, a large group of low-skilled older people facing skills obsolescence is emerging. The current and future demographic transitions on the labour market therefore require policies in the following fields:

- *Compensating for demographic shrinkage by:*
 - mitigating the departure of young people from the region by offering sufficient employment for higher education graduates;
 - attracting high-skilled workers by branding of the region in the media;
 - better integrating of foreign workers and students into the Limburg society;
 - initiatives in the field of economic development that link up with the strengths of the region: chemicals and tourism creating employment that also offers work for those with low qualifications;
 - giving scope for experimentation with respect to both education and labour market regulations and policies.

- *Reducing the number of school drop outs by:*
 - devoting much more attention to good study and career guidance at schools. This requires that schools can provide more information about professions;
 - spending more time to 'winning back' those who have dropped out, because once students have dropped out, it is unlikely that they will return to school again without some encouragement;
 - offering more opportunities for apprenticeships as learning in practice is a better way of maintaining attention levels.

- *Integrating vulnerable groups in the labour process by:*
 - the maintenance and further developments of professional expertise during the worker career as a shared responsibility of employees and employers;
 - offering training that takes place in workplaces that encourage learning;
 - launching an appeal to the business world to contribute to new government's plans to encourage the employment of low-skilled workers;
 - local and regional governments that make use of 'social return' in their calls for tender aiming at the employment of vulnerable groups following the best practice from Maastricht municipal council and the Provincial government of Limburg with regard to the construction of motorways;
 - job coaching for low-skilled young people via a master-and-journeyman system.

4.5.3 *Developing knowledge and skills for the regional labour market*

It appears that the knowledge and skills possessed by the working population in Limburg are not in alignment with the demands of employers. Roughly speaking, the target groups for public policy refer to (1) young people who face a mismatch between labour supply and demand, (2) low-skilled workers who are insufficiently employable, and (3) older workers who face risks of skills obsolescence due to changing skill demands. Developing the skills demanded in the regional labour market requires policies in the following fields:

- *Stimulating young people to choose to work in sectors in which there is a demand for labour by:*
 - involving parents in study and occupational guidance by giving them information in an early stage as well as using them as role models, for example: visit parents if their son or daughter is interested in a technical study;
 - giving opportunities to discover other sectors during internships that bring youngsters into contact with different professions. For instance, girls who are trained to become hairdressers could have an internship in the care sector. This makes them aware of the job opportunities in the health care sector that offers them far more opportunities to find a job;
 - making particularly female teachers in primary education more enthusiastic on technique and improve their perceptions of working in manufacturing;
 - maintaining as much as possible the number of potential places in technological and health care education programmes which face falling numbers of students, because nearby opportunities to follow a study are very important for choosing what to study;
 - limiting student admission in educational programmes in fields with poor work prospects;
 - giving scope for experimentation in the educational sector in Limburg with respect to among others:
 - introducing other school concepts with a greater focus on learning in practice;
 - improving cooperation between education and the business sector.

- *Ensuring that low-skilled people are sufficiently employable by:*
 - determining the choice of work together with the person, taking into account his or her limitations as well as the demand within the labour market;
 - offering training in a company instead of a school classroom, because this is essential for successfully training low-skilled people;
 - certification of the training as this is a requirement for long-lasting employability;
 - job carving and the job redesign as a means for creating more employment for the low-skilled;
 - creating a pool of employees for SMEs in the region such as developed in the *Poortwachterscentrum Weert*;
 - creating an employers' service point that can remove the concerns of businesses with regard to the administrative burden when employing low skilled or other persons with limited physical or mental capacities;
 - greater attention for certification of prior learning can contribute to raising levels of education.

- *Preventing skill obsolescence by:*
 - spending a much larger share of firms' training budgets on training employees aged 40 or older;
 - facilitate the learning of older workers in the workplace;
 - sensitising businesses (including SMEs) by informing them of the greying of the working population in the coming years and its impact on labour supply in Limburg;
 - devoting more attention to the hidden competencies employees often have.

4.5.4 New sources of economic growth

Companies always opt for a location with the highest quality. A region must offer that quality to attract them to the region. More in general, developing new sources of economic growth requires strong regional and local leadership. More specifically, this leadership should focus on policies in the following fields:

- *Fostering opportunities for new sources of economic growth by:*
 - an industry policy that builds on the national top sectors strategy, Brainport 2020 and the Chemelot, Greenport and Maastricht Heath Campuses, and creates knowledge jobs with substantial multiplier effects to the regional economy;
 - encouraging that these initiatives have spin-offs to ensure connections with the working population of Limburg;
 - giving foreign firms that have a high value added for a campus access to public-private partnership programs;
 - using the high quality of life in Limburg as a means to attract firms, employees, retirees as well as tourists;
 - viewing quality of life as a source of innovation and economic growth;
 - attracting more students to Maastricht University contributing to economic growth in both a direct and indirect way;
 - further developing the existing infrastructure in North Limburg by the widening of water ways in order to improve the connection between the port of Rotterdam and the German hinterland. This will result in jobs in Limburg for people with low and intermediate levels of education levels, for instance in transport and in value-added logistics;
 - creating a better economy with fewer people: thinking about a green economy;
 - improving the involvement of SMEs in the cooperative arrangements of the triple helix;
 - strengthening the role of the *SME portal of Maastricht University* to encourage the knowledge transfer between the university and SMEs.

- *Facilitating entrepreneurship or self-employment by:*
 - devoting more attention to the middle group of SMEs and facilitate strategies and promote smart co-operation between these firms;
 - making the criteria for tenders and grants more manageable for smaller firms;
 - making tendering processes smarter in order to encourage innovations;
 - a stronger supervisory role for the regional government in strengthening international cooperation of SMEs;
 - expansion and further development of education in entrepreneurship at Maastricht University and universities of applied sciences;
 - strengthening the role of Maastricht University in setting up new businesses and spin-offs, linked with the top sectors.

- *Developing cross-sector innovations by:*
 - creating more cross-over between the various campuses by incorporating incentives or conditions to this end into its instruments and grants. Bio based materials, have interfaces with all three campuses. The 'Linking life sciences' project aims to bring together entrepreneurs and students from all three campuses in the field of life sciences. New developments in the agricultural sector also stimulate the creation of new links between various sectors and campuses.

4.6 Conclusions and policy themes

4.6.1 A framework for policy interventions

In order to structure the discussion on the policies with respect to the shrinking population and economy that should have priority, Figure 51 **Error! Reference source not found.** offers a framework for policy interventions by sketching the major relationships that create more or less self-reinforcing cycles of economic growth or shrinkage. The figure explains that by creating new employment, economic growth stimulates the growth of the regional labour force and population by

attracting people to the region from other regions in The Netherlands or from abroad. This process will be self-reinforcing in as far as the larger labour force (by its contribution to regional production) and the larger population (by its contribution to consumption) create a multiplier effect on economic growth.

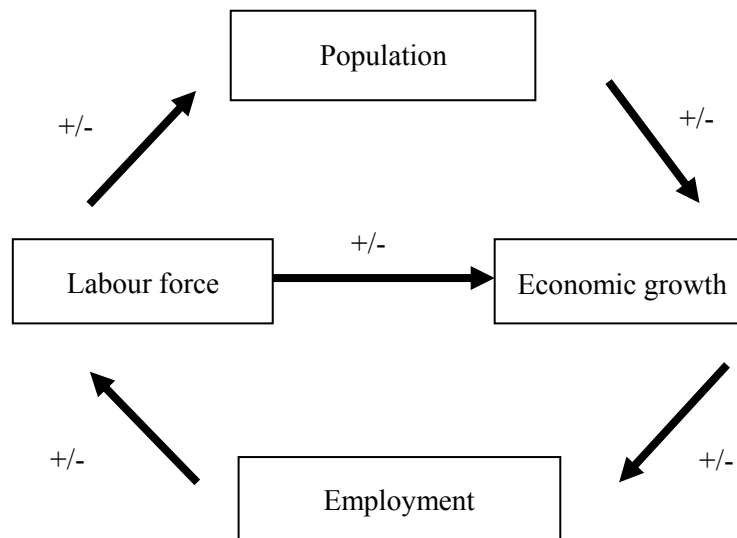


Figure 51 Growth and shrinkage cycle

Source: author, 2013

However, the figure also explains that the reverse will occur when economic growth stagnates or when there is an exogenous shrinkage of the population. Again, the cycle will be self-reinforcing as a stagnating economy will encourage particularly youngsters to find a job in a region with higher economic growth.

Figure 52 illustrates that the growth and shrinkage cycle offers a clear framework for the various opportunities for policies to fight or mitigate the effects of a shrinking economy. On the one hand, policies that attempt to strengthen the Limburg economy could increase economic growth by revitalising the economy. These policies now focus on the “top sectors” of the Dutch economy and the development of the Chemelot Campus and the Maastricht Health Campus or on creating new business in tourism or encouraging entrepreneurship more in general. Particularly in an ageing region, policy could also focus on the ‘silver economy’ (see Section 6.4.4) by creating high-level health care and living opportunities for the elderly, which might encourage retirees to visit or even migrate to the region. The revitalisation of the economy could increase employment and attract employees from outside the region to find a job in Limburg and also increase labour productivity when new employment refers to high-value added sectors of industry. Moreover, there will be a multiplier effect as new employees from outside the region and their families lead to population growth.

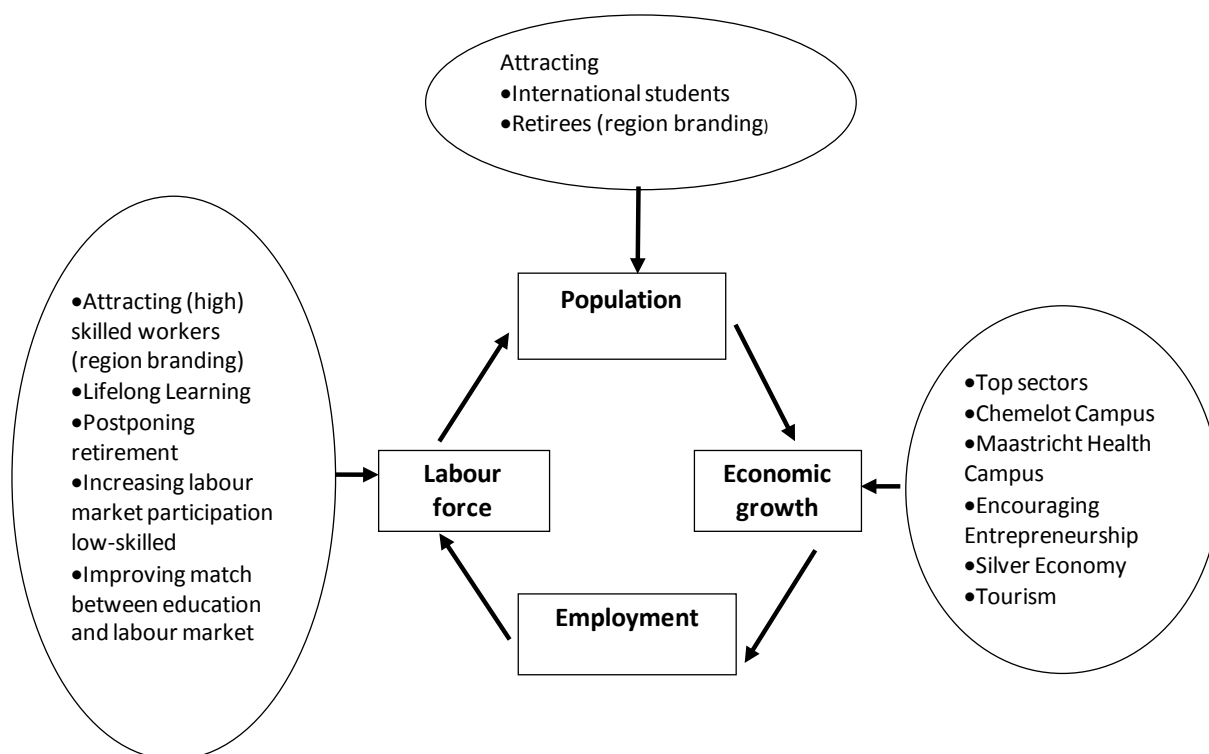


Figure 52 Opportunities for Policy development

On the other hand, policies could primarily focus on attracting more high-skilled workers to the region by region branding, or by increasing labour participation (by postponing retirement to a later age and increasing labour participation of the low-skilled) and increasing labour productivity by intensifying investments in lifelong learning. Furthermore, policies might focus on improving the match between education and the labour market. The latter is in Limburg the more an issue because vocational schools have to reduce their student capacity because of the decreasing number of youngsters.

Figure 52 also illustrates the opportunities of revitalising the Limburg economy by policies that attempt to compensate population shrinkage by attracting persons to the region who are not (yet) contributing to a larger labour force. There are two target groups distinguished: international students and retirees. Building on the international character of Maastricht University more international students might be attracted to the region, whereas region branding on the quality of life for the elderly in Limburg might encourage retirees to migrate to Limburg.

The policy framework presented in Figure 52 raises the question of whether policies that attempt to increase labour demand or policies that attempt to increase labour supply should lead the process of revitalising the Limburg economy. However, the figure also shows that a two-pronged approach, including labour demand as well as labour supply policies might be most effective because of the complementarities between both policies. However, then the question still remains: which policies would be most effective for revitalisation of the economy?

Limburg is indeed facing a demographic transition in terms of stagnating population growth and an ageing society. Data show that population shrinkage is most severe in South Limburg, where the fertility rate is much lower than the Dutch average. However, the development of the Limburg population also appears to be highly dependent on foreign immigration flows. Remarkably, the growth of the 65+ population is largest in Mid and North Limburg, whereas population shrinkage is most severe in South Limburg. Moreover, the demographic transition in Limburg does not mean that Limburg is suffering from a very low population density. Population density in Limburg is actually

higher than the Dutch average. This particularly holds for South Limburg where population density is almost twice as much as the Dutch average.

Stagnating population growth in Limburg is reflected in the declining share of Limburg in total Dutch GDP. Moreover, GDP per capita in Limburg is below average GDP in the Netherlands and growing at a slightly lower rate. Moreover, in recent years R&D investments in Limburg have been declining whereas R&D investments in the Netherlands have increased.

Data show that the employment rate in Limburg has steadily increased in the last two decades due to a clear upward trend in the female participation rate and an increasing participation of older workers (see Figures 41-43). Only in South Limburg is the participation rate below the Dutch average. In this region, the unemployment rate is also structurally higher than the Dutch average.

Most policy initiatives in Limburg emphasise the revitalisation of the Limburg economy, and are not specific in the light of population decline. This strategy focuses on fighting the shrinkage of the economy and population by attracting new economic activities and inhabitants. One might wonder whether such a strategy can be successful in mitigating population shrinkage as other regions in the Netherlands and Europe are also attempting to revitalise their economy in more or less similar ways. However, the latter also illustrates that population shrinkage is highly related to migration flows which usually follow economic activity. Currently, these migration flows are negative for peripheral regions, but here it should be noted that Limburg is still one of the most densely populated areas of the Netherlands and is a rather attractive place to live. Moreover, public-private partnerships are well developed, particularly those following the triple helix: business, education and research, and regional and local government.

A vital region should have a dynamic labour market, strong job creation and attractive living conditions. However, due to the peripheral situation of border regions it is often more convenient for people to move to central regions, where one can choose from a large supply and a wide variety of jobs, while living closer to other parts of the country. Therefore it is important for border regions to stimulate cross-border commuting and migration as much as possible and to promote the advantages of cross-border labour markets and diversity of skills. The more open neighbouring regions at both sides of the border become, the more attractive it is for people to find employment and to take advantage from the different institutional, environmental and cultural circumstances.

4.6.2 Policy themes

The framework for policy interventions discussed in Section 4.6.1 shows the self-reinforcing cycle of shrinkage which characterizes the current economy of Limburg. As we have seen above, this particularly holds for South Limburg. Given the fact that population density in Limburg is still relatively high, the urgency to focus on policies that attempt to improve the living conditions in desolate areas is less relevant for Limburg than for other regions that face a shrinking population. Moreover, it should be noted that population shrinkage in Limburg is to a large extent due to declining employment in traditional manufacturing sectors and the related migration to other regions in the Netherlands. This explains why most policy initiatives in Limburg as discussed in Section 4.3 focus on the revitalisation of the Limburg economy.

Figure 52 clearly shows the various opportunities for policies to fight or mitigate the effects of a shrinking economy. On the one hand, policies that attempt to strengthen the Limburg economy could increase economic growth by revitalising the economy. On the other hand, policies that focus on increasing labour supply by attracting more high-skilled workers to the region and increasing labour participation by postponing retirement to a later age and increasing labour participation of the low-skilled. Furthermore, policies might focus on strengthening the Limburg economy by improving the match between education and the labour market. Definitely, the two-pronged approach, including

policies that increase labour demand as well as well as labour supply policies will be most effective because of their complementarities. From this perspective, three policies fields can be defined:⁵⁰

- Increasing labour demand by revitalisation of the economy with new sources of economic growth.
- Increasing labour supply.
- Improving the match between labour demand and supply.

Increasing labour demand by new sources of economic growth

Here, the focal points defined by the Deetman committee (See Section 4.4.4) still hold although they can be slightly updated:

- Chemelot Campus and Maastricht Health Campus;
- Healthcare and living opportunities for the elderly population encouraging the development of a Silver economy.
- Financial-administrative cluster.
- Attracting more tourists by region branding and further developing water recreation Mid Limburg.
- Greenport Venlo.
- Facilitating innovative small and medium size firms.
- Attract more students to Maastricht University.
- Further development of education in entrepreneurship at Maastricht University and the Universities of Applied Sciences.

Increasing labour supply

Public policies on increasing labour supply should combine an external and internal focus, i.e. attracting more suitable workers from other Dutch regions or from abroad as well as increasing labour participation of the potential labour force in Limburg. More specifically, we recommend the following policy lines:

- Attracting high-skilled workers by branding of the region in the media using the high quality of life in Limburg.
- Better integrating of foreign workers and students into the Limburg society;
- Developing the cross-border Euro-regional labour market by removal of border barriers and encouraging cross-border commuting and migration.
- Creating a pool of employees for SMEs in the region.

Improving the match between labour demand and supply

In addition to policies which aim to increase labour supply in a quantitative sense it will also be highly important to improve the quality of labour supply in a way that it better matches the skills demanded in the Limburg labour market. More specifically, we here recommend the following policy lines:

- Developing knowledge and skills for the regional labour market.
- Facilitating cross-border solutions in case of labour market shortages in a particular field.
- Giving scope for experimentation with respect to both education and labour market regulations and policies.

⁵⁰ Sections 5 and 6 give more details on the various policies.

- Spending more effort and involving parents in study and career guidance at schools and create more internships
- Reduce the number of school drop outs by actively using early indicators.
- Limit student admission in educational programmes in fields with poor work prospects;
- Offering more opportunities for apprenticeships and adult training that takes place in workplace.
- Facilitate training participation of older workers in order to prevent skills obsolescence and improve the learning culture in the organisation.

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CHAPTER 5**MANAGING TERRITORIAL DEMOGRAPHIC TRANSITIONS AND DECLINING LABOUR SUPPLY, CHALLENGES FOR ZEELAND**

Analysing demographic change in Zeeland shows that in particular Zeeuwsch-Vlaanderen is exposed to demographic decline, whereas the developments in the rest of Zeeland are much less different from those in the Netherlands. The population decline is not due to low fertility rates, but to women of birth-giving age migrating to other parts of the country, possibly because of the unfavourable educational infrastructure such as the lack of a university offering Masters level programmes. Notwithstanding the tighter labour market in Zeeland relative to the Netherlands generally, it appears to be that over time Zeeland has become a less attractive place to live. Employers in Zeeland need to find solutions for the falling labour supply, such as raising the participation rates among the economically active population, in particular the elderly and women. Also, new initiatives could be started up to establish a ‘silver economy’ that can fully utilise the strengths of older workers.

5.1 Local demographic conditions

Zeeland is situated in the southwest of the Netherlands, bordered by the North Sea and Belgium and the harbour of Antwerp at close distance (Figure 53). Neighbouring provinces in the Netherlands are Zuid-Holland in the northern direction, including the Rijnmond area with the harbour of Rotterdam, and Noord-Brabant in the eastern direction. The province of Zeeland is made up of islands and peninsulas that are connected to each other by bridges, storm surge barriers and a tunnel between Terneuzen in Zeeuwsch-Vlaanderen and Zuid-Beveland. Zeeland and the surrounding areas are sadly known for the North Sea flood in 1953, which killed more than 1 800 people and caused huge damage. The flood led to huge investments in the infrastructure of Zeeland to protect it from the water, the so-called Delta Works. This is a series of construction projects in Zeeland and the surrounding delta that mainly consists of dams, sluices and storm surge barriers.



Figure 53 Map of the province of Zeeland and its subregions and municipalities

In this chapter the demographic change in Zeeland is discussed in relation to employment, migration and education. In the analyses two distinct regions of Zeeland are considered: Zeeuwsch-Vlaanderen that is more connected to the main land of Flanders (Belgium) than to the Netherlands, and the rest of Zeeland ('Overig Zeeland'). It will be shown that in particular Zeeuwsch-Vlaanderen is exposed to demographic decline, whereas the developments in the rest of Zeeland are much less different from those in the Netherlands. For many indicators Zeeland and its two regions are compared to the Netherlands, and where useful differentiated by municipality within Zeeland. Section 5.1 of this chapter discusses the development in population and migration in Zeeland, as well as the educational infrastructure as being

probably one of the important drivers of changing population and inland migration patterns. Section 5.2 shows the development and distribution of employment in Zeeland by sector of industry. Some reference is made to the silver economy, meaning both the emergence of services that the elderly need and the employment opportunities for older workers. Section 5.3 analyses the labour supply of the potential work force, and discusses the mismatches on the labour market. Section 5.4 discusses lifelong learning in Zeeland, as a potential source of new growth. Section 5.5 concludes and presents a SWOT-analysis for Zeeland.

5.1.1 Population and migration

In the Netherlands population growth is stagnating. However, at the regional level differences in population growth can be substantial. As from the 1990s the population of the province of Zeeland has grown slower than the national average. Recently, the population in Zeeland has been increasing only marginally, and according to the forecasts it will only start declining towards the end of the forecasting period. Moreover, the two distinct NUTS-3 sub regions distinguished within Zeeland, Zeeuwsch-Vlaanderen and the rest of Zeeland ('Overig Zeeland'), follow completely different growth paths (Figure 54). Whereas the population in Overig Zeeland has been increasing substantially, in the region of Zeeuwsch-Vlaanderen, population size more or less stabilised between 1980 and the start of the 21st century. Since last decade Zeeuwsch-Vlaanderen is facing a population decline, and this negative trend is expected to continue in the future.

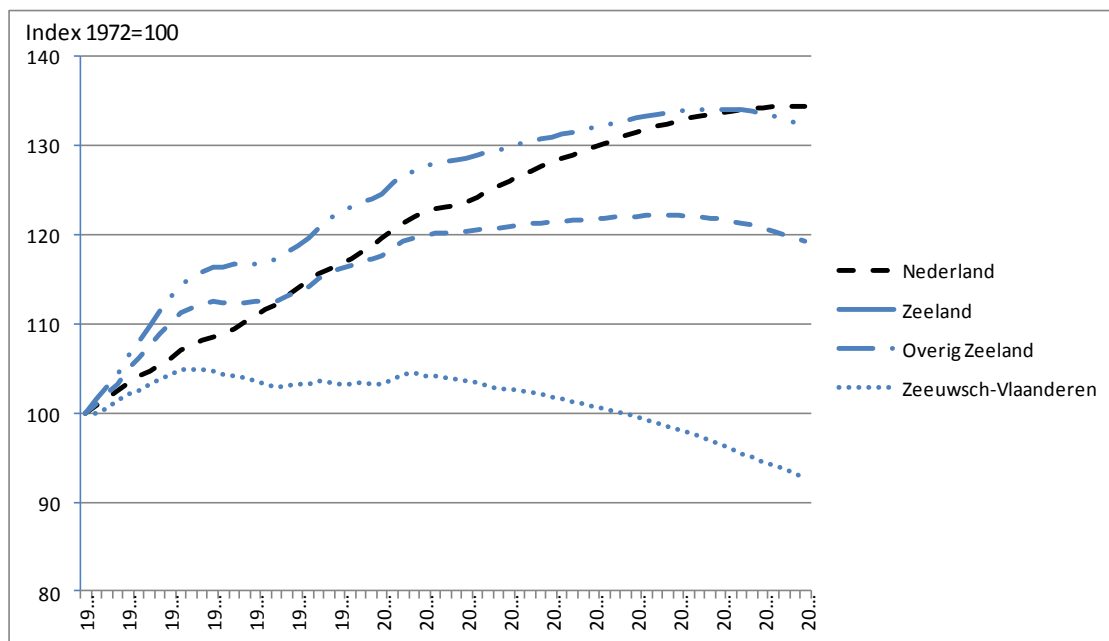


Figure 54 Population development in Zeeland, 1972=100, forecast from 2012 onwards

Source: Statistics Netherlands, calculations by authors

Figure 55 shows the 13 municipalities of Zeeland, of which three are situated in Zeeuwsch-Vlaanderen (no. 3, 9, 10) and the other nine in the rest of Zeeland. As can be seen from Table 15, Terneuzen (10) in Zeeuwsch-Vlaanderen is the largest municipality of Zeeland. The three municipalities of Zeeuwsch-Vlaanderen are growing below the average of Zeeland, or even shrinking. As can be seen from Figure 70, the population in the municipalities of Overig Zeeland is growing at a higher pace than on average for the Netherlands, in particular the Eastern part including the municipalities Kapelle (4),

Reimerswaal (7) and Tholen (11). These municipalities had also the largest shares of people of below 20 years old (Scoop, 2012). Thus population growth is somehow related to the age distribution. The population in the capital city of Middelburg (5) is growing above the average of Zeeland, in contrast to the neighbouring city of Vlissingen (13). The smallest municipalities of Zeeland, Noord-Beveland (6) and Kapelle (4), are growing relatively fast. The differences in population growth of course have consequences for investments in local infrastructure, like schools and shopping centres. *Policy makers from different municipalities could anticipate these differences, and collaborate to prevent over-investments in shrinking areas and to accommodate investments in growing areas.*



Figure 55 Municipalities of the province of Zeeland

Note: see Table 15 for the number of municipalities

Table 15 Inhabitants and population growth per municipality of Zeeland

Municipality	Number of inhabitants, 2011	Population growth in %, 2000-2011
1 Borsele	22707	3.8
2 Goes	36665	2.5
3 Hulst	27719	0.9
4 Kapelle	12365	10.7
5 Middelburg	48030	6.9
6 Noord-Beveland	7474	8.3
7 Reimerswaal	21614	5.3
8 Schouwen-Duiveland	34203	1.8
9 Sluis	23979	-1.1
10 Terneuzen	54823	-1.0
11 Tholen	25489	7.9
12 Veere	21926	-0.6
13 Vlissingen	44536	0.4
Total Zeeland	381530	2.6

Source: Statistics Netherlands, calculations by authors

The relatively fast ageing population is another important characteristic of Zeeland. This is illustrated in Figure 56, which shows the percentage of the population that is at least 65 years old. In 2012, Zeeland had approximately 4% more people aged 65+ than the Netherlands ratio. In Zeeuwsch-Vlaanderen the population is greying faster than in the Netherlands. Although the rest of Zeeland ('Overig Zeeland') has relatively older people, this area is greying more slowly than the Netherlands. Evidently, the relatively large and growing share of older people leads to a further need to *invest in care and cure facilities*. This will be discussed in more detail in Section 5.4.

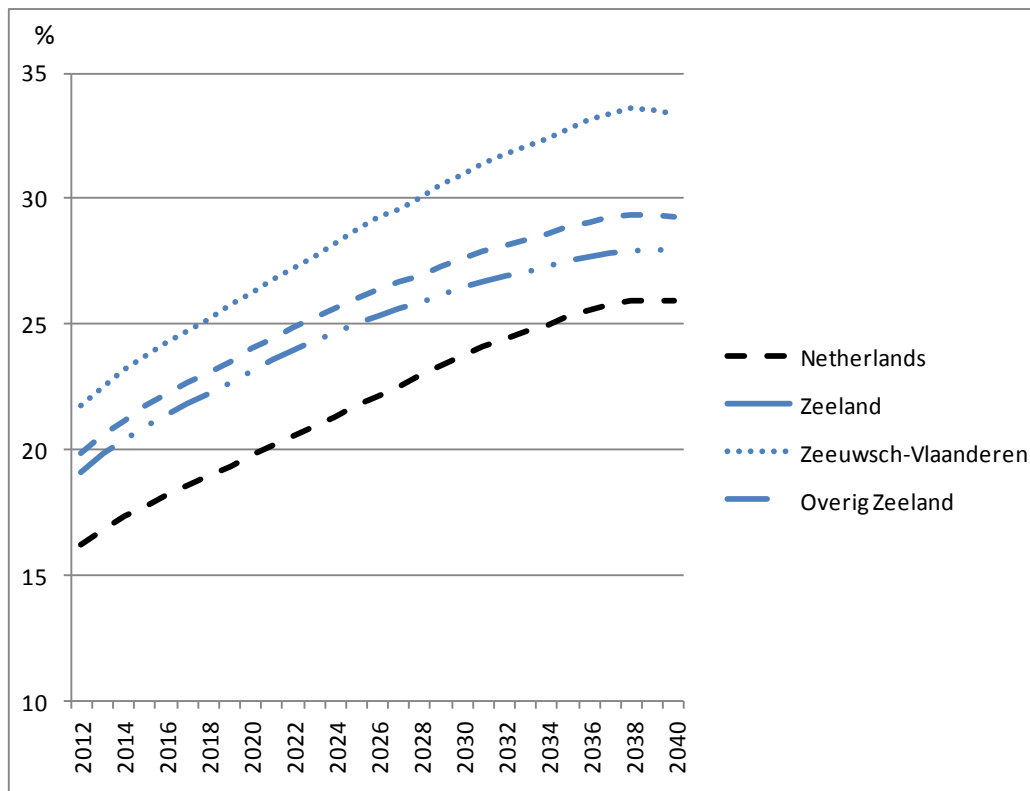


Figure 56 Percentage of people 65 years and older, the Netherlands and Zeeland, forecast 2012-2040

Source: Statistics Netherlands, calculations by authors

Figure 57 offers another way of illustrating the falling growth in population and the changing age composition in Zeeland and the Netherlands. The figure presents the percentage of the population of a particular age at January 1st 2012. For both the Netherlands and Zeeland the baby boom after the liberation of the Netherlands in 1945 is visible. Moreover, the figure clearly shows that the percentage of people of 55 years or older is larger in Zeeland than on average in the Netherlands. In other words, the province of Zeeland is greying more strongly than the Netherlands.

The declining cohorts of the population in the age class of 0-10 years old point to the decrease in the number of births in the Netherlands. About 35 to 40 years ago there has been a huge drop in birth rates relative to total population, and a further decline of births has occurred during the last ten years. Both trends hold even stronger for Zeeland, which can be due to lower fertility rates as well as a lower share of women of birth-giving age. Figure 57 clearly reveals the low share of the 18-35 years age group in Zeeland. This low share cannot be explained by low fertility rates or high mortality, but can only be due to the outward migration of young people to other parts of the country.

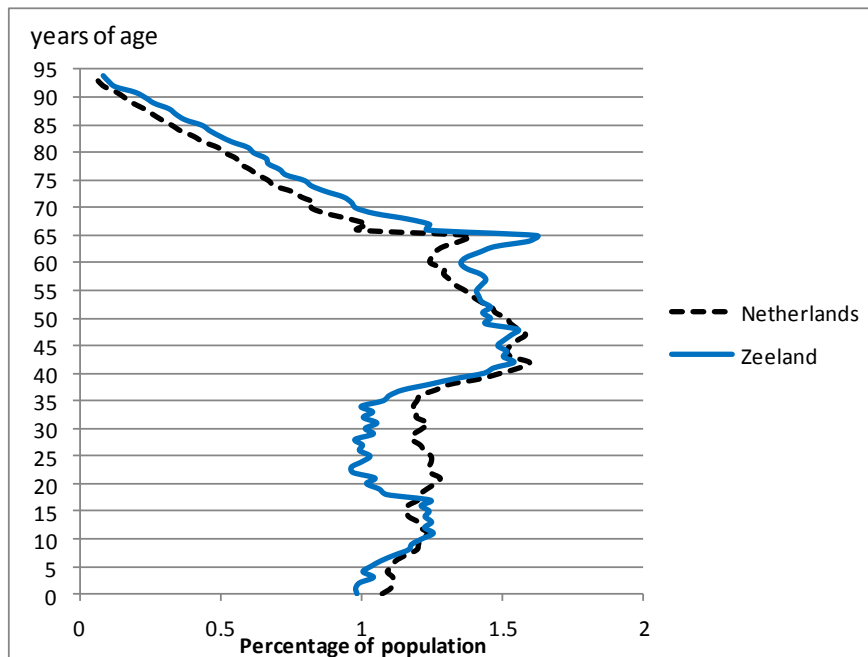


Figure 57 Age distribution from 0 to 94 years old in the Netherlands and Zeeland, 2012

Source: Statistics Netherlands, calculations by authors

Figure 58 demonstrates that fertility rates in Zeeland are even higher than in the Netherlands, and have been increasing over time from 1.6 to 1.9 children born per woman. In Zeeuwsch-Vlaanderen fertility rates are approximately at the same low level as in the Netherlands. Nevertheless, for Zeeland as a whole it can be concluded that population decline is not due to low fertility rates, but to women at birth-giving ages migrating to other parts of the country. To increase the number of births and population growth in Zeeland, these women should be kept somehow within the borders of the province. The reason why these women leave may be the unfavourable educational infrastructure that will be discussed in the next subsection.

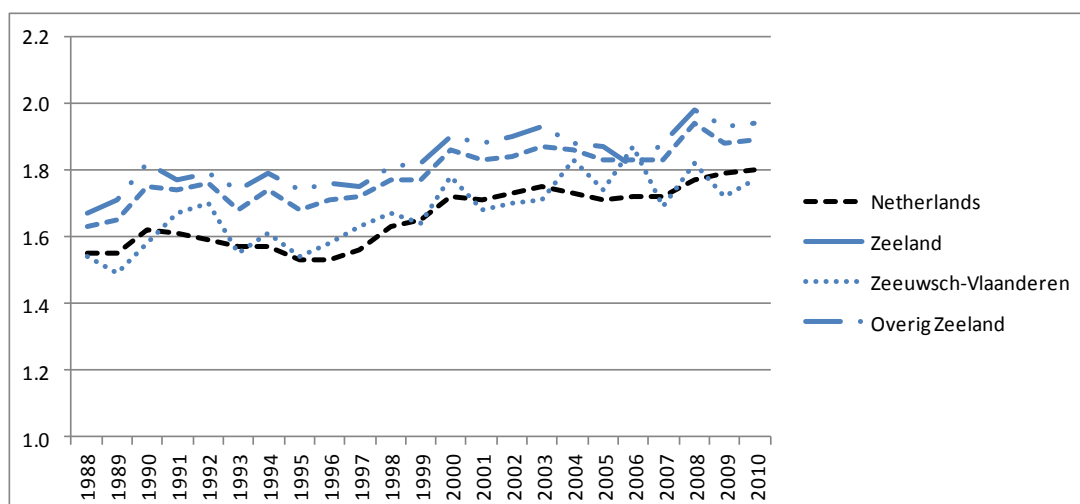


Figure 58 Fertility rates in the Netherlands and Zeeland, children born per woman, 1998-2010

Source: Statistics Netherlands, calculations by authors

There are two main reasons why people in the age bracket 18-35 move from Zeeland to other provinces, namely to study or to work. From the data available it is difficult to distinguish between these two reasons. However, since age and study are related, the differentiation of inland migration by age group casts some light on this issue. Figure 59 indeed shows that young adults are leaving Zeeland. In 2011 Zeeland had more youngsters moving out than moving in: the difference was approximately 3% of the respective population between 15 and 24 years old. Of course, this may lead to *further investment of services for youngsters, including the provision of education, sports and leisure activities.*

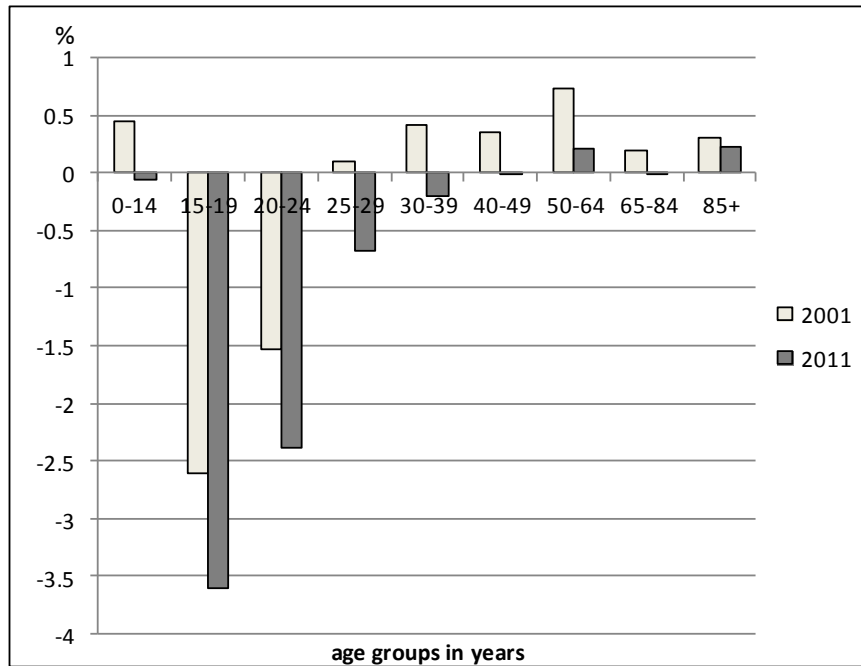


Figure 59 Net inland migration by age group in Zeeland, percentage of population, 2001 and 2011

Source: Statistics Netherlands, calculations by author

Relative to 2001 this percentage has increased, and in contrast to 2001 most other age groups reveal negative net inland migration. In 2001 the number of people coming to Zeeland in a later period of life, perhaps to a large extent return migration, exceeded the number of people out-migrating considerably. The migration patterns that are revealed for Zeeland in general point at young people moving out, older people moving in. These patterns may require *policy actions from local governments to shift investments in public services (education, health, leisure, etc.) from a focus on the young to those for the old* (see also Section 5.4).

However, as is shown by Figure 60, migration flows can be very volatile. This holds for inland as well as foreign migration flows. The figure shows that during the last ten years net inland migration turned negative. On the other hand, net foreign migration to Zeeland is positive: since 2009 the net inward migration of people moving from outside the Netherlands to Zeeland was at least 1 000 persons per year. The sudden rise of immigration to Zeeland is, however, a general trend in the Netherlands, due to the opening up of the borders of the 'old' EU Member States for Eastern-European workers since May 1st 2008. Nevertheless, the uplift in immigration implies that *local policy makers should take care of sufficient housing and schooling of foreign workers and their families.* A third factor that is relevant in this respect is the development of births net of deaths. The figure shows that this number is gradually declining between 2000 and 2011. As can be seen from Figure 60, the number of births in Zeeland is declining faster than on

average in the Netherlands. Since fertility rates have not been falling (Figure 58), this seems to be due to women leaving at ages that they give birth to children. Some years afterwards they, or other women of the same age, may return to Zeeland with their children. Figure 75 shows that in 2001 more people in the age classes 0-14 and 25+ were moving in than moving out. However, in 2011 there was a net outflow for almost all age classes. It seems to be that over time Zeeland has become a less attractive place to live. The role of economic crises is a bit diffuse. One at least has to assume that Zeeland has on average been hit stronger by economic crises than the Netherlands, which is plausible given the relatively large manufacturing sector in Zeeland. In that case people may move from Zeeland to other parts of the country if Dutch economic growth falls, to find work and to live. However, Figure 60 does not reveal a clear correlation between the periods of economic crisis (1992/93, 2002/03, and 2008/09) and net inland migration.

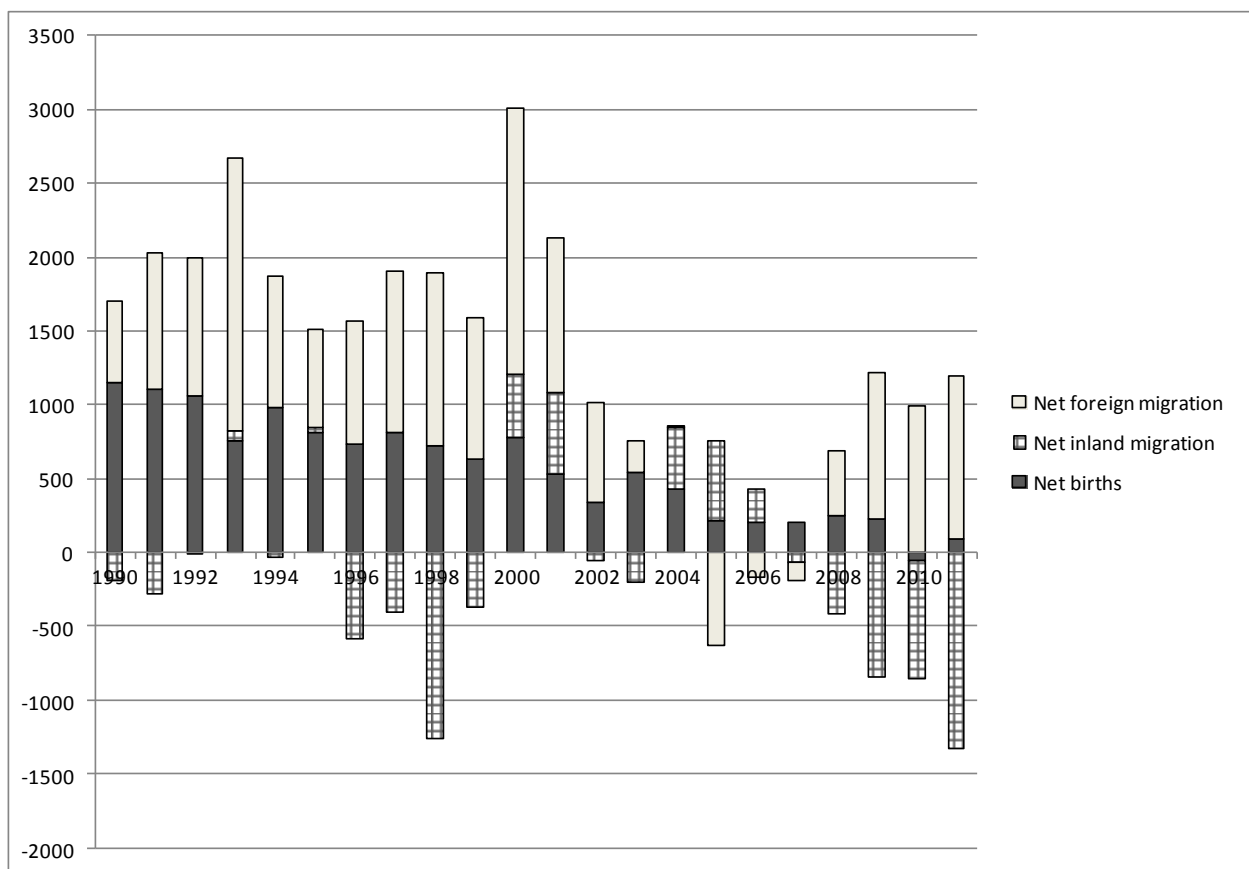


Figure 60 Population growth in Zeeland by net births, net inland and net foreign migration, 1990-2011

Source: Statistics Netherlands

5.1.2 Educational infrastructure and population

From the preceding subsection it is evident that a lot of young people leave the province of Zeeland. This may be partly due to the poor educational infrastructure. Less schools that are more strongly concentrated in Zeeland might push young people (including young families) to migrate elsewhere or might prevent migrants to move to Zeeland, which in turn may lead to a further decline in educational infrastructure ('cumulative causation'). Therefore this is discussed in more detail below.

According to the Commissie Taskforce Zeeland (2010) the education quality of the schools in Zeeland is generally good. From the ROA School leaver surveys (ROA, 2012), held one year after graduating, it can be concluded that recent graduates in Zeeland are more satisfied with the educational quality than on average in the Netherlands. Figure 61 shows this for recent graduates of intermediate vocational education (mbo) and higher vocational education (hbo). Mbo has two different tracks ('dual system'), namely the school-based track and apprenticeship-based track, which formally lead to the same qualifications for a particular field of study. Recent graduates had to answer the question whether they (fully) agree with the statement that their education in Zeeland was challenging with respect to the level. Also most other indicators for satisfaction among school leavers turned out to be relatively good.

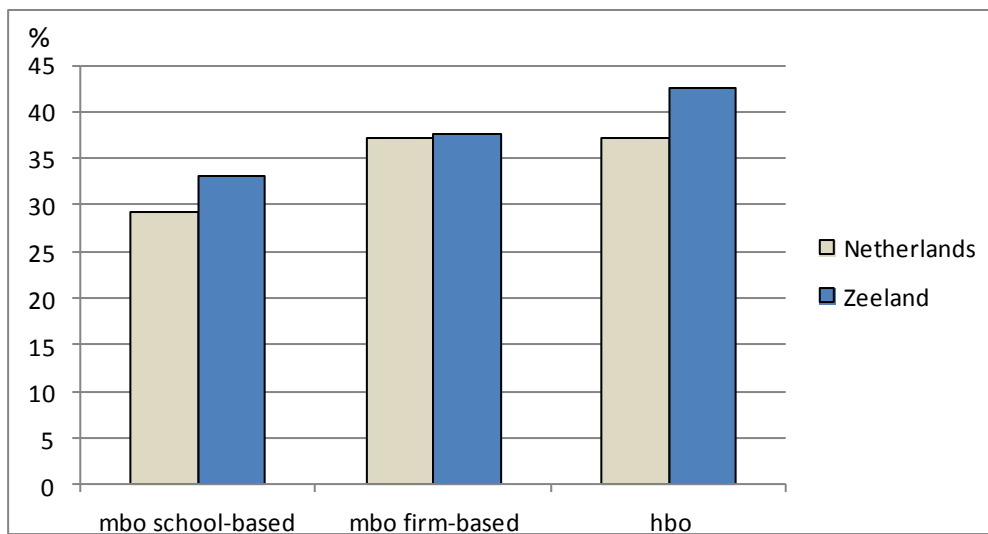


Figure 61 Percentage of graduates who found their education challenging, one year after graduating, 2011

Source: ROA (2012)

However, the decline of the school-age population in Zeeland and the outflow of young people to other parts of the country might negatively impact the long-term continuity and quality of the educational infrastructure in Zeeland. That is one of the reasons that in many policy documents by the province of Zeeland concerns are raised about young people leaving Zeeland to study elsewhere (see Commissie Taskforce Zeeland, 2010; Van der Wouw *et al.*, 2012). This is certainly happening for youngsters graduating from upper secondary education (mbo/havo/vwo) and entering into higher education. The graduates from upper secondary general education (havo) typically have only access to higher vocational education (hbo), and about 60% of those living in Zeeland study at a higher education institution in another province. The Hogeschool Zeeland is an institute for higher vocational education with about 4 000 students in 2009 divided among two locations, Vlissingen en Terneuzen. Zeeland also hosts the Roosevelt Academy, a small university in Middelburg, with more than 500 students in 2009, offering a Bachelor program in Liberal Arts and Sciences, but not regularly funded by the Ministry of Education. Both higher education institutions only distribute bachelor degrees and do not cover all fields of study. Most vwo-graduates from preparatory university education (vwo, which is upper secondary general education at a slightly higher level than havo) indeed go to universities outside Zeeland (nearest by in the Netherlands are Rotterdam and Tilburg, and in Belgium Antwerp and Ghent), and a large share of them moves to another place outside Zeeland during their study. For vwo-graduates studying at universities it is much more common to live in their place of study than for havo-graduates in higher vocational education (hbo), who typically live at their parents' home during the study period.

At the upper secondary level of vocational education, youngsters can go to Scalda in Zeeland, which as of January 1st 2012 has been established by a merger between two different schools. These are the ROC Westerschelde with 2 700 students and the ROC Zeeland with more than 8 000 students. The merger was due to some serious concerns regarding the financial sustainability of these schools. For many studies costs exceeded subsidies by the government. Part of the financial problem may be caused by the large share of small-scale studies for which the subsidies per student cannot cover all the cost. This problem may be partly caused or at least aggravated by youngsters studying elsewhere, as has been pointed out before, and the declining numbers of students due to declining births. This demographic decline of young people in the region is illustrated in Figure 62, which shows that in 2018 a big drop of the number of youngsters in the age of 17-27 years old will take place. This may in particular have big effects for both Scalda and the Hogeschool Zeeland. For upper secondary general education (havo and vwo) the drop in the number of students will take place from 2014 onwards.

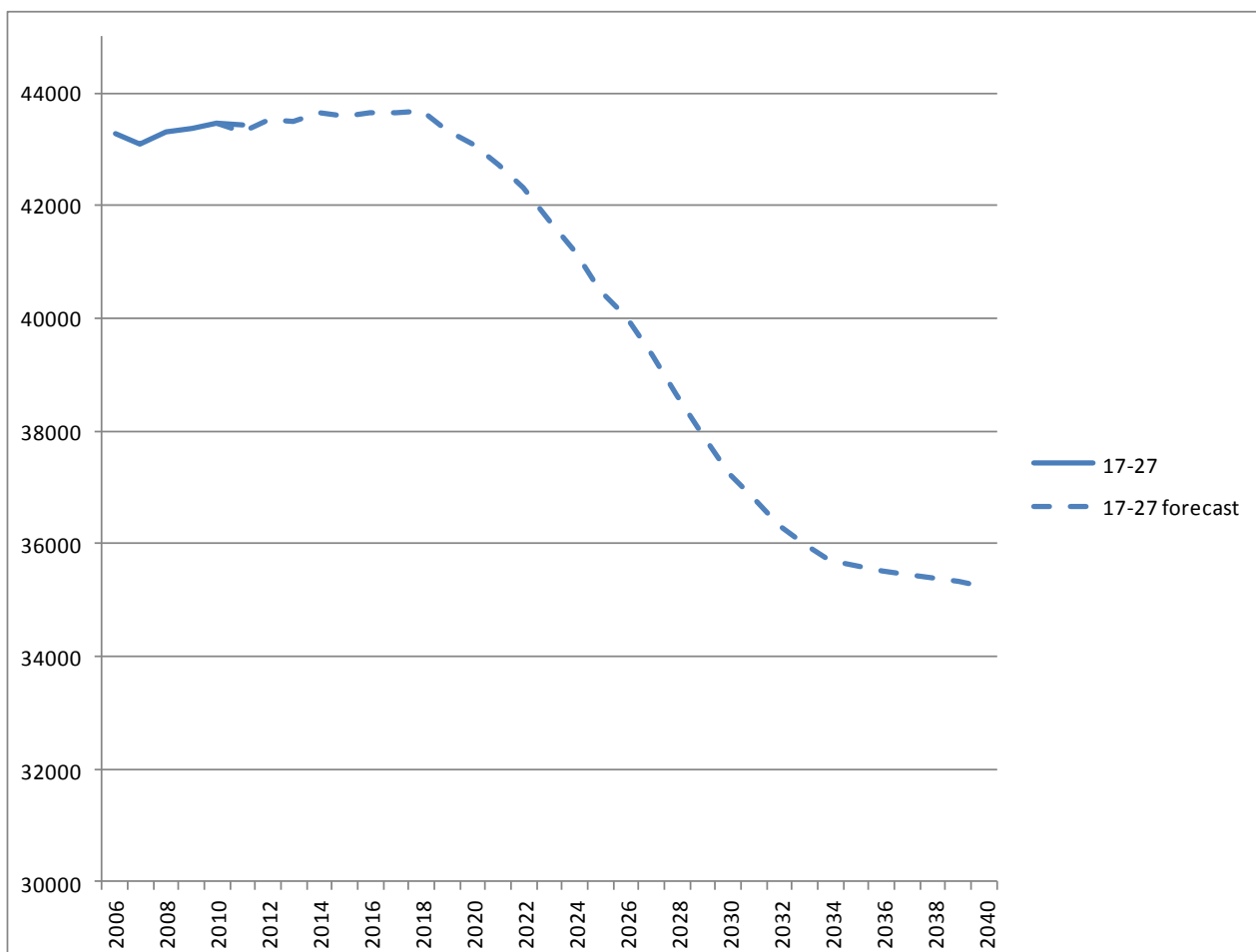


Figure 62 Population decline of young people at intermediate and higher vocational and university education in Zeeland, 2006-2040

Source: Van der Wouw et al. (2012), based on Statistics Netherlands (Statline)

The drastic decline in the number of students in many regions of the Netherlands has given rise to a discussion on the ‘macroefficiency’ (‘macrodoelmatigheid’ in Dutch) of educational institutions, in particular of the ROC’s. The national Council for Education (Onderwijsraad, 2012) has recently published on this issue to improve the cost efficiency and the match between intermediate and higher education and the labour market. For Zeeland this discussion is important, and the topic also plays a role in the report by

Van der Wouw *et al.* (2012) that has been published on behalf of the Education Authority Zeeland. Table 16 outlines the large number of small-scale educations in intermediate vocational schools (ROC's and AOC's) in Zeeland relative to the Netherlands. The share of educations (*i.e.* fields of study) with less than 18 students amounts to 56% in Zeeland, whereas this is 42% in the Netherlands. Only 13% of the students participate in these small-scale studies in Zeeland. In particular agricultural and technical educations have many small-scale studies, about two third, whereas health has on average the least small-scale studies. More than 70% of the educations at Edudelta and ROC Westerschelde are small. This large share *emphasises the need for reforms of the educational infrastructure* in Zeeland, whereas at the same time the schools in Zeeland should be *attractive enough for students and their parents*. The latter implies a broad spectrum of fields and types of study and excellent schools. Of course the merger of two ROC's into Scalda is a step in the right direction.

Table 16 Number of small-scale studies (<18 students) at intermediate vocational schools in the Netherlands and Zeeland, by field of study and school, 2011-2012

	% of small-scale studies	% of students in small-scale studies
Netherlands	42	5
Zeeland	56	13
<i>field</i>		
Economics	56	16
Technical	65	17
Health	36	6
<i>school</i>		
Edudelta (agricultural, AOC)	71	29
ROC Westerschelde	72	27
ROC Zeeland	43	8

Note: As of 1 January 2012, ROC Westerschelde and ROC Zeeland have merged.

Source: DUO, calculations according to Bertrand-Cloodt *et al.* (2012)

5.2 Regional labour market analyses

5.2.1 Labour force participation and unemployment

To analyse mismatches on regional labour markets different methods can be used. In the last section, labour demand has been shown by looking at employment. Figure 63 first shows the forecast of the number of 20-65 years old population to indicate the future growth of the potential work force. The figure reveals that the potential work force in Zeeland is falling much faster than in the Netherlands. By 2020 it will be down by almost 4%, and by 2040 more than 15% (Statistics Netherlands, Statline). For Zeeuwsch-Vlaanderen the decline is much larger. Thus, without major changes in past trends, employers in Zeeland need to find solutions for the falling labour supply. Together with local policy makers they may try to stimulate *labour force participation among the declining potential work force*. Another policy may be to *attract workers from elsewhere by offering them better terms, or introduce new labour-saving production techniques* (*i.e.* higher capital intensity).

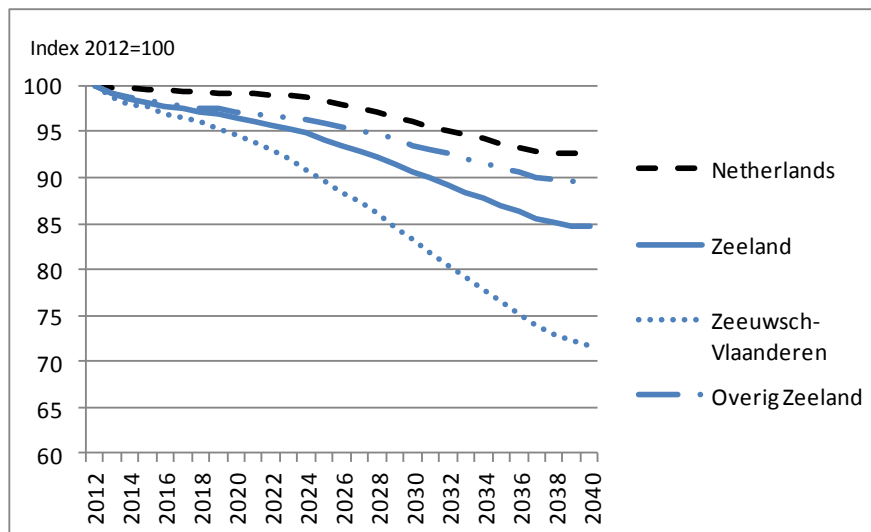


Figure 63 Development of 20-65 years old population in the Netherlands and Zeeland, forecast 2012-2040

Source: Statistics Netherlands, calculations by author

The supply of labour can be shown by the economic active labour population (15-64 years) or in other words the labour force,¹ referring to all people in this age group that are either working or willing to work and actively searching for a job. Figure 64 shows an upward trend for the labour force in Zeeland between 1996 and 2011. During these years the labour force of Zeeland has increased by 11.9%. In 2011, the labour force in Zeeland consisted of 169 000 persons (Zeeuwsch-Vlaanderen: 47 000 vs. 'Overig Zeeland': 122 000). Yet, in the same period the labour force in the Netherlands has grown even more rapidly (+16.8%) to over 7.8 million persons in 2011. Interestingly, the increase in the labour force of Zeeland is solely due to the strong increase in Overig Zeeland, whereas the labour force in Zeeuwsch-Vlaanderen was more or less stable.²

¹ Note that all labour force figures in this background note use the national definition of the labour force. This implies that those working or searching for a job of less than 12 hours per week are not included, and are regarded as non-participating.

² The data are drawn from surveys, so that for percentages based on small numbers fluctuate due to sample size biases.

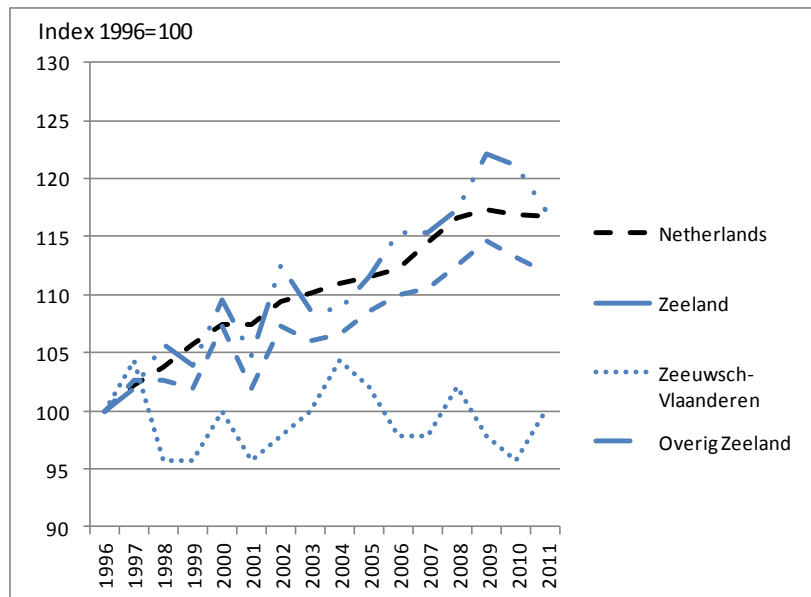


Figure 64 Growth of the labour force in the Netherlands and Zeeland, 1996-2011

Source: Statistics Netherlands, calculations by author

The supply of labour can be also shown by gross participation rates, which usually refer to the percentage of the 15-65 years old population that is working or willing and searching for work, which is the labour force as a percentage of the potential work force. Figure 65 presents the gross participation rates for the Netherlands and Zeeland. Both in the Netherlands and in Zeeland participation rates have increased since 2001. The increasing participation rates are to a large extent due to the fast rise in participation of women and older people. The participation rate of older workers dropped slightly in 2004 and 2010. This may be due to the so-called ‘discouraged worker effect’ of high unemployment in these two years (see Figure 66): older unemployed are discouraged by high unemployment rates and are not actively searching anymore (Vendrik and Cörvers, 2009). Another reason is the personnel policy of employers to fire their older workers and offering them an attractive pre-pension plan. Furthermore, it turns out that participation in Zeeland between 2001 and 2011 is about 0 to 2% lower than in the Netherlands. This implies that over and above a relatively strong fall of the potential labour force in Zeeland as shown by the previous figure, also participation rates are relatively low. However, this also implies that there is more room than in the Netherlands to compensate for the falling potential work force in Zeeland (Figure 63) by *increasing participation rates among the economically active population, in particular the elderly and women.*

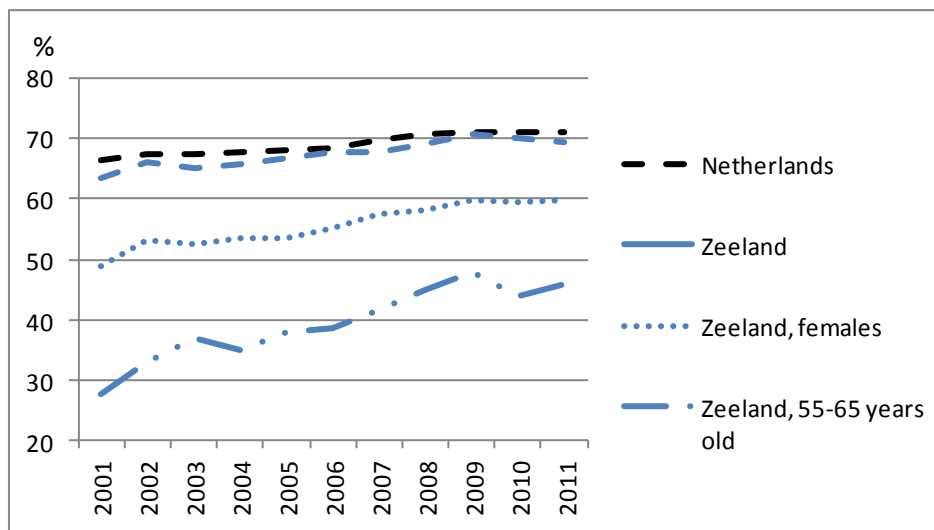


Figure 65 Gross participation rates in the Netherlands and Zeeland, total, females and 55-65 years old, 2001-2011

Source: Statistics Netherlands, 2012

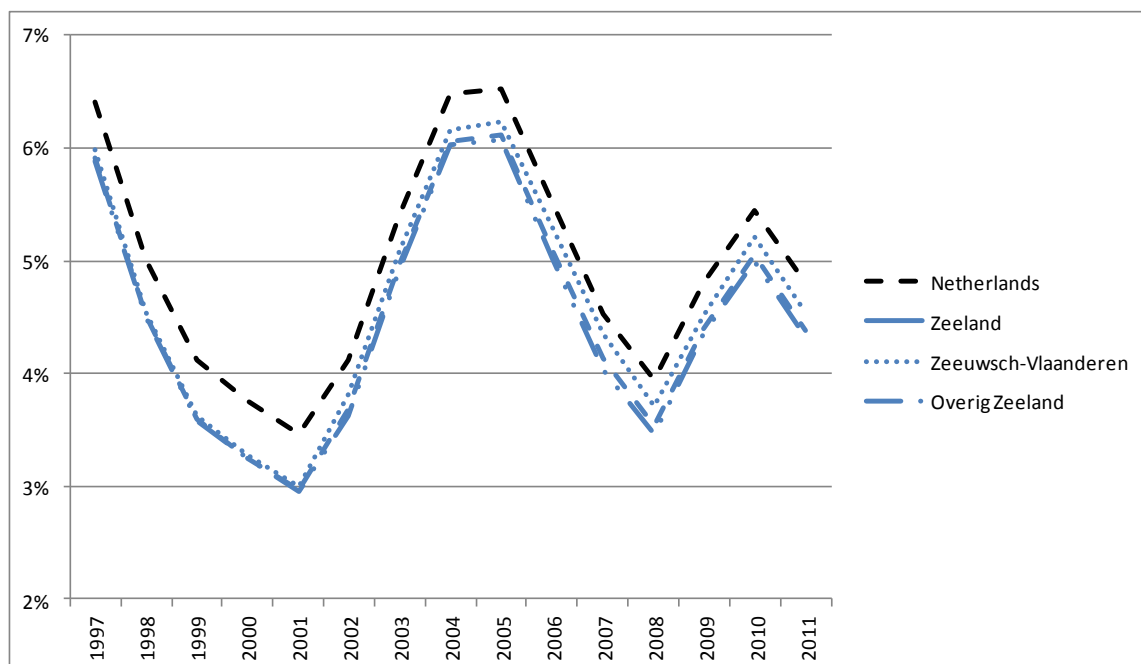


Figure 66 Unemployment rates in the Netherlands and Zeeland, 1997-2011

Source: Statistics Netherlands, 2012

Figure 66 illustrates the development in the unemployment rate of Zeeland compared to the Netherlands. Next to cyclical fluctuations, the figure shows that Zeeland outperforms the Netherlands in terms of a lower unemployment rate in all consecutive years between 1997 and 2011. On average the unemployment rate in Zeeland was 4.5%, which is slightly less than the unemployment rate at the national

level (5.0%). The unemployment rate of Zeeuwsch-Vlaanderen is hardly any higher than the province's average. The relatively low unemployment in Zeeland could be a good reason for young people to stay in Zeeland instead of going to live and work in other parts of the country.

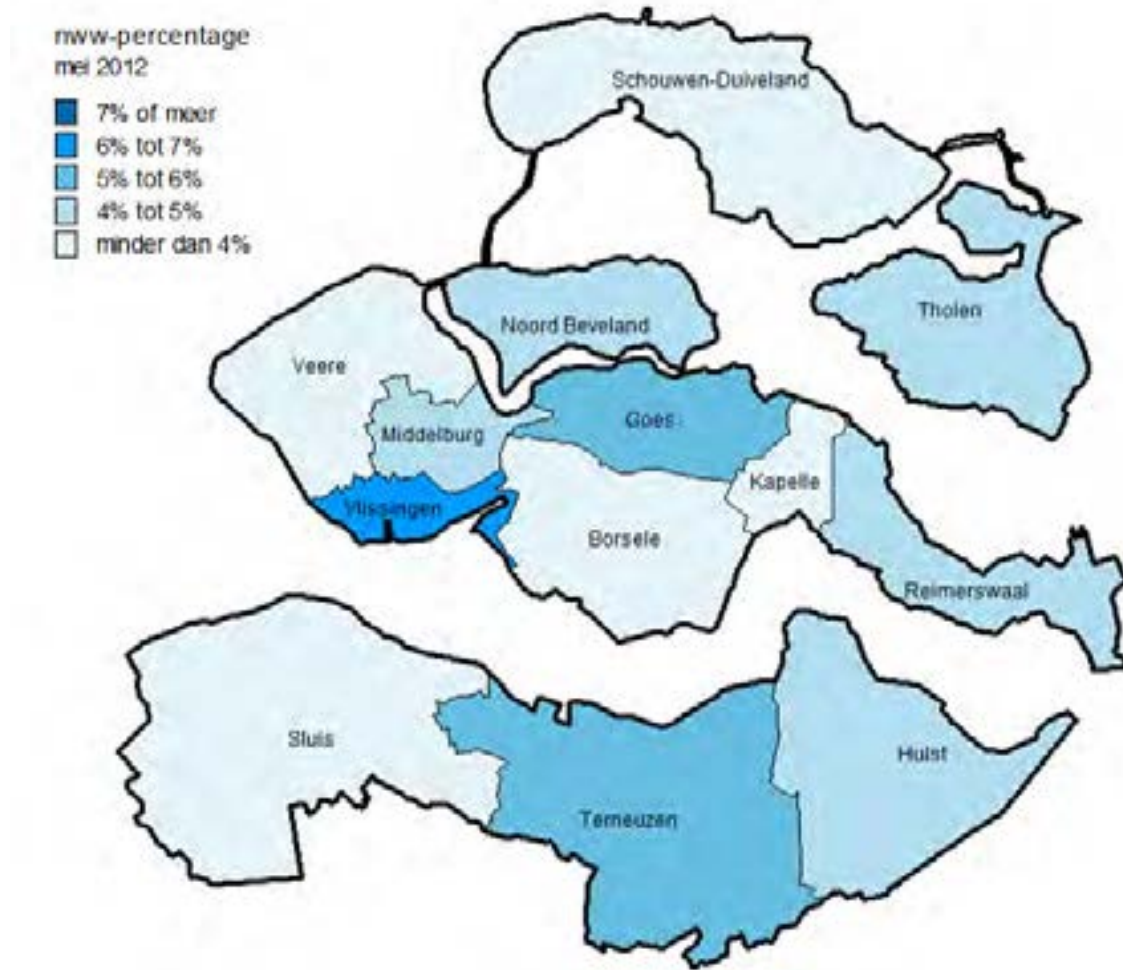


Figure 67 Number of registered unemployed as percentage of the labour force per municipality in Zeeland, May 2012

Source: UWV (2012)

Figure 67 shows the number of unemployed persons registered by the Dutch public employment office (UWV WERKbedrijf, unemployment rates from May 2012) as percentage of the labour force.³ The municipalities with the highest unemployment rates are Vlissingen, Terneuzen en Goes. Yet the unemployment rate of 4.3% in Zeeland is low relative to the average of 6.0% in the Netherlands. Only Vlissingen has a slightly higher unemployment rate of 6.1%.

To monitor mismatches on the labour market, unemployment as well as vacancy figures can be presented. The more the number of vacancies exceeds the number of unemployed for a particular region or occupation, the higher the tightness on the respective labour market segment is. Figure 68 shows the tension indicator by occupational class published by the Dutch public employment office (UWV WERKbedrijf) for the Netherlands and Zeeland. The indicator divides the number of vacancies by the

³ This measure differs from the unemployment measure by Statistics Netherlands, since it is based on another definition and method of counting the unemployed.

number of short-term unemployed, i.e. unemployed registered less than 6 months ago. The public employment office argues that it becomes significantly more difficult to find a job when unemployment duration is longer than 6 months due to skill obsolescence. If the tension indicator is larger than 1.5, labour demand exceeds labour supply, implying a high labour tightness for the particular occupational class. If the indicator is between 1.0 and 1.5 the labour market is more or less in balance, whereas a value of less than 1.0 indicates that labour demand falls short of labour supply. The figure reveals that the labour market in Zeeland is very tight for (para) medical occupations. The tightness is more than twice as high as for the Netherlands. Also for ICT and services occupations the labour market in Zeeland is tight. Due to the economic crisis and the slack on the labour market it is in general relatively easy for employers to find personnel. This holds even for the technical occupations. In September 2012 the labour market in Zeeland was a bit tighter than on average for the Netherlands. Again, the relatively tight labour market in Zeeland should be no reason for young people to leave the province.

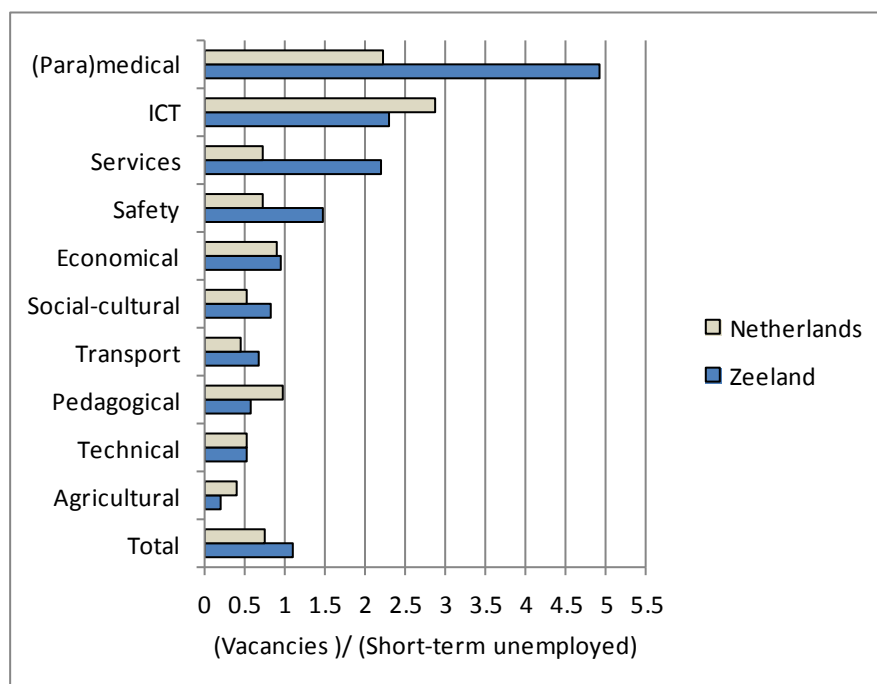


Figure 68 Number of vacancies divided by the number of unemployed registered less than 6 months ago, September 2012

Source: UWV, 2012

To escape from unemployment or find a better job, people may commute to other regions. About 17.5% of the labour force of Zeeland commutes, mainly to West-Brabant (the province of Noord-Brabant), and to a lesser extent to Rijnmond (province of Zuid-Holland). This amounts to approximately 29 000 out-commuters in 2009.⁴ The number of in-commuters is considerably lower. The 13 200 in-commuters mainly come from Vlaanderen (Belgium) and West-Brabant. Notwithstanding the tighter labour market in Zeeland relative to the Netherlands, more people are leaving the province to work or to permanently live elsewhere than the other way round (apart from immigration). This means that there is some potential for Zeeland to keep these people within the own province borders by *becoming a more attractive place to work and live*.

⁴ These figures and text are taken from UWV (2012), but the source of the data is the Labour Force Survey of Statistics Netherlands.

5.2.2 Labour market entry of recent graduates

Surveys on recent graduates can be used to analyse labour market mismatches. From the surveys held by ROA among recent graduates one year after graduating, it can be concluded that the unemployment rates for recent graduates of intermediate and higher vocational education in Zeeland are somewhat lower relative to the Netherlands (see e.g. ROA, 2012), in particular for recent graduates of technical education at the intermediate level (Bertrand-Cloudt *et al.*, 2012). Also other indicators in general point to a relatively good labour market position for recent graduates from Zeeland (ROA, 2012). These indicators refer to working at the own level of education (*i.e.* no over-education) and within the occupational domain, and to the extent that recent graduates are satisfied with their job and career perspectives in their organisation.

In Table 17, the distribution by field of study is presented for both recent graduates of intermediate vocational education that have a job and the total group of workers in the labour force. It appears that the technical field is underrepresented whereas the social-cultural field of study is overrepresented among recent graduates relative to the total work force. This holds for both the Netherlands and Zeeland. This doesn't have to indicate a mismatch problem if the labour demand for technical workers is structurally decreasing and for social-cultural workers increasing. For other fields of study the differences are much smaller. If anything, also the number of graduates in the agricultural field may fall short of demand.

Table 17 Percentage of mbo-workers recently graduated (grad) from a particular field of study vis-à-vis the distribution of the work force (work) by these fields of study, 2004-2007

	Agricultural		Technical		Social-cultural		Health care		Economical		Other		Total	
	grad %	work %	grad %	work %	grad %	work %	grad %	work %	grad %	work %	grad %	Work %	grad %	work %
Netherlands	5	6	26	36	30	19	9	8	28	30	2	1	100	100
Zeeland	4	6	32	44	28	18	9	8	24	23	2	1	100	100

Source: Bertrand-Cloudt *et al.*, 2012

For recent graduates from higher vocational education a similar table can be constructed (see Cörvers and Ramaekers, 2006). In general the discrepancies between the number of recent graduates and employment by field of study are larger for higher vocational education (hbo) than for intermediate vocational education (mbo). This is due to the fact that higher vocational education institutions are more heavily concentrated, and because regional mobility for study and work, both in term of commuting and migrating, are larger as well at the higher education level. More than 80% of the recent graduates from a school for intermediate vocational education (AOC or ROC) in Zeeland also work in Zeeland (ROA, 2012). This percentage is high relative to other regions (Bertrand-Cloudt *et al.*, 2012).

The cross-regional migration patterns of higher vocational education graduates may differ a lot from those of university graduates since Zeeland has a big school for higher vocational education, but only a very small university without any Master programs (see Section 7.2.2). Regarding higher vocational education, Zeeland attracts more graduates that are going to work in Zeeland but have recently finished their study in another province, than it loses graduates living in Zeeland that are going to work in other provinces. This points to a net surplus of higher vocational graduates (Cörvers and Ramaekers, 2006). About 70% of those graduated at a higher vocational school in Zeeland also find a job within Zeeland (ROA, 2012). The reason for the net surplus could be that Zeeland is an attractive region to work for these graduates. Another explanation could be that many higher vocational graduates live at their parents' home during their study at a higher vocational school outside Zeeland, which implies that there is no net surplus

since most recent graduates were already living in Zeeland. Regarding university education poi Zeeland significantly loses more recent university graduates that lived in Zeeland when they were 16 years old and work in another province, than it wins recent university graduates that lived elsewhere when they were 16 years old and started to work in Zeeland after graduation (Cörvers and Ramaekers, 2010). To fill in open vacancies at academic level, Zeeland may in particular try to attract return migrants who used to live in Zeeland.

5.3 Skills ecosystem and lifelong learning

5.3.1 Learning on-the-job

Particularly in shrinkage regions it is not only important that older workers retire at a later age, but also that older workers remain productive over their life time. Thus, workers are required to enhance their human capital throughout their entire career. In this view, the concept of *lifelong learning* is predominantly acknowledged as being an absolute necessity for workers to *enhance their employability*. Lifelong learning can comprehend training participation in formal courses as well as opportunities for informal learning in the workplace (Borghans et al., 2011).

A very crude indicator for informal learning could be whether people are working at all. Figure 69 reveals that workers in Zeeland who are between 55 and 64 years old have more problems to keep their job than on average in the Netherlands. Without a job it is of course much more difficult to be involved in informal learning. Between 25-34 years of age, employment rates are higher for Zeeland. Employment rates are almost similar between the Netherlands and Zeeland for the 35-54 age group.

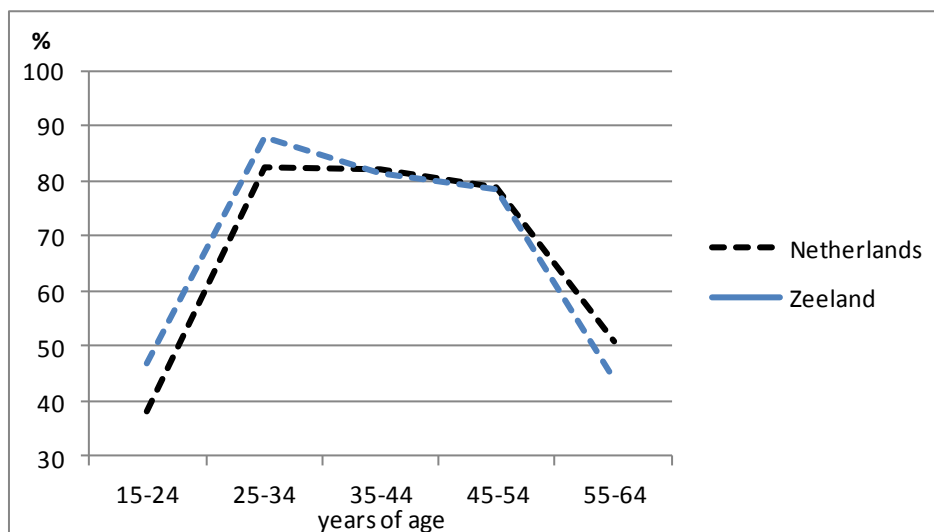


Figure 69 Employment rate by 10-years age classes, 2011

Source: Statistics Netherlands, 2012

Figure 70 illustrates that the employment rate increases strongly with the level of education. At the lowest level of education less than half of the people are at work. For intermediate and highly-skilled people the percentages increase to more than 70% or even more than 80%, respectively. This implies that the employment opportunities for the low-skilled increase drastically when they finish their study at the intermediate level. The difference in employment rate is 20% for Zeeland. Investing in higher instead of intermediate education increases the employment rate by another 10%. *Investing in intermediate or higher*

education thus could be a good strategy against unemployment and non-participation of the low-skilled, and offers good opportunities to on-the-job training and informal learning over a lifetime.

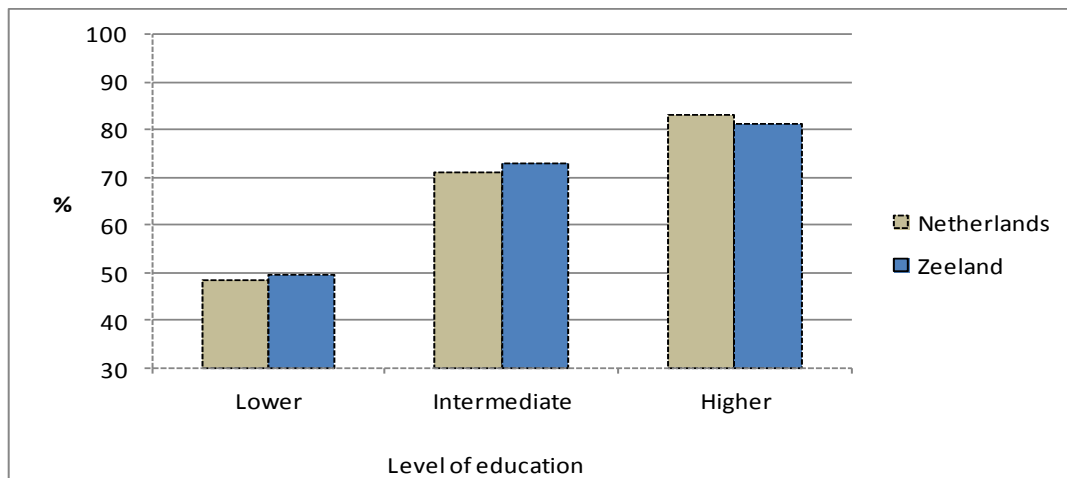


Figure 70 Employment rate by level of education, 2011

Source: Statistics Netherlands, 2012

5.3.2 Formal education and training

Investments in initial education may offer a good starting position for life-long learning of those who start their career. From Figure 71, it can be inferred that Zeeland has, relative to the Netherlands, a large share of intermediate and low-skilled people, and a low share of high-skilled people in the labour force. This can be explained by both the net outmigration of students and university graduates to other parts of the country and by the fact that the work force in Zeeland is hardly catching up to the Netherlands with respect to investments in initial education. Both stimulating the participation in higher education programmes of the work force and keeping highly educated within the own province may have a positive impact on economic growth and the purchasing power parity of the region.

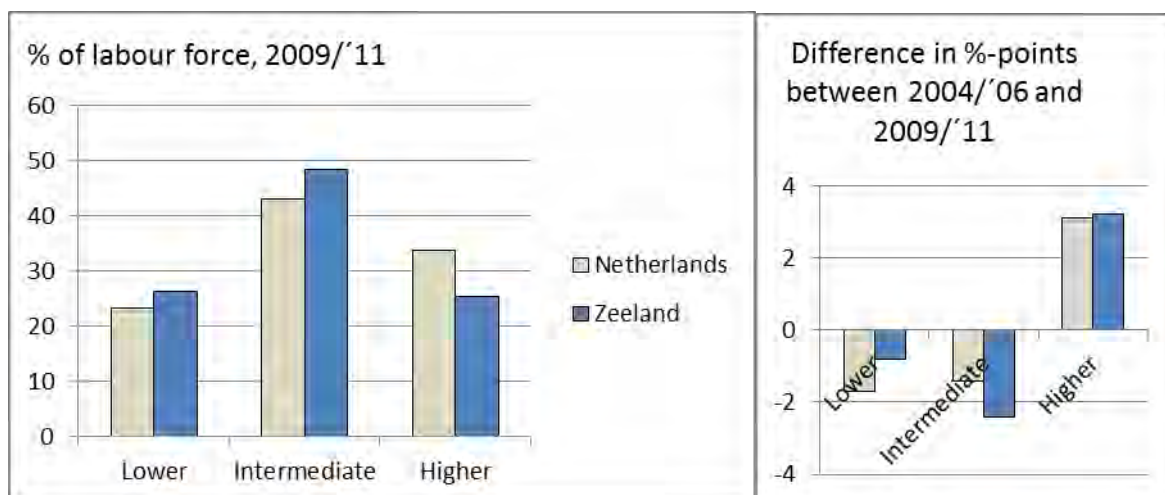


Figure 71 Educational attainment of the labour force in the Netherlands and Zeeland, average 2009/11 and growth relative to 2004/06

Source: Statistics Netherlands, 2012

Recently, the participation in adult education and training among 25-64 year olds in the Netherlands has increased slightly. This is shown by **Error! Reference source not found.**Figure 72. The data retrieved from the Dutch labour force survey, in which respondents are asked whether they participated in a training course during the last four weeks prior to the survey. Although training participation in Zeeland shows an upward trend in the period 2006-2011, it is lower than the average Dutch trend. Whereas in the Netherlands on average 2.1% of the workers of 25 to 64 years old attended a training course in the four weeks prior to the survey, in Zeeland this group was fairly smaller (1.7%). This can be explained by the lower level of education in Zeeland, since low-skilled workers in general train less than highly-skilled workers. Furthermore, in 2010 and 2011 adult training participation in Zeeuwsch-Vlaanderen was at a lower level than in the rest of Zeeland. *Offering training programmes on a wider scale could stimulate adult education and training participation.*

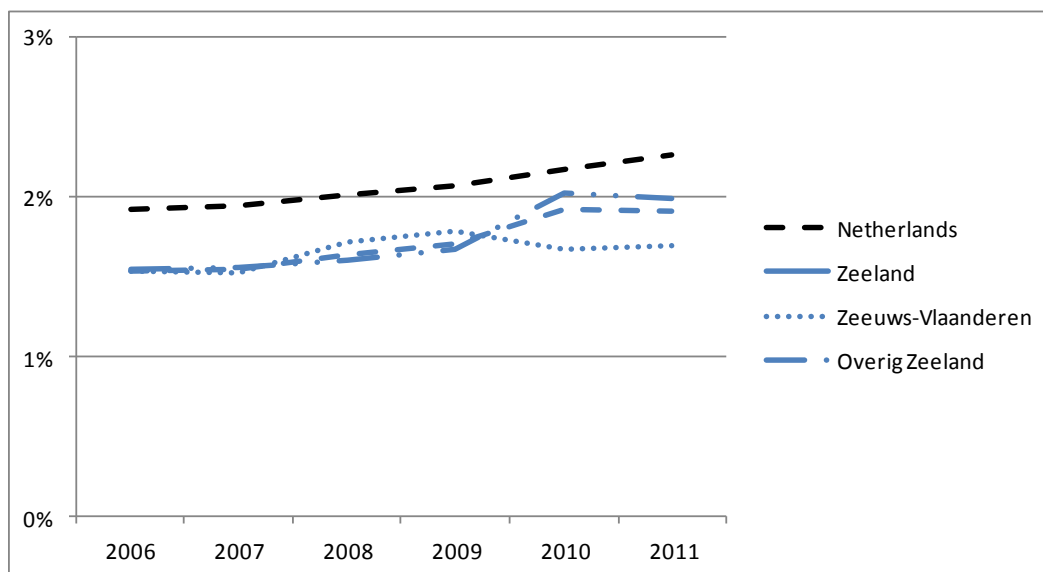


Figure 72 Participation of the population in adult education and training, 25-64 years old, 2006-2011

Source: Statistics Netherlands

5.4 Employment and the silver economy⁵

5.4.1 Employment

During the last few years the economy in Zeeland has grown faster than the national economy: on average yearly 2.2% real growth in gross value added between 2005 and 2011 versus 1.6% for the Netherlands. This is remarkable given the usually large impact of the economic crisis on manufacturing, which is rather large in Zeeland. The industrial sector in Zeeland produces 39% of total value added, whereas this is only 24% in the Netherlands. Figure 73 presents the composition of gross value added in Zeeland and the Netherlands. Later on in this subsection, the different economic activities in Zeeland will be analysed in more detail.

⁵ Several figures in this section are taken from the analyses in *De Economische Agenda 2013-2015* (Provincie Zeeland, 2012), including the supplements (Provincie Zeeland, 2012b).

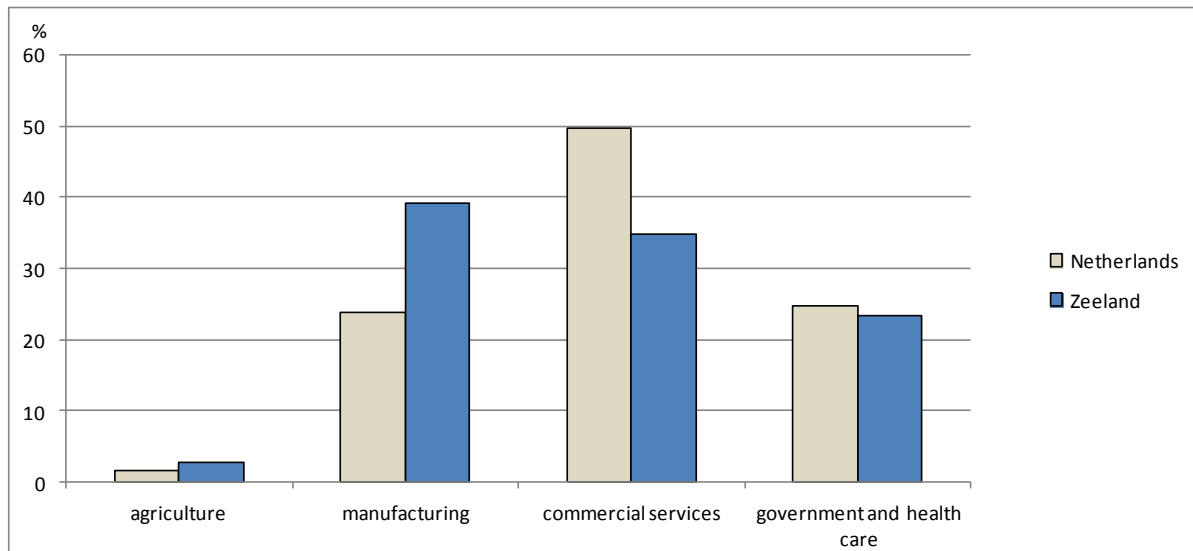


Figure 73 Composition of value added in the Netherlands and Zeeland, % of total value added, 2009

Source: Statistics Netherlands, 2012

Figure 74 shows the employment structure in Zeeland and the two distinct sub regions, and compares the distribution to the general employment structure in the Netherlands. In Zeeland (78%) the vast majority of the workforce is employed in the services sector (both commercial and public). However, in Zeeland relatively many workers are employed in the manufacturing sector (20%). This is nearly 5% more than the country's average. The remaining part works in the agricultural sector (2%). Concerning the sub regions within Zeeland, the large share of workers in manufacturing in Zeeuwsch-Vlaanderen is most remarkable. Nearly a quarter of all workers in this sub region are employed in the manufacturing sector, whereas in the Netherlands this is only 16%.

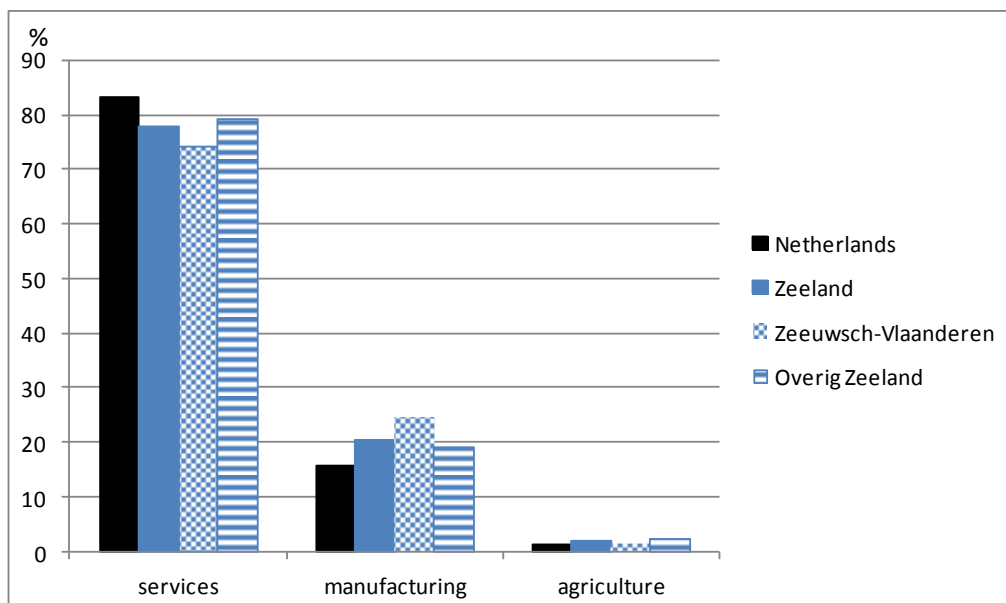


Figure 74 Employment structure by sector in the Netherlands and Zeeland, average 2008-2010

Source: Statistics Netherlands

Table 18 shows that in 2011 commercial trade made up 30 460 of the 173 230 jobs in Zeeland.⁶ It is the largest sector in Zeeland, followed by health care. However, in terms of shares in total employment these sectors are hardly more important than on average in the Netherlands. The industry shares in total employment of Zeeland versus the Netherlands can be considered as indicators for comparative advantage. In relative terms agriculture in Zeeland has the largest employment share, namely more than twice as large as the Netherlands. Apart from the agricultural sector, Zeeland reveals comparative advantages in energy, hotels and restaurants and manufacturing. Between 2005 and 2011 the number of jobs have been growing for most sectors, except for transport, financial services and agriculture.

ICT and health care have had by far the largest yearly average rate of growth (4.1 and 3.1% respectively). ICT is the smallest sector in Zeeland, and the employment share in Zeeland is only one third of the employment share of the Netherlands. Moreover, it turns out that health care in Zeeland is not only a big but also a strongly growing sector with respect to the number of jobs. Between 2005 and 2011 employment in health care has been growing faster than on average in the Netherlands, which can be related to the ageing population in Zeeland. This also holds for ICT, agriculture and manufacturing. Relative to the Netherlands, Zeeland has been facing a strong employment decline in financial services of yearly 4.3% between 1995 and 2001, whereas employment in hotels and restaurants was growing much less. In Bertrand-Cloodt *et al.* (2012) the comparative advantages for 30 regions of the Netherlands are further differentiated within manufacturing industry. Zeeland reveals a strong comparative advantage for in particular chemicals and food.

Table 18 Employment in number of jobs in Zeeland versus the Netherlands, by sector of industry, 2005-2011

Sector of industry	Number of jobs, 2011	Comparative advantage relative to the Netherlands, 2011	Yearly job growth, 2005-2011 in %	Growth difference Zeeland-Netherlands, in %-points
Agriculture	10 660	2.16	0.0	+1.9
Manufacturing	23 630	1.34	0.6	+0.6
Energy	2 390	1.63	1.3	-0.5
Construction	11 200	1.07	0.4	-0.1
Commercial trade	30 460	1.01	0.0	-0.8
Transport	8 700	0.97	-0.6	-0.8
Hotels and restaurants	12 190	1.63	0.5	-1.2
ICT	1 840	0.33	4.1	+2.1
Financial services	2 740	0.54	-4.3	-3.0
Business services	16 560	0.66	2.1	-0.4
Government	8 370	0.88	-0.3	-0.1
Education	9 880	0.85	1.3	-0.2
Health care	28 940	1.04	3.1	+0.6
Other services	5 680	0.75	1.9	-0.9
Total	173 230		-0.9	-0.1

Source: RIBZ, 2012

The economic policy of the regional government of the province of Zeeland is based on the choice for particular so-called 'top sectors'.⁷ This choice includes the following sectors of industry (Provincie Zeeland, 2012):

⁶ Note that in Table 3 the number of jobs is observed, contrary to the number of workers in Figure 10. In particular for agriculture this matters a lot. The number of agricultural jobs in Zeeland is high relative to the number of people of the labour force of Zeeland working in agriculture.

⁷ The selection of top sectors for Zeeland is in the end the result of a political process, which is difficult to reconstruct. The selection is also related to political choices for top sectors at the national level, which have been made earlier.

- Harbours and manufacturing, including bio based economy, logistics and maintenance;
- Energy;
- Health care;
- Tourism and leisure;
- Water;
- Agriculture and food;
- Seafood, fishery and aquaculture.

The choice for these sectors of industry reflects to some extent the employment distribution in Zeeland, either in absolute or in relative terms. Regional policy makers argue that the chosen sectors offer the biggest opportunities for economic growth of the province of Zeeland in the forthcoming years, although no strict criteria for the political choices made can be found. Many new projects and investments are initiated to further stimulate innovation and sustainability, and to improve comparative advantage of the business top sectors. For particular sectors of industry, like health care, tourism and agriculture greater economies of scale should increase efficiency and quality. In agriculture policies are directed towards making stronger the economic position of young entrepreneurs. In Table 19 the business cases in the different top sectors are mentioned.

Table 19 Business cases per top sector according to the Provincie Zeeland (2012)

Top Sector	Projects
Harbours and manufacturing, incl. biobased economy, logistics and maintenance	<ul style="list-style-type: none"> - Development and growing of green raw materials (e.g. algae, seaweed, flax, proteins from fish) - Recycling in process industry - Containerisation of Zeeland Seaports, related to the new canal between the Seine and the Scheldt
Energy	<ul style="list-style-type: none"> - Making available subsidies for concrete projects, to save energy or to generate new energy
Health care	<ul style="list-style-type: none"> - Keeping patients for the own region by offering good quality and short waiting lists, and attracting patients from outside Zeeland that combine short vacations with treatments, e.g. for plastic surgery
Tourism and leisure	<ul style="list-style-type: none"> - Investing in recreational infrastructure, like better routes for cycling, hiking and sailing, and better Wi-Fi network - Development of leisure hotspots, e.g. around the Brouwersdam
Water	<ul style="list-style-type: none"> - Energy Water Valley (business case in development), but includes many research centres, with the Grevelingen Tidal Test Centre as one of the most important centres
Agriculture and food	<ul style="list-style-type: none"> - Foodport Zeeland: clustering activities that link the harbour to food production - New growing technology in agriculture: entrepreneurs should take the lead in agricultural project related to the biobased economy and finding new sources of energy
Seafood, fishery and aquaculture	<ul style="list-style-type: none"> - Development of aquaculture: growing of fish and seafood on land

5.4.2 Silver economy

The greying of the labour force raises the question where all the older people are working? The sectors that have employed many older persons could profit from their skills and experience. This may make older workers an asset for the economy, which can be referred to as the 'silver economy'. However,

the ‘silver economy’ may also refer to the purchasing power and the goods and services that are consumed by the elderly. The latter is probably the reason why employment in health care is growing so fast in Zeeland (see Table 17). Also touristic and leisure activities, in which Zeeland has a comparative advantage (see employment in hotels and restaurants in Table 17Table), may be boosted by the purchasing power of the growing share of older people.

However, from Provincie Zeeland (2008) can be concluded that the economic policy of the province of Zeeland seems to be focused on accommodating the housing market, the labour market, public transport, educational infrastructure and health care to the ageing population instead of actively using the growing share of older people to develop new economic activities. Also initiatives like the use of more volunteers, in care and local transport for the elderly, can be interpreted as a way to economize on increasing costs due to ageing. More co-operation between municipalities and care institutions may be essential to develop these low-cost initiatives. *New initiatives could be launched to further explore the possibilities to establish a ‘silver economy’ that is really using the strengths of older workers.*

Table 20 outlines that the largest percentage of older workers in the Netherlands can be found in agriculture and in the government and education sector. In Zeeland these sectors reveal an even higher percentage of older workers, namely 21 and 23% respectively. Also the communication sector in Zeeland has a large share of older workers. As mentioned above, having a large share of older workers, could be considered as an asset, although this is often not the case. In fact a lot of older workers usually are a major concern for policy makers and employers, since this may lead to a large replacement demand within 5 or 10 years. The upcoming vacancies have to be filled by young, relatively un-experienced workers.

In contrast, the percentage of older workers in the food sector is very low in Zeeland. Also in another top sector of Zeeland, chemicals, the percentage of older workers is low.

Table 20 Percentage of 55-64 years old workers by sector of industry in the Netherlands and Zeeland, average 2010-2011

Sector of industry	Netherlands in %	Zeeland in %
Agriculture	20	21
Food	13	6
Chemicals	14	11
Metal and electronics	13	13
Other industries	19	18
Energy	17	17
Construction	14	15
Real estate	15	15
Trade	12	14
Transport	17	14
Communication	15	19
Financial services	11	11
Hotels, restaurant and business services	12	13
Health care	15	14
Government and education	20	23

Source: Statistics Netherlands, calculations by author

5.5 Conclusions and policy themes

Zeeland is a divided province, both physically and socio-economically. The water divides the province, but is also an economic driving force since it offers opportunities for transportation (harbours), tourism (water sports), aquaculture (growing fish and sea food on land). Within the province of Zeeland situations may differ. The northern part of Zeeland has close connections with Rotterdam and the province of Zuid-Holland, the eastern part is connected with western Brabant, and Zeeuwsch-Vlaanderen is connected with Belgium.

5.5.1 Population

The development of the population in Zeeuwsch-Vlaanderen is different from the development in the rest of Zeeland. Where the capital of Zeeland (Middelburg) is still growing, the largest town in Zeeuwsch-Vlaanderen and Zeeland (Terneuzen) is shrinking. While the population of Zeeuwsch-Vlaanderen is in decline, the rest of the province of Zeeland shows an increase in its population that is a little higher than the average increase in the Netherlands. Zeeland also has an ageing population: the percentage of people older than 65 is increasing. In 2040, one out of every three residents will be over 65; now this is approximately one out of four (23%). This percentage is considerably lower for the Netherlands. The outline of the population in the region shows that age distribution of the population in the Netherlands is relatively more in balance than in Zeeland, where more young people are moving away and the percentage of older people is increasing more rapidly. The number of young people (age bracket 15-35) leaving the province of Zeeland can be clearly seen from the figures. The net number of births (the number of birth minus the number of deaths) has fallen to almost zero (2011) from nearly 1 000 (1990) in Zeeland. Inland and foreign migration numbers are fluctuating in Zeeland, but on average there is more inward foreign migration than the people leaving the region. Those migrating from abroad are mainly from Belgium, but also from other countries like Germany and Poland. For a long time, inland migration has shown a deficit in the age bracket of 15-24. 2011 was the first year with a negative outcome for most age categories.

From this chapter, the site visits and the workshop held in Zeeland the following policy implications can be deducted:

- For Zeeland as a whole it can be concluded that population decline is not due to low fertility rates, but to women at birth-giving ages migrating to other parts of the country. The reason why these women leave may be the unfavourable educational infrastructure, like the absence of a large university. To increase the number of births and population growth in Zeeland, these women should be encouraged to remain within the borders of the province.
- The migration patterns that are revealed for Zeeland in general point at young people moving out, older people moving in. These patterns may require policy actions from local governments to shift investments in public services (education, health, leisure, etc.) from the young to those for the old.
- The uplift in foreign immigration implies that local policy makers should ensure there is sufficient housing and schooling of foreign workers and their families.

5.5.2 Economy

Industry, and also agriculture, are both sectors that are relatively larger in the province of Zeeland than the average for the Netherlands. Industry is responsible for almost 40 per cent of the added value in the province. There are many jobs in the industrial sector, in particular in Zeeuwsch-Vlaanderen (25% of

overall employment). But even in Zeeuwsch-Vlaanderen, as is commonly the case in all Western European economies, most of the jobs are in the services sector. In Zeeland, some top sectors can be identified with an employment percentage of 1.5 or two times the average in the Netherlands. These sectors include: industry (mainly biobased, which is rapidly increasing); logistics and maintenance; the ports, the energy sector, the health sector (not exceptionally large but with a higher than average growth); tourism; water, foodstuffs, agriculture and aquaculture.

Zeeuwsch-Vlaanderen is oriented towards Flanders (Belgium), more so than the rest of Zeeland. The problems that this region is facing are unique when compared to other shrinkage regions in the Netherlands. While unemployment and youth unemployment is a problem in other regions, Zeeuwsch-Vlaanderen's concern is how to retain a sufficient labour force for its enterprises in the region because of its ageing population, but also because of the economic growth area Vlissingen-Terneuzen-Ghent where the demand for personnel is high. Large amounts are invested in the regional infrastructure – connecting roads moving East-West and North-South, and new sea locks that will connect the Seine and the Scheldt. The municipalities in the region seized upon this ambition for growth with cross-border co-operation activities to achieve a more streamlined labour market: the Province of Zeeland, Zeeland Sea Ports and the municipalities have lined up 35 of such projects for further improvement. Some examples are the construction of the Sluiskiltunnel, a new sea lock, the Maintenance Value Park in which a number of chemical companies is involved, and lots of initiatives were launched in the field of bio-based economy in Zeeuwsch-Vlaanderen and the neighbouring region of Belgium.

From this chapter, the site visits and the workshop held in Zeeland the following policy implications can be deduced:

- The starting up of many new projects and investments to further stimulate innovation and sustainability should be continued to improve the comparative advantage of business top sectors. For example, in health care, tourism and agriculture greater economies of scale should increase efficiency and quality. Moreover, in agriculture, policies can be directed towards making the economic position of young entrepreneurs stronger.
- The differences in population growth have consequences for investments in local infrastructure, like schools and shopping centres. Policy makers from different municipalities could anticipate these differences, and collaborate to prevent over-investments in shrinking areas and to accommodate investments in growing areas.
- The relatively large and growing share of older people leads to a further need to invest in care and cure facilities. More co-operation between municipalities and care institutions may be essential to develop low-cost initiatives like the use of volunteers in care and local transport for the elderly.
- In general, the province of Zeeland seems to be focused on accommodating the housing market, the labour market, public transport, educational infrastructure and health care to the ageing population instead of actively using the growing share of older people to develop new economic activities. New initiatives could be launched to further explore the possibilities to establish a 'silver economy' that really uses the strengths of older workers.

5.5.3 Labour market

Older workers mainly work in NGOs, agriculture and communication in Zeeland. It must be noted that there are fewer older employees working in the strongly growing industrial, chemical and foodstuff sectors. It is estimated that by 2040 the professional population of the Netherlands will have fallen by approximately 7%. Zeeuwsch-Vlaanderen will be the most affected with a decrease of 27%, compared with a decrease for the rest of Zeeland of approximately 10%. Labour participation is nearly

identical for the Netherlands and Zeeland (70%). The participation of women in Zeeland is lower, although this percentage has risen in the past few years. Labour participation of the 55 to 65 year old has also risen. This is a positive development, certainly in view of the overall decline of the working population. Unemployment rates in Zeeland are below the average for the Netherlands. A comparison between the number of vacancies and the number of short-term unemployed shows that the number of vacancies in the paramedic and medical profession is five times the number of short-term unemployed people. Employment growth shows that there is potential for future gain here: younger people are more often employed than the average in the Netherlands, but older people less often.

From this chapter, the site visits and the workshop held in Zeeland the following policy implications can be deducted:

- Notwithstanding the tighter labour market in Zeeland relative to the Netherlands, more people are leaving the province to work or to permanently live elsewhere rather than the other way round (apart from immigration). This means that there is some potential for Zeeland to keep these people within the province borders by becoming a more attractive place to work and live.
- Employers in Zeeland need to find solutions for the falling labour supply. Participation rates are relatively low, which implies that there is more room than in the Netherlands as a whole to compensate for the falling potential work force in Zeeland by increasing participation rates among the economically active population, in particular the elderly and women. Together with local policy makers, companies may try to stimulate labour force participation among the declining potential work force.
- Other policies for employers may be to attract workers from elsewhere by offering them better terms, or introducing new labour-saving production techniques (i.e. higher capital intensity).
- To fill vacancies at the academic level, Zeeland may try to attract back those who used to live in Zeeland.

5.5.4 Education

Zeeland has an unfavourable educational infrastructure for demographic recovery. There is no regular university and there are many small-scale studies. Moreover, Zeeland, and in particular Zeeuwsch-Vlaanderen, will be faced with a huge drop of youngsters in the school-going age (17-27 years of age). Nevertheless, initial education seems to be of good quality. There seems to be a relative good match between education and the labour market, with in general low rates of unemployment. Still there are many vacancies relative to short-term unemployed in health care and ICT, and many people working in regions outside Zeeland. The population in Zeeland is on average lowly educated, since lowly- and intermediately-skilled people are overrepresented in the population. Related to this may be low investments in both learning-on-the-job and formal training courses in Zeeland.

5.5.5 Policy themes

From this chapter note, the site visits and the workshop held in Zeeland the following policy implications can be deducted:

- Investing in intermediate or higher education could be a good strategy against unemployment and non-participation of the lower skilled, and offers good opportunities for on-the-job training and informal learning over a lifetime.

- The large share of small education institutes emphasises the need for reforms of the educational infrastructure in Zeeland, while at the same time the schools in Zeeland should be attractive enough for students and their parents to keep them within the borders of the province. The latter implies a broad spectrum of fields and types of study and excellent schools. The merger of two ROC's into Scalda is a step in the right direction.
- Both stimulating the participation in higher education programmes of the work force and keeping highly educated people within the own province may have a positive impact on the purchasing power parity of the region and economic growth.
- A training centre like Biobase is worth mentioning as it seems to follow a similar, modern and playful approach to raising interest in technical professions, as done by their counterpart SXC in Groningen. The concept of these training facilities might be considered a good practice example for other countries.
- Although Zeeland is lacking a large university, it does have a higher vocational school (Hogeschool Zeeland). This school can be used as an engine for areas such as supporting start-ups, SMEs, high-tech in selected topsectors, and innovations in the region. It is strategic for the regional government to make sure that the absence of a university is compensated by policy, organisational and practical matters, to ensure access to university level knowledge and skills.

From this chapter some interesting “controversial trends” can be deduced. On the one hand, unemployment is very low. On the other hand, more people commute and migrate from Zeeland to other areas than vice versa. Labour demand is higher in Zeeland than in the rest of the Netherlands, but at the same time participation rate of older workers is relatively low. And there is a considerable outflow of university students and highly qualified personnel. In other words: Zeeland economy needs more labour supply, but, labour force is inclined to go elsewhere (even to regions with much higher unemployment rates). Preferences for geographically more centrally located regions may be an important reason. In peripheral regions career opportunities may be less promising, commuting distances may be larger for one or both partners in a household when they both want to have a good job that matches their educational background and seniority, and also commuting distances to secondary schools and universities may be larger for the younger family members when one lives in Zeeland.

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CHAPTER 6

THE NETHERLANDS' DASHBOARD ON DEMOGRAPHIC CHANGE AND GUIDELINES FOR LOCAL STRATEGIC MANAGEMENT

This chapter presents a performance comparison of key demographic indicators between the EU27, OECD, the Netherlands and the three study regions, using a new dashboard technique. The chapter outlines guidelines for the management of demographic changes at the local level so that the effects of shrinking and ageing populations are strategically addressed in advance. Policy messages and guidelines are outlined according to interconnected policy themes that are vital for regional labour markets attempting to manage a shrinking and ageing society: (1) intergenerational responses to labour market challenges; (2) co-operative local frameworks towards a dynamic and responsive labour market; and (3) place-based development strategies for resilient communities.

The Netherlands' case study revealed the complexity of demographic challenges that are occurring within the regions. Each region is experiencing different issues associated with their socio-economic situation, such as: population ageing experienced in all three study regions; and population shrinkage in local areas. These differences in demographic situations require a territorial analysis so that regional and local perspectives on policy preparation, development and implementation are co-ordinated within national policy efforts. This chapter firstly discusses a review of the performances of the regions, when compared to OECD member countries, EU27 and the Netherlands, using a Dashboard method¹ (see Annex 12). Secondly, guidelines for the management of demographic changes at the local level are presented.

6.1 The Netherlands' Dashboard on demographic change²

A comprehensive set of indicators was collected for each study region and the Netherlands as a whole. As noted by (INTERREG VIC and European Union, 2012) in the Declining, Ageing and Regional Transformation (DART) project: "...[a] prerequisite for analysis and evaluation of demographic change is first the supply of regionally differentiated information and data, for which regional benchmarking can be used" (p.22). The DART project produced an indicator set (see Annex 13), with the majority of these indicators having been collected as part of this study. The Dashboard presents sets of indicators in a simple pie chart based on three principles:

1. The size of a segment reflects the relative importance of the issue described by the indicator.
2. Colour codes signal relative performance, with green meaning "good" and red meaning "bad".
3. A central circle, the Policy Performance Index (PPI), summarises the information from the component indicators – in this case, it is called the *Demographic Change Index* (DCI).

The demographic change dashboard is an evolving tool designed to assess the performance levels of demographic transition at a local and regional scale between 2000 and 2010. The Dutch dashboard provides a comparison 'with and between' OECD member countries, EU27, the Netherlands, the case study regions – Groningen, Drenthe, Zeeland and Limburg with especially the subregions which are considered as shrinking regions in the Netherlands (Delfzijl en omgeving, Oost Groningen, Zeeuws Vlaanderen, Zuid Limburg). Thus, green indicates the region's performances are better (good), while red indicates its performance is behind or lower (bad) than the comparison regions.

The DCI (central circle) provides a summary performance index of the demographic change themes (Demography, Economy, Labour, and Skills and Education); the surrounding segments provide the overall summary of the performance of the each theme. Demography includes the population growth; age cohorts (0-14, 15-64, and 65+); life expectancy; birth and death rates; fertility rates; and infant mortality. Economy includes primary income of households; regional GDP; youth, elderly and economic dependency ratios. Labour includes employment rates (15-64, 15-24, 55-64 age cohorts) and unemployment rates (15-24, 55-64 age cohorts). Skills and education include students enrolled in education (percentage of population), students enrolled in tertiary education (percentage of students); tertiary education attainment (percentage of employment and labour force); and participation of adults in education (by gender).

¹ The Dashboard tool was developed by the Consultative Group of Sustainable Development Indices (CGSDI) - (<http://esl.jrc.it/envind/dashbrds.htm>). The demographic change dashboard has been developed in consultation with the CGSDI.

² The dashboard statistics are at NUT2 level, ideally it would have been preferable to obtain statistics at the NUT3 (local level)

In 2010, the Netherlands was out performing the EU27 and the OECD especially within the labour, and skills/education themes, while two study regions were average (Drenthe and, Zeeland) Groningen and Limburg were fair (Figures 75 and 76). Groningen in 2010 was significantly out-performing the other study regions in the skills and education theme and performing 'good' within the economy, while Drenthe was languishing in economy theme. The local area, was categorised between fair (Overig Groningen) with excellent rating in skills and education, average for the majority of the local areas and substandard results for Oost-Groningen, Delfzijl en omgeving and Zeeuwsch-Vlaanderen. The demographic dashboard confirms the negative demographic trends in the subregions which are defined as shrinking regions in the Netherlands: Delfzijl en omgeving, Oost Groningen, Zeeuws Vlaanderen and Zuid Limburg. However, it also shows they have a different character which makes them more or less resilient to these changes. Zuid Limburg has an average overall performance due to the presence of higher education in the region, although labour market performance on the other hand is weak. Zeeuws Vlaanderen has a relatively good labour market performance due to low unemployment rates.

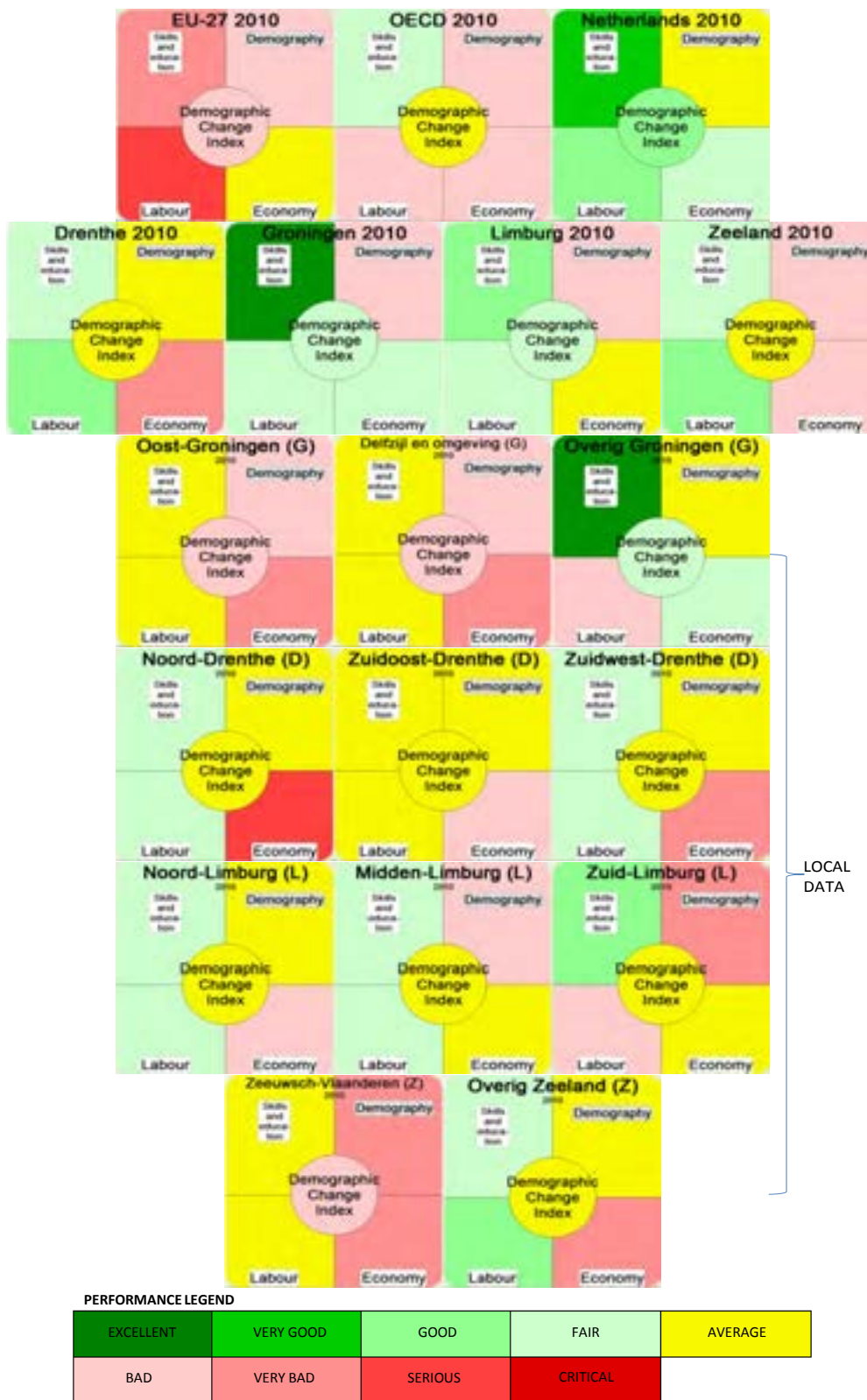


Figure 75 Demographic change index dashboard results for 2010³

³ See Annex 15 for notes

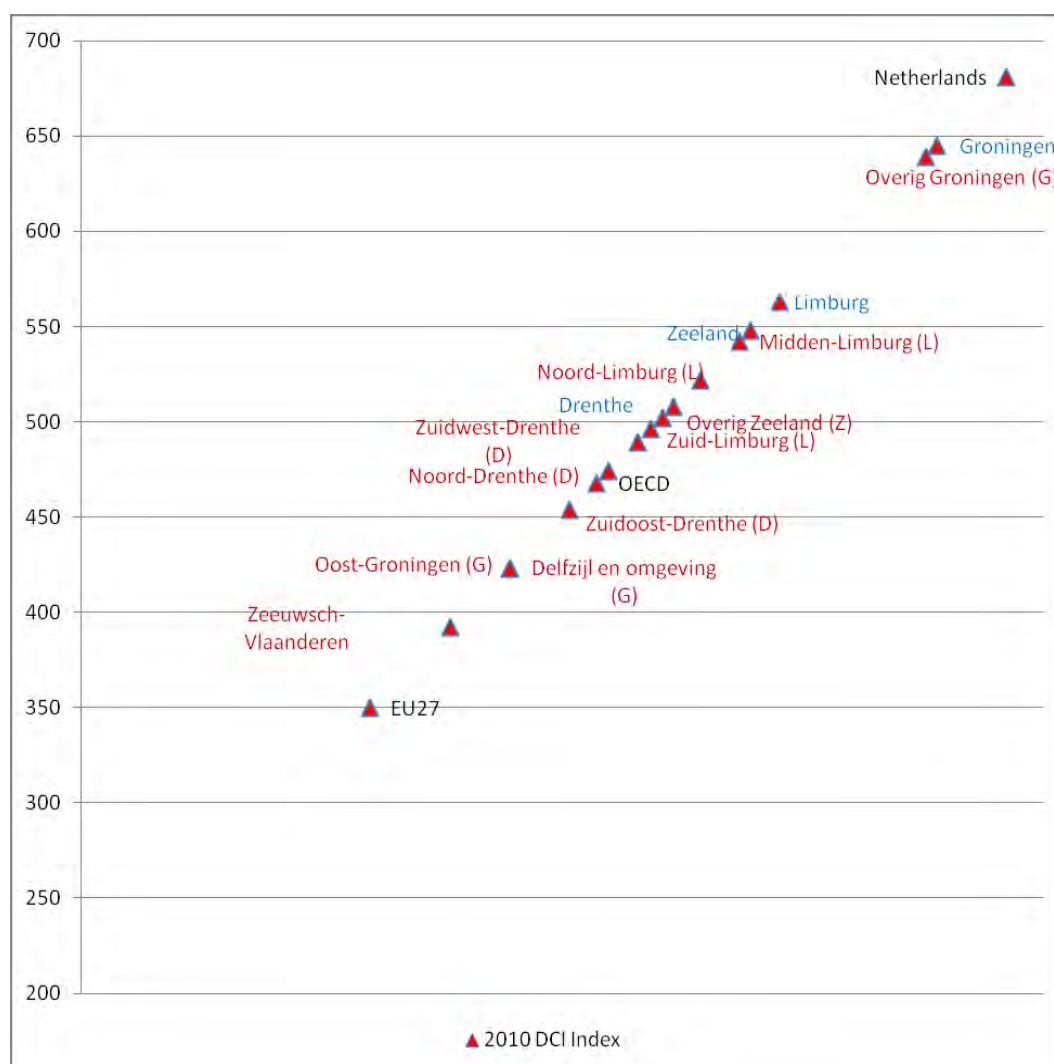


Figure 76 Demographic Change Index (points) for 2010

The following dashboard results illustrates the performance change or the current trend (trend from 2000-10). Surprisingly, the EU27 experienced an ‘over better’ performance change, while Drenthe, Limburg and Zeeland had are languishing, Groningen and the Netherlands only experienced an ‘average’ performance change (Figures 77 and 78 and Annex 16). Locally, all subregions are struggling with demographic transitions with Zeeuwsch-Vlaanderen and Noord-Drenthe experiencing challenging trends due to issues within the labour, skills and education, economy.

Most subregions which are not yet facing demographic decline have relatively weak performances on labour market, economy and education as compared to the rest of the Netherlands, like in the subregions of Drenthe, Noord and Midden Limburg and Overig Zeeland. This shows that they are particularly vulnerable for future demographic transitions. Trend data for 2000-2010 show that these areas are weakening substantially on these aspects, whereas some of the current shrinkage subregions show positive trends, like Delfzijl en omgeving. The dashboards clearly illustrate the differing social-economic contexts that that local areas experience and that local policy response is required. Detailed dashboard results are illustrated in Annex 15.

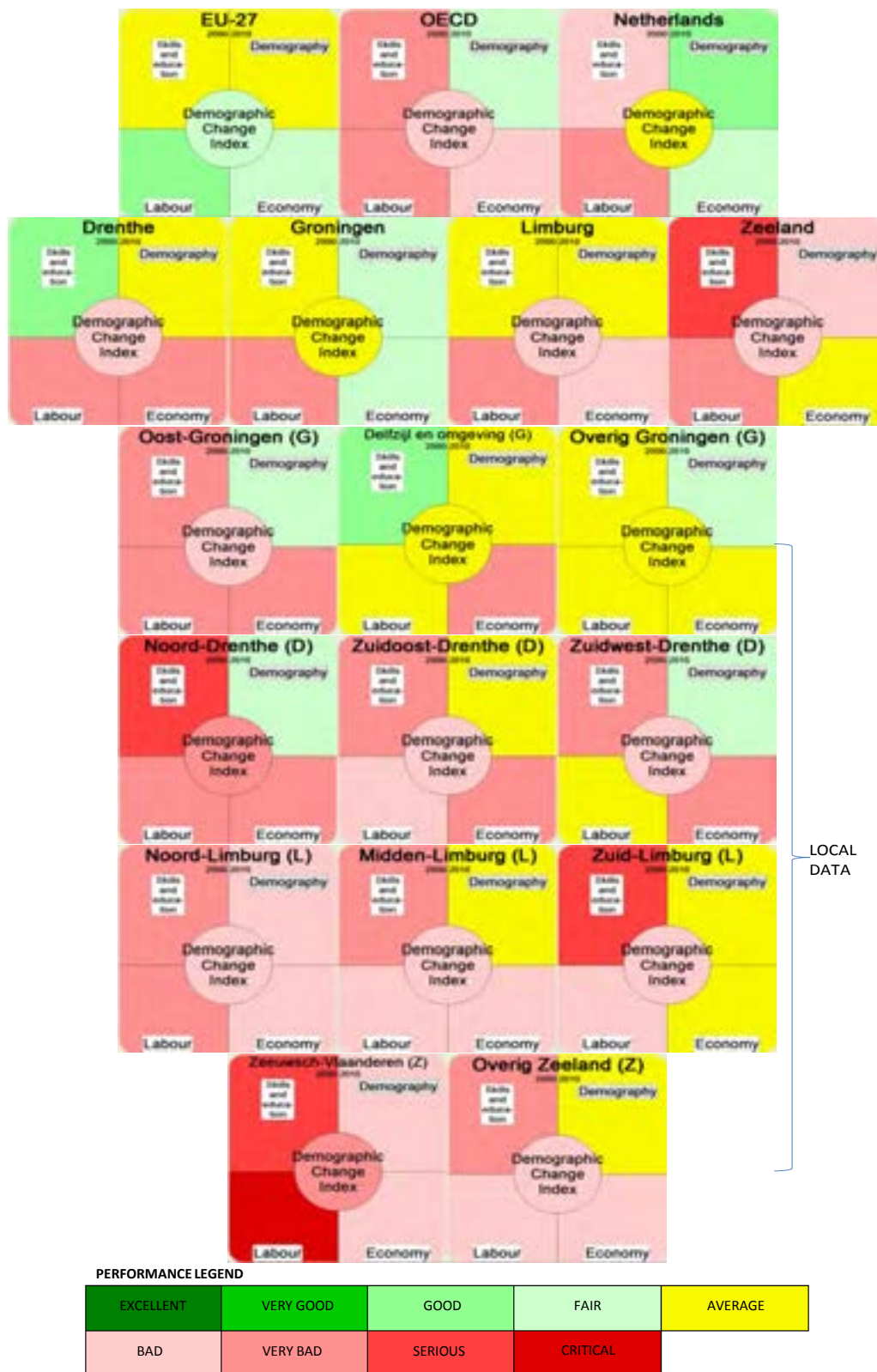


Figure 77 Demographic change index dashboard results for 'trend' from 2000-10⁴

⁴ See Annex 15 for notes

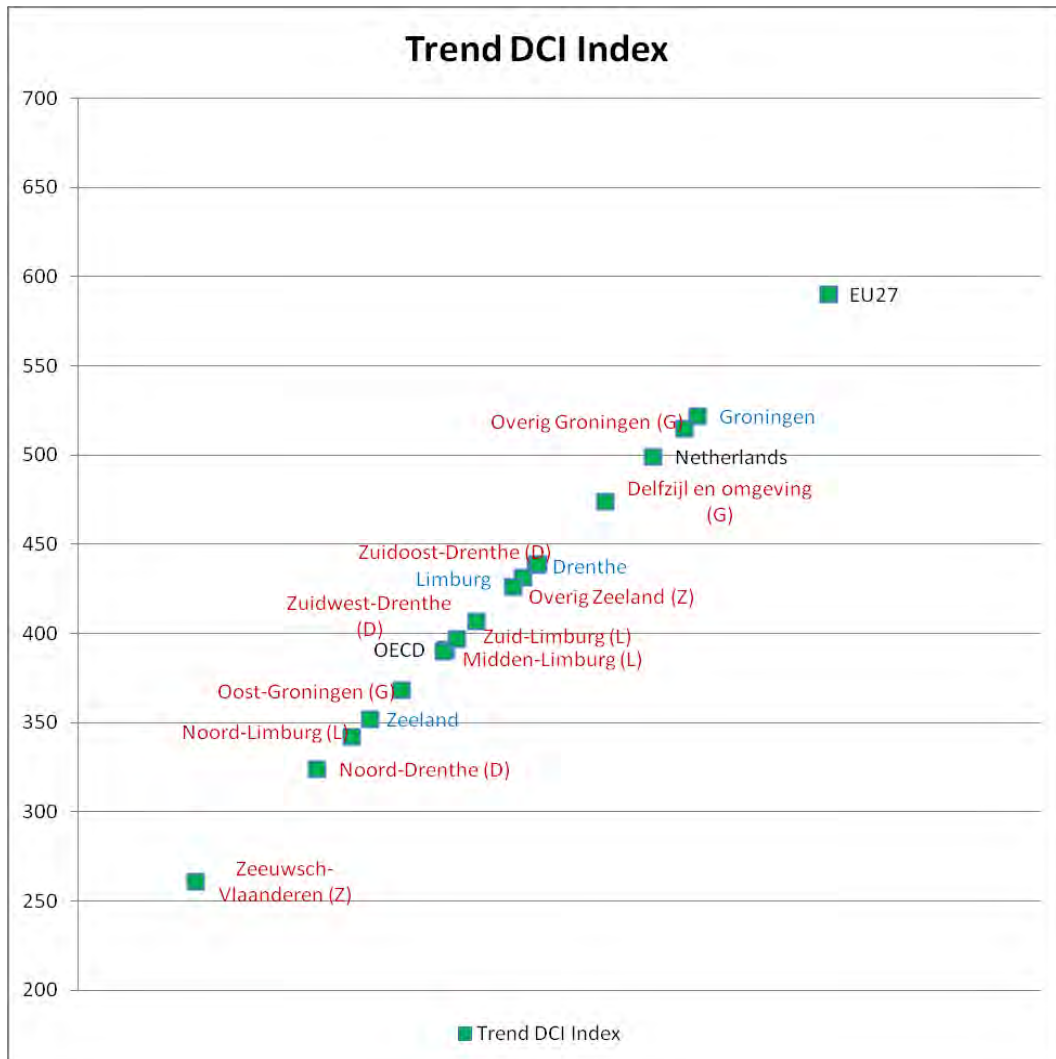


Figure 78 Trend from 2000-10 DCI points

6.2 Guidelines for local management of demographic changes

Demographic and economic decline is more likely to occur in peripheral regions with a mono-functional economic structure. Central urban regions with a diverse economic structure and/or regions with large sectors such as business services, industry or logistics, seem less vulnerable to demographic and economic decline. Territorial population decline and population ageing is and will continue to have social and economic consequences for national, regional and local labour markets. These include:

- *A decreasing potential labour force*, due to the declining numbers of youth and stagnating working age population, leading to a dwindling labour supply, a tight labour market and more competition over workers, or even labour shortages (Martinez-Fernandez et. al., 2012, Verwest, 2011, and Euwals et al., 2009).
- *A decrease of industrial activity and business vitality as firms relocate or reduce activities* from shrinking regions to growing regions because of labour market issues.
- *A decrease in the population* and the number of households implies a smaller local market and may lead to an oversupply of services and housing. Such a surplus in housing may in turn result in vacant properties.
- *Local services (e.g. infrastructure, transport, care) will become more expensive*, as demand in shrinking regions is expected to increase due to the ageing population, with a simultaneous decrease in labour supply (Verwest and van Dam, 2010) and eroded tax-base as population declines.
- *Skills ecosystems weaken* as the private sector and skilled labour force thin-out.

Strategic solutions must encompass both local and regional capacities to attract and generate jobs within the national and economic contexts.

Demographic changes such as localised population decline, population ageing and migration are key changes in the demography of the Netherlands and particularly in the study regions. A negative economic situation may increase outward migration. A decrease in the labour force may also lead to a decrease in job growth, together with an ageing population, which could prompt firms to leave shrinking areas and re-establish in growing regions. For localised shrinkage and population ageing, efforts should also focus on encouraging the existence of personal networks and personal attachment to the area, for example if a person has roots in the area, they might be willing to continue their life in the area and therefore relative less energy is required to attach them to the area (Musterd and Murie, 2010, and Musterd and Kovacs, 2013).

These differences in demographic situations require a territorial analysis so that regional and local perspectives on policy preparation, development and implementation are co-ordinated with national policy efforts. The need is for holistic, but customised solutions, which respond to the specific needs of the local labour market, individual firm or person, based on national/regional/local partnerships. The national-local axis requires systematic consideration for policy delivery.

Due to socio-economic differences, regional systemic and sustainable strategies should firstly be explored, then developed, implemented and reviewed, focusing on the key aspects that make the region unique. Essential measures for a strategic framework that provide the starting point and guidance for future projects and initiatives for each region include:

- *Developing regional networks for local action* in order to establish national and regional provincial policy support for demographic transition, and to raise the awareness of local authorities and businesses of the impact on the labour market and economy.

- *Strategies that are place-based and highly contingent on context* (instead of place neutral). These should consider economic, social, political and institutional diversity in order to maximise both the local and the aggregate potential for economic development.
- *A territorial approach* that takes into account the demographic diversity of shrinking and predicted potentially shrinking municipalities. Policies should anticipate and managed demographic decline rather than combat it (Martinez et. al., 2012). Municipalities, as well as the business community, should manage with less people; support people and families who want to stay; and provide a living environment that continues to appeal to existing (and potential new residents); in particular, those in the 20 to 65 age group, in order to maintain (and potentially) increase the labour force. Local communities should be made aware of not only the challenges, but also the opportunities inherent in local shrinkage, through education campaigns and raising awareness of innovative thinking and options (Box 22).

Box 22 Innovative awareness

‘Leve de Krimp!’⁵ is a methodology based on an alternate reality game. The game raises awareness of the effects of depopulation on the daily lives of inhabitants in shrinking regions. Current inhabitants are the most important stakeholders in shrinking regions. The game stimulates a sense of ownership and encourages people to start taking action. The methodology is based on current wins and potential options in shrinking areas with smart connections being made between streams, such as knowledge, energy, materials, services and money. This way the collective intelligence of the community in a shrinking region is mobilised and ideas arise that are supported from the bottom-up. This way, the quality of life within a shrinking region can be kept high – or even made higher – despite a quantitative decrease in inhabitants.

A pilot was implemented by the game developers in the Achterhoek, a region in the east of Holland, which is facing anticipated depopulation. In the pilot (played by three inhabitants during a week and a half), players imagined themselves living in the year 2039. The game created awareness of the effects of shrinkage and the players thus became motivated to create ideas and solutions.

“Let’s Shrink!” (‘Leve de Krimp!’) consists of a generic portion and a specific part. The generic part is the framework of the game, which can be applied to different regions that are experiencing depopulation and ageing. The specific portion is the option to shape the content of the game to match the culture, mentality and relevant themes within a shrinking region. For the next stage of the project, Studio Papaver has a partnership vision, in which a combination of partners with a strong interest in the generic portion of the game (such as ministries and European programmes), are combined with partners that have a strong interest in the specific part (such as local organisations and private parties). The next step would be to undertake a larger pilot and then fine-tune the game and play it for real.

Figure 79 illustrates three interconnected policy themes that are vital for regional labour markets attempting to manage a shrinking and ageing society: (1) intergenerational responses to labour market challenges; (2) co-operative local frameworks towards a dynamic and responsive labour market; and (3) place-based development strategies for resilient communities.

⁵ The title ‘Leve de Krimp!’ could be translated as ‘Let’s Shrink’, it has a positive tone to it. Most of the time the subject of depopulation and shrinkage is labeled as something very negative. ‘Leve de Krimp!’ focuses on an increase of quality parallel to a decrease of quantity.

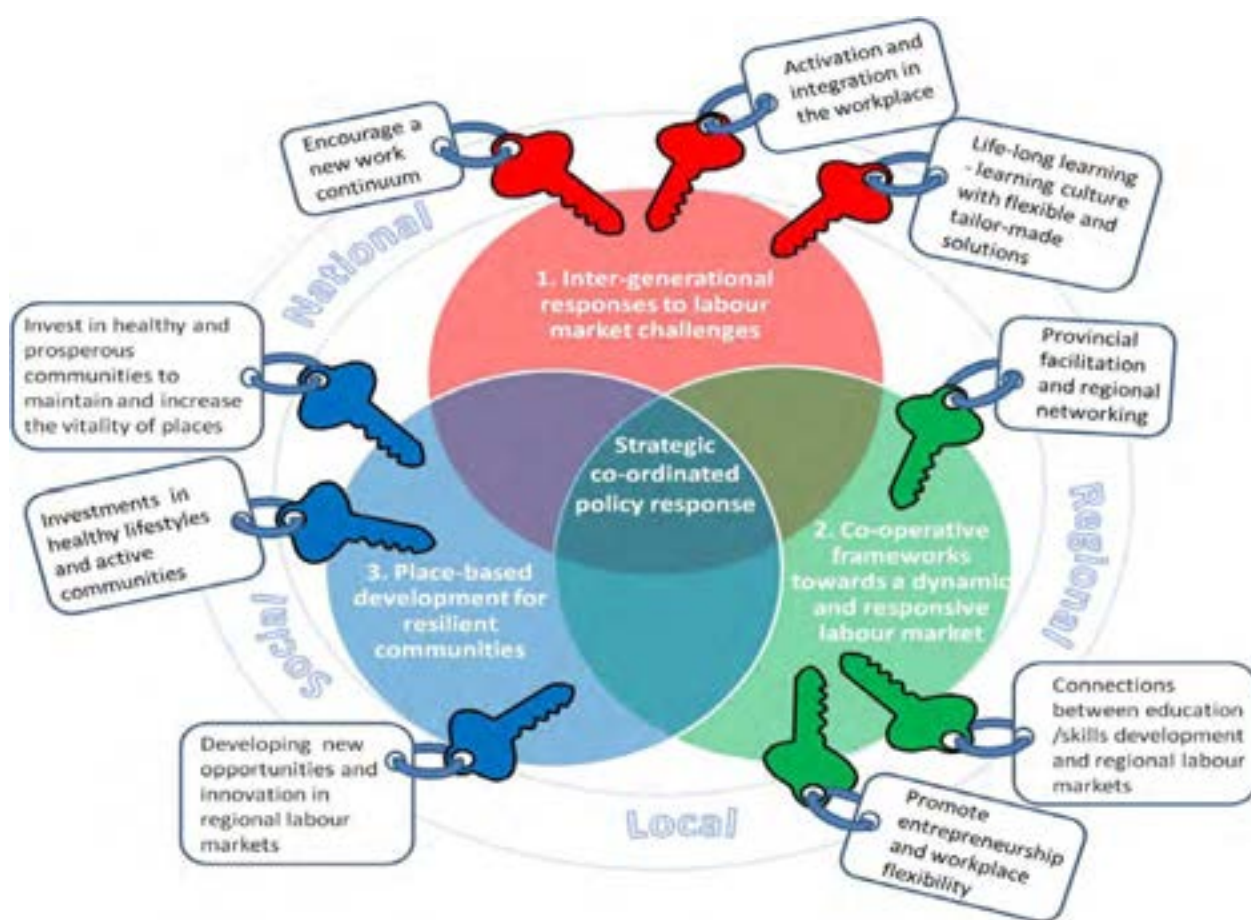


Figure 79 The Netherlands' demographic transition strategic areas

Source: author, 2013

These areas of strategic policy development are now discussed in turn.

6.2.1. Develop inter-generational responses to labour market challenges

There is a tendency for older workers to retire relatively early, either due to attainment of retirement age or a preference to stop working. The Dutch government is in the process of raising the retirement age to 66 by 2018 and to 67 by 2021 (VVD and PvdA, 2012). Although this will increase labour participation among the older age cohorts, it will not fully compensate for the expected decline in the potential labour force (Commissie Bakker, 2008, Verwest, 2011, Euwals et. al, 2009, Verwest and van Dam, 2010, EPSON and NIDI, 2010). Nevertheless, the raising of the retirement age will place less pressure on national old age entitlements and encourage longer and more active working lifestyles. Another reason that older workers leave the workplace is the increasing competition from younger and better educated persons; the widespread use of technology; and unsupportive work cultures and behaviours. Encouraging companies to implement age management practices, such as flexible working hours, opportunities for older workers to update their skills, and better health and/or safety programmes would encourage older workers to stay within the working environment, Boxes 23, 24 and 25 provide some good examples. Examples of specific measures are:

- a. *Encourage a new work continuum ranging from full-time to part-time within employment options for companies, governments and other sectors to extend the length and variety of and engagement in working-life; leading to longer employment and increased productivity for people across all sectors. This will extend the working age while allowing people to meet the requirements of family, community and other engagements that in turn improve personal, family and community health. Inter-generational engagement in changing working conditions needs to also be taken into account.*

Box 23 Facilitating work after retirement

Governments can play a role here by shaping labour markets, equal opportunity and social protection policies as well as tax and benefit systems. For example, in Sweden, employers are exempt from payroll taxes for all employees over the age of 65. A pilot scheme in Italy offered workers who were about to retire the possibility to postpone retirement by three years, and add employer and employee social security contributions to their income.

Companies can also play a role, with measures aimed at attracting and retaining pensioners. Examples include the Ship Design and Research Centre in Poland, where 7% of its employees are retirees. Most of these people work in areas in which they hold expertise that the company does not want to lose. As pensions in Poland can be low in comparison to the increasing cost of living, work has become a necessity for many, even for the relatively well-off. A recent national law, however, requires pensioners to resign and re-apply for their jobs to continue receiving a pension in addition to their working income. For some this might mean the end of their employment.

Some companies also specifically recruit older workers. One example is Seniorjobbarna in Sweden, which conducts agency work in areas such as crafts, cleaning and gardening. Another is the Austrian Senior Expert Pool, which provides consultancy services, mainly in management or in highly specialised technical areas. In both cases, the option of working part-time and with flexible working hours was considered crucial in attracting and retaining retirees.

Source: European Foundation for the Improvement of Living and Working Conditions (2011)

The Senior Enterprise project⁶ aims to raise awareness about how the over 50s can engage with enterprise and the benefits that can flow from that engagement. This could be through starting a business, alone or with others; acquiring or investing in a business; advising an entrepreneur; or supporting innovation within a business owned by another.

The four-year project (2010-14) is a response to the challenge of ageing populations in Europe. The change in demographics is viewed in an almost entirely negative light by many people, but the promoters of Senior Enterprise believe that the over 50 age group is a source of untapped potential that could be used to drive forward Europe's national economies.

It is intended that as a result of Senior Enterprise, more businesses will have been started, more investment will have been made and more senior citizens will be active as advisors in new and developing businesses. The project is being implemented by partners in Ireland, the UK and France, and nine observers across north-western Europe.

PATRON Project⁷

This Grundtvig project identifies and tests ways to transfer skills that senior managers and entrepreneurs have developed in their working lives which have helped them to develop their creativity, competitiveness, management and entrepreneurial capacities. Young entrepreneurs and managers benefit from this skills transfer in the participating countries and regions. The methods and results are disseminated through the project's website, so these can be used in other participating regions.

For details: <http://www.patronproject.org>.

⁶ <http://europa.eu/ey2012/ey2012main.jsp?catId=975&langId=en&mode=initDetail&initiativeId=785&initLangId=en>

⁷ <http://www.age-platform.eu/en/age-policy-work/solidarity-between-generations/best-practices/985-employment>

- b. Identify and implement programmes to re-position workers (older and younger) who are un-(or under) employed, especially lower skilled workers, in a concerted effort to encourage their activation and integration into the workplace (job carving⁸) and to connect older and younger workers in the workplace. Incentives for staying in work after age 60, as well as social security systems designed to promote working late in life need to be developed, including creating new roles within companies for workers in their later life.*

Box 24 Examples of strategies for activation and integration into the workplace

Older Workers

In Germany, *Perspective 50 Plus – Employment* – Employment Pacts for Older Workers in the Regions, is part of the *Initiative 50 Plus* programme under the German Federal Ministry of Labour and Social Affairs⁹. A programme of regional employment pacts was launched to initiate and evaluate new strategies targeting older workers. Those supported are predominantly among the low- or semi-skilled long-term unemployed. Jobcentres and local authorities find the activation and integration of older workers particularly difficult and these regional employment pacts aim to involve all appropriate regional and local actors to ensure more and better employment for this group. This form of regional co-operation takes a cross-sector approach including: the labour market; employment; social and health policies. Regional pacts have deployed a wide range of different tools and instruments, including profiling, assessments, special training measures, internships in companies, placement activities (adapted to the special needs of the target group), wage subsidies for employers, time management, and publicity campaigns to raise awareness of the challenges of demographic change.

Job Carving

Canada's WORKink®¹⁰ is an online career development and employment portal for persons with disabilities, however, it can be applied to persons who are unemployed or lower skilled. The portal describes the values of 'Job Carving' (or creating roles), thus 'structuring one or more jobs to make the best use of all employees' skills and abilities'. To implement successful job carving practices it is important to consider:

- Changes in supervision requirements, such as more frequent instructions and guidance.
- Alternative methods of conveying job instructions and adding new tasks.
- Co-worker involvement and support.
- Involvement of a community agency that works with employers to define roles, assist in training employees and ironing out some of the initial details.
- Job or work experience with defined time parameters.
- Staying positive. Being prepared to deal with some co-workers' negative perceptions about "make work" projects and short-term limited opportunities.

Centrica: Age management policy (UK)¹¹

Centrica, a large-scale UK gas supplier, is attempting to encourage age diversity among its labour force by setting up various measures such as the Age Action Group, which brings together the managers of various sections to see how they as a group can best meet the needs of their ageing work force. With this in mind, they have developed an awareness-raising programme on age management with flexible working conditions, a network of staff members with family obligations, teams of different ages and potential for mentoring. They feel that the age mix helps staff members in these groups with different ages to be mutually enriched.

⁸ Job carving is a term for customising job duties, such as to create specialist job roles therefore freeing up time of specialist staff, or to swap job duties to make the most of individual skills (<http://base-uk.org/employers-recruitment-jobcarving>)

⁹ <http://www.forumpartnerships.zsi.at/attach/germany2.pdf>

¹⁰ WORKink® <http://www.workink.com/articles.php?prID=2&pgID=8&art=1191>

¹¹ <http://www.age-platform.eu/en/age-policy-work/solidarity-between-generations/best-practices/985-employment>

- c. *Foster life-long learning to stimulate competitiveness, because economies now depend on value that is added from the entire workforce. Regional firms need to invest in and improve their learning culture, with flexible and tailor-made training and skills development programmes, not only for new employees, but also for the older workforce. These programmes will promote intergenerational workforce skill linkages, such as master-apprentice relationships. To increase entrepreneurship or self-employment, educational programmes and business coaching should be promoted wherein the skills of older people are transferred into new opportunities.*

Box 25 Examples of life-long learning

Genial - Generations at the workplace (Austria)¹²

Demographic change will require enterprises to take more social responsibility and to open up the resources of older employees to stay in the market, and it will require employees to invest in their abilities, in their competences, and in their health. The Genial project of the Provincial government supports these needs by assisting employees to develop their work-life balance in order to maintain their health, but also tries to elicit more individual responsibility for life-long learning through to an advanced age, to stay open-minded about new technologies, and to achieve a different attitude towards ageing.

Genial is based on three pillars:

- *Public relations* and awareness raising.
- *Specific projects* realised in companies.
- *Network building* to exchange experiences and develop new measures and instruments to support the process.

The project also enables enterprises to better understand and deal with the human capital they can generate, while enhancing the work experiences of older employees. The portfolio of activities is comprised of specific ageing analyses, work ability indices, specific support for putting concrete activities in place, and more.¹³

Within the framework of the project, the 'Qualification Association Genial'¹⁴ was founded, offering qualifications in health and work-ability issues, seminars for managers (e.g. on modern, more motivationally oriented leadership), and content related issues. Currently, the Qualification Association Genial has 7 member companies and delivered 20 measures to approximately 230 people from March to July 2012.

Intelligent personnel management for logistics (IPL)

The pilot project IPL, funded by the Ministry of Labour, Social Integration and Welfare in North Rhine-Westphalia and the European Social Fund, focuses on improving human resource management. Approaches to implementing life-long learning as a component of demographically sensitive human resources work were generated from the results of the IPL project:

- Promoting vocational education and training
 - Additional training for people with immigrant backgrounds
 - Part-time training
 - Dual higher education study programmes in logistics.

¹² Förschner, M., Partnership strategies for demographic change and ageing: Lessons learnt from a Study Visit to the Province of Carinthia, Austria, in October 2012, OECD/LEED

¹³ Genial: <http://www.genial.or.at>

¹⁴ Qualification Associations are instruments of active labour market policy whereby one or more large companies together with a number of smaller companies within a region engage in common qualification measures for their staff. Often companies within the same field and geographical area have the same needs regarding qualification, but it is too complicated and expensive for single organisations to go alone. Qualifications Associations are supported by the AMS and the ESF, and receive higher funding if they offer measures for older workers.

- Further qualification of older workers in warehouse management and professional driving.
- Mixed-aged teams – designed to retain the knowledge and experience of older workers within companies, to foster intergenerational learning, and to prevent the development of age-specific stigmas among employees.
- On-the-job training.
- Job rotation schemes and mixed work.
- Employee discussions on specific topics.

Source: CEDEFOP (2012)

CVET, Germany¹⁵

German citizens also participate in CVET, which includes among other areas, re-training, qualification upgrades, second-chance opportunities for adults to complete school leaving certificates, university entrance preparation, specialist training, foreign languages instruction, and political education. CVET in Germany includes further in-house training which is not regulated, and further training that is regulated by the chamber (for example, the achievement of Meister and specialist or technician-level qualifications). These qualifications and programs are also associated with federal regulations for further training. However, state governments also play a role in supporting continuing education that leads to qualifications. A constituent element of the institutionalised system of CVET is provider plurality⁵. This diversity of providers of CVET coincides with a variety of activities offered which cover a very large spectrum both in terms of content and in terms of organisation and methodology.

6.2.2. Strengthen national-local alignment and co-operation frameworks towards a dynamic and responsive labour market

Central governments are no longer the sole provider of territorial policies. Shrinking areas require a coherent policy response from national and local governments to maintain existing jobs, generate new employment, and protect vulnerable households. National, regional and local levels of government need to align their various strategies in order to develop a consistent direction to meet development objectives, leverage economies of scale, and reap the dividends of joint initiatives that share knowledge and reduce operational overheads. Improving the policy coherence between national and local levels of government (vertically) and co-ordination across different ministries (horizontally) can significantly increase the effectiveness of programme delivery and the quality of services provided. The interests of the national and local governments may not always be harmonised. National considerations, such as increased gross domestic product or improved foreign exchange flows, may not always mesh with local government's concerns, such as local job creation, infrastructure development and social protection programmes. National and local governments need to harmonise development objectives (e.g. enhanced rural access) to avoid redundant programmes and heighten the effectiveness of programmes occupying shared geographic and technical space (e.g. environment). Box 26 outlines opportunities and challenges for effective harmonisation of national-local strategies. While identification of conflicting national-local objectives (e.g. the planning of rural roads for extractive industries rather than for improving market access of remote rural producers) can result in a national-local dialogue that can lead to the development of an innovative win-win situation (OECD, 2011a).

¹⁵ <http://www.eqavet.eu/gns/what-we-do/implementing-the-framework/germany.aspx>

Box 26 Opportunities and challenges for effective harmonisation of national-local strategies

There are significant *opportunities* for local strategies to play a deciding factor in the success of national social and economic programmes. The core advantages of including a local dimension into a national strategy are manifold. Key gains are:

- greater flexibility to changing local opportunities and challenges;
- improved utilisation of scarce resources through better targeting;
- greater support for longer term, national strategic plans through leveraging quick wins.

The harmonisation of national-local strategies and inter-ministerial co-operation can yield significant efficiency dividends. A successful alignment and division of roles hinges, naturally, on the effective degree of decentralisation. Several *challenges* may impede government synchronisation and policy alignment:

- local government's priorities do not coincide with national priorities;
- lack of experienced local managers or technical experts to address new local mandates;
- limited local financial space that restricts local government's ability to mobilise resources for their initiatives.

Source: OECD (2011a)

Examples of specific measures are:

- d. Encourage horizontal integration and vertical alignment of policies by promoting co-operative frameworks and regional co-ordinated approaches, such as territorial employment pacts (Box 27), which are innovation networks that provide an institutional framework and commitment for regional networks targeting employment strategies.*

Box 27 Territorial Employment Pacts

The Employment Pacts were initiated in 1997 by the European Commission, with a call for submission of projects under a 'territorial employment pacts' initiative to improve the employment situation. The local pacts for employment are formed as multi-level partnerships between entities of key significance for local labour markets. Local governments can play a leadership role in elaborating strategies for active intervention on the local labour market together with local partners. Barcelona Employment Pact, and Austria Employment Pacts exemplify the different dimensions of the governance arrangements for employment (often supported by the structural funds).

Territorial Employment Pact in Vienna

The Employment Pact in Vienna began its formal co-operation in 1999 and is a partnership between the Municipality of Vienna, the Public Employment Service, the Wiener ArbeitnehmerInnen Förderungsfonds - WAFF (Vienna Fund for the Promotion of Employees), Federal Social Welfare Office – Vienna Regional Office, interest representations of employers and employees (working group of the federal province). The objective is to support economic development and the development of employment policies of Greater Vienna with forward-looking, concentrated labour market interventions. The core function of the Pact is to co-ordinate co-operation and to harmonise the strategic and operative labour market and employment policies in Vienna. Its functions are facilitation of co-ordination, collaboration and co-decision in order to improve employment. These activities are based on joint programme development and on financial co-ordination of the three key partners: Vienna Fund for the Promotion of Employees; Public Employment Service; and Federal Social Welfare Office. The Pact has two special focus areas: youth, who require support in the transition from school to training, and people at a risk of being permanently excluded from professional life. The labour market and employment policies are linked to other policy areas (social, economic, education). The Pact has a trans-national cooperation project with Bratislava.

Barcelona Employment Pact

The Barcelona Employment Pact is a partnership agreement among the City Council of Barcelona, Comissions Obreres (Trade Union) of Barcelonès, the UGT (Trade Union) of Catalonia, Foment del Treball (The Department for the promotion of Work), PIMEC (the organisation for promoting SMEs) and the Government of Catalonia, which defines and agrees the framework and priorities for developing active employment and local development policies in the capital of Catalonia. It constitutes a long trajectory of social co-ordination in the city of Barcelona as manifested in previous Agreements for Employment of Barcelona signed in 1997, 2001, and 2003.

The aim of the agreement is to promote a quality and inclusive labour market, with a high level of productivity and one that generates professional opportunities for everyone. The agreement is committed to the economic growth of the city of Barcelona that incorporates more added value and innovation and that allows the reaching of high levels of competitiveness, welfare and social and territorial cohesion. Effectiveness of the strategy relies on the commitment and inclusiveness of the partnership.

Source: OECD (2011b) and Martinez-Fernandez et al. (2011)

With the population ageing, inactivity of older age groups will increase the strain on social security and pension systems. According to the EU and OECD (2012), “few older people are involved in entrepreneurship, particularly women, and their enterprises tend to be less growth oriented than firms of younger entrepreneurs. [However] ... there is a growing population of healthy older people with the skills, financial resources and time available to contribute to economic activity through extending their working lives, including through entrepreneurship”. According to a 2009 Eurobarometer Survey on entrepreneurship, 68.2% of prime aged (20-49 years) persons never thought about starting a business, while this figure jumped to 86.2% of older persons (50-64 years). While 14.6% of prime aged persons were thinking about starting a business, this dropped significantly to only 3.6% of older persons. 17.3% of prime aged persons, and 10.3% of older persons are involved in early stage start-up activities. Therefore, “.... the older an individual gets, the less likely they are to take action on their entrepreneurial intention because they have less time left to enjoy the benefits that the business generates. This suggests that the bulk of those seriously considering starting a business has already taken action and that policy should focus on increasing interest and awareness about entrepreneurship in the third-age before people get there.” (OECD, 2011b).

- e. *Promote entrepreneurship and workplace flexibility by designing strategies for new work-ecologies incubators, entrepreneurship education, skills development in SMEs and the development of senior entrepreneurs (Box 28).*

Box 28 Senior Entrepreneurship – policy focus examples

The policy focus should be on the factors that influence an older person's decision to enter self-employment:

Promote the benefits of entrepreneurship

The Grundtvig project supports several initiatives on active learning by adults, including 'Superact'. This is a project funded by the European Regional Fund INTERREG and promotes personal stories about older entrepreneurs with disadvantaged backgrounds in order to promote entrepreneurship to other older entrepreneurs with non-mainstream backgrounds.¹⁶

Improve entrepreneurship skills with training

Example - the Business and Innovation Centre in Slovakia. This private organisation serves older people and supports the creation of business start-ups with advice, education and start-up financing¹⁷. The "fe:female" scheme is an EU-wide network in the UK, Cyprus¹⁸, Netherlands, Italy and Malta that provides assistance to female entrepreneurs, particularly those over 50, ethnic minorities, lone parents or long-term unemployed. The "fe:female" network provides training, advice and mentorship by other female entrepreneurs to help participants develop entrepreneurship skills so that they can start businesses. The website also aims to provide a virtual support network and information source for participants.

Develop and support networks

The United States has had an entrepreneurship scheme for decades. Starting as the Service Corps of Retired Executives, now simply known as SCORE, the scheme was launched to provide business advice to former military officers. The scheme has grown and serves currently the wider population. Certain groups are targeted, such as people over 50, but the services are not tailored for different segments of the population. SCORE helps entrepreneurs find mentors through an online database and can help facilitate face-to-face mentorships. It provides training and workshops through local associations and actively seeks older entrepreneurs to serve as volunteers to provide mentoring services, and to deliver workshops and training.

Improve access to finance

The Mature Entrepreneur project in Poland is another example. This scheme aims to support entrepreneurship among those over the age of 50 to help them remain in, or re-enter, the labour market through self-employment. Participants receive grants of up to 40 000 PLN to help them start a business, and also receive training and business advice. The unique aspect of this project is that the employment office made a television series about the project participants to help promote entrepreneurship among older people.¹⁹

Ensure there are no disincentives for entrepreneurship in social support systems. Sweden has recently undertaken new policy actions to reduce sick leave contributions for all self-employed workers and guarantee them covered leave for seven days (European Commission, 2010). This makes self-employment more attractive for older people because the insurance costs less and there is a guaranteed minimum coverage.

Source: OECD (2011b)

¹⁶ More information is available online [http:// www.europe-education-formation.fr/grundtvig.php](http://www.europe-education-formation.fr/grundtvig.php)

¹⁷ More information is available online <http://bic.sk/index.php?lang=en>.

¹⁸ *The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of United Nations, Turkey shall preserve its position concerning the "Cyprus" issue.*

¹⁹ More information on the scheme is available at: www.pup.gda.pl.

Regional labour markets require a skilled workforce. A decrease in the potential labour force does not automatically result in lower unemployment, but simply a greater mismatch between labour supply and demand (Verwest and van Dam, 2010; Verwest, 2011, Euwals et. al, 2009). Labour shortages for any particular sector are not only the result of demographic changes but also educational and career choices made by young people (Verwest and van Dam, 2010; and SER, 2011). Education should be aimed at encouraging student participation and linkages within the regional economy. There is a need to stimulate businesses and knowledge institutes to develop joint educational programmes (Verwest and van Dam, 2010), so that the competencies of the available labour force better match current and future labour requirements. Developing widely available valid and reliable information, and career counselling to guide occupational choices are also needed, such as the entrepreneurship summer school²⁰. To enable this free flow of information there is a need for better co-operation between employers, educational institutes, trade unions and local authorities. Universities should adjust their learning programmes to meet the regional needs of the economy, increase international student attendance, and encourage a family friendly environment.

- f. Promote targeted and better connections between education and skills development and regional labour markets (local skills ecosystem) for job preparation and creation. Re-orient Vocational Education and Training organisations to new skills ecologies (Box 29).*

Box 29 Examples of better education and labour market connections

OECD Skill Strategy: Good practice in designing local skills strategies

OECD analysis shows that the most effective local skills strategies integrate human resource and training policies into wider economic development strategies, so that the focus is not only on how skills can be developed, but also how they can be deployed. Designing such an approach means looking beyond immediate skills shortages and understanding how investment in human resources can help capitalise on local comparative advantage, and local employment sectors, and capture new opportunities from global and national trends. It also means looking at how the public sector can help support existing skills 'ecosystems', self-sustaining concentrations of workforce skills and knowledge in an industry or a region, through public funded training and knowledge transfer. Such strategies involve not just education and training institutions but a wider range of stakeholders, including firms, employer associations, economic-development agencies, employment agencies, trade unions, and non-profit organisations that can work together to develop skills and training ecosystems. Competent brokers or facilitators who are capable of working across the private and public sectors are also of key importance.

Nordrhein-Westfalen, Germany

At Nordrhein-Westfalen in Germany, support is provided for education and training that are aimed at enhancing human capital, which is seen as being fundamental to broad-based development, particularly in the context of demographic decline and workforce ageing. Nordrhein-Westfalen's sub-regions are developing plans aimed at providing broad support for education and training that extend from pre-school to university. The 'Gemeinschaftsaufgabe zur Verbesserung der regionalen Wirtschaftsstruktur' (GA) in Nordrhein-Westfalen is used to fund technical equipment in vocational training schools and training institutes. Land Ministries are working together to co-ordinate or reorient existing funding streams towards common goals.

²⁰ <http://www.london.edu/programmes/executiveeducation/entrepreneurshipsummerschool.html>

Dual System IVET, Germany²¹

The Dual System takes place in vocational schools and companies and it is a way of preparing young people for the occupation they will pursue in the future and integrating them in society (duration: usually 3 years). Every young person who has completed full-time compulsory education has access to dual vocational training. Students may undertake a year of basic vocational education which can be used in the second year of the dual system of training. The vocational school is an autonomous place of learning. Its task is to provide basic and specialised vocational training and to extend previously acquired general education. Training in the part-time vocational school provides the underpinning knowledge (theory) and technical skills (for example, operation planning, technology, technical drawing, technical mathematics, business studies) to support the training provided in the company. The vocational schools must provide at least 12 hours' teaching a week, normally eight hours for vocational subjects and four hours to general subjects such as German language and literature, mathematics, economics or other social sciences, religion and sport. A particular characteristic of this training path is its two places of learning: the company and the vocational training school. The dual system provides broad basic vocational training and competences for some 350 recognized occupations. Successful completion provides recognition for employment as a qualified skilled employee. The companies sign contracts with applicants under private law and train them in line with the binding provisions of the vocational training directives which guarantee a national standard. The apprentice is trained in an enterprise for three to four days a week and in the vocational school for up to two days a week. This is monitored by the competent bodies, for example, professional associations as autonomous administrative bodies in industry.

Zorgacademie Limburg

The *Zorgacademie* Limburg is a collaborative effort of schools, employers and municipalities in the province of Limburg. The three parties, supported by the province of Limburg, recognise that only through collaboration can a better quality of schooling and qualifications of workers in the care sector be achieved. It provides better schooling for starters, but also training for workers, as well as re-introductory courses for former workers and people switching jobs within the sector. It also supports a vacancy database for job seekers. The initiative has been quite successful in matching demand and supply in the province. The initiative won the prize for best practice in the DART (Declining Ageing and Regional Transformation) project, an initiative of European declining regions. The idea is applicable in other regions and other sectors as well.

Source: OECD (2011c) and OECD (2013)

6.2.3. Invest in place-based development and foster resilient communities

Demographic change on national, regional and local scales have important impacts on the labour market, including an ageing workforce, labour shortages and skills gaps, but also by providing opportunities in the 'silver economy' (the ecosystem of services for the older customer). The growing demand for labour intensive personal services is not able to be managed at the national level by increasing the supply of adequate labour. This applies even more forcefully to regional markets: the relatively large increases in personal and health services in declining and ageing regions have to be met by adjustments in the local and regional labour market. Promoting workforce mobility, flexibility and cross-border collaboration will help support local businesses and economies and will stimulate key economic sectors and encourage entrepreneurship and business opportunities. Places have value and social capital as well as a 'right to survive' and investment in life-style infrastructure can contribute to increasing its resilience.

²¹ <http://www.eqavet.eu/gns/what-we-do/implementing-the-framework/germany.aspx>

- g. *Develop new opportunities and innovation in regional/local labour markets, targeting new sources of growth (Box 30) such as cross-border programmes, workforce mobility, clustering²², new economic growth areas in health and silver work ecologies, entrepreneurship and business opportunities.*

Box 30 New sources of growth

EURES partnership Odra-Oder between the Polish and Germans

The partnership operates, inter alia, in the West Pomerania Region and it is co-ordinated by the Labour Office in Szczecin, and includes participation by the Labour Offices in Swinoujście, Police and Gryfino. On the German side, it is co-ordinated by Neubrandenburg Labour Agency and encompasses also Pasewalk and Stralsund Labour Agencies. The main services of the Odra-Oder Partnerships cover vocational and language training and courses, study visits, workshops, meetings regarding specific business branches, employment opportunities, meetings with Polish and German employers and also initiation of job fairs in the cities of West Pomerania Region. Such job fairs take place on bi-annual and annual bases and are organised in the different areas, such as Szczecin, Police, Świnoujście. Although an official EURES partnership does not exist in the border area, the exchange of job offers through EURES advisors is developing and seems to be the most promising and practical measure for fostering cross-border mobility. There is a weekly and ad hoc consultancy point for cross-border works organised at the Szczecin Federal Labour Office and run by EURES advisors from the Labour Agencies of Neubrandenburg, Stralsund and Pasewalk. The consultation service was well-accepted by Polish job-seekers. In May 2011, there were approximately 60 consultations performed per day; at present there are about 20 daily. Also, the issues that are discussed have changed; there are now more questions on legal and social issues than previously.

The *Euro Region Pomerania* forum is composed of partners essentially at the municipal level, with rural and urban districts from Mecklenburg-Vorpommern, West Pomeranian Region and the Swedish region of Skåne. Euro Region Pomerania is an important partner, which is closely connected with the implementation of the INTERREG cross-border co-operation programmes. Some of the most promising projects in the context of fostering cross-border mobility are:

- The establishment of six Service-Advisory Centres in the cities located in the hinterland of West Pomerania (Karlino, Dębno, Koszalin, Myślibórz and Szczecin) also on the German side in Greifswald, Neubrandenburg and Schwedt. The main activities concern promotion of the business environment in the Polish-German border area in order to strengthen the activities of small and medium-sized enterprises, informing them about requirements and conditions for running their own businesses; also training for successful and potential entrepreneurs in the regions, supplemented by cultural and educational issues.
- The establishment of two Contact-Advisory Offices, the first of which was in Loeknitz in 2009, and the second of which was set up in Szczecin in 2011. Their roles include provision of information to Polish and German inhabitants about social, tax and working conditions in local Polish and German communities; assistance with finding accommodation; provision of contacts with relevant authorities; organisation of language courses; and social and cultural integration matters in cross-border areas.

Source: South Baltic Professionals and European Union (2012)

²² Clusters are geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related sectors and related institutions (eg, universities, R&D institutions, trade associations etc.) in fields that compete but also co-operate (Porter, 1998).

Copenhagen Cleantech Cluster

Copenhagen Cleantech Cluster (CCC) in Denmark aims to secure continuous growth for existing cleantech companies; to support and assist new cleantech companies; and to attract more foreign cleantech companies to the city. Together with partners and members, CCC develops projects and initiatives that create new business opportunities. The CCC activities include:

- 1) The 12 partners provide a range of **services** free-of-charge that address concrete demands identified by Danish stakeholders. The services are concentrated around four categories: Testing & Demonstration; International Branding & Marketing; Matchmaking and Innovation; & Entrepreneurship.
- 2) The CCC develops new **strategic initiatives** that translate into business opportunities for their members. The CCC innovation platforms facilitate new and innovative solutions that address some of the most important challenges in society, and their projects and networks enable them to develop and scale new solutions locally and bring Danish solutions to the world market.

Source: OECD (2012c) and Copenhagen Cleantech Cluster (2013)

Silver economy

A recognition of the benefits of the 'silver economy' in terms of products and services for older people and in terms of employment opportunities for health care workers and others led the Teutoburger Wald region in Germany to initiate an association to promote age-adequate housing, an initiative of craftsmen that offered services to convert apartments and houses for older residents and tourism and wellness services for older people. Twenty-five partners in the region also worked together to develop specific tourism services for older people. Partners were hotels and guesthouses, wellbeing providers, and recreational and tourist information agencies. 'Silver economy' was a co-operative project funded by the North-Rhine-Westfalian Ministry of Economics within the 'senior economy' initiative.

Source: Hollbach-Grömig and Trapp (2006)

Another reason for leaving the workplace is often the person's state of health. The need for new services in areas such as education, entertainment/leisure, information technology, financial services and transportation can encourage longer, healthier and more active lifestyles, by creating family friendly environments and active policies to improve living opportunities for the elderly. The ageing of the population structure will increase demand on new social services and the health sector. The issue becomes greater within territorial areas with shrinking populations, because services will become more expensive for consumers due to an increased demand and a decreased labour supply (Euwals et. al, 2009; and Verwest and van Dam, 2010). The forms of delivery of care services should have an emphasis on flexibility and financial effectiveness, and promote opportunities for some services to be delivered by social enterprises.

- h. Invest in early healthy lifestyles and active communities (Box 31) by incorporating new approaches to the development of infrastructure and the provision of services to the society, designed to reduce medical costs in later life, such as investment in community-based agencies for health and social support, facilitating non-profit/voluntary efforts, and fostering local resource sharing.*

Box 31 Healthy and active lifestyles examples

Reshaping Care in Scotland²³

The Reshaping Care for Older People is a Scottish Government initiative aimed at improving services for older people by shifting care towards anticipatory care and prevention. The 'Reshaping Care for Older People: A Programme for Change 2011-2021' outlines the following key themes:

- Partnerships in a community business model to keep people out of the formal care system.
- Helping people remain at home using telecare and home adaptation, supporting healthy ageing through diet, exercise and fall prevention.
- Creating effective care pathways including anticipatory care plans, managed care networks, reablement, and implementation of dementia strategy.

Healthy and Active Australia²⁴

The Australian Government has a campaign committed to the promotion of healthy lifestyles, addressing obesity and taking preventative measures to improve the health of the community with a number of initiatives including:

- Get Set 4 Life – a guide providing information on key areas of health and development.
- Stephanie Alexander Kitchen Garden National Program – primary schools learn how to grow, harvest, prepare and share fresh food.
- Learning from successful community obesity initiative – bringing together the lessons learnt from community projects aimed at preventing obesity.
- Aged Care – website with information on aged care, staying at home, aged care homes, carers and family and health.
- Healthy Communities Initiative – A three phase initiative from April 2010 to June 2014. The Australian Government is issuing grants to local governments to deliver effective community-based physical activity and healthy eating programs and to develop local policies that support healthy lifestyle behaviours.
- Healthy Weight – website providing information on physical activity and nutrition to achieve and maintain a healthy weight
- Active After-school Communities (AASC) program – provides primary school children with a fun, free and safe introduction to over 70 sports and 20 other structured physical activities and encourages life-long participation in sport.
- MyHospitals website – online vehicle for the National Health Performance Authority to report on the performance of individual hospitals and local hospital networks, enabling patients to compare the services available at, and the performance of, different hospitals in their local area.
- Healthy Spaces and Places project – A partnership between the Australian Local Government Association, the National Heart Foundation of Australia and the Planning Institute of Australia in the development of the Healthy Spaces and Places planning guide.

²³ <http://www.oecd.org/els/health-systems/48245594.pdf> and <http://www.scotland.gov.uk/Resource/0039/00398295.pdf>

²⁴ <http://www.healthyaactive.gov.au/internet/healthyaactive/publishing.nsf/Content/home>

- i. Invest in healthy and prosperous communities to maintain and increase the vitality of places and encourage personal networks and/or attachments, which stimulates the business environment and improves quality of life, entrepreneurship and innovation (Box 32). All are factors that can foster resilience in shrinking areas. Investments can be in the form of institutional assets that are located in shrinking places and that can act as 'magnet infrastructure' (e.g. a new educational institution or a cultural landmark) and digital media in promoting intergenerational (alumni) and social networks. Good communities nurture entrepreneurship and healthy life-style living conditions.*

Box 32 Examples of initiatives to stimulate vitality

Local communities facing demographic changes are responding in different ways. In some cases, regeneration tries to address social phenomena while in others major economic changes are responsible for out-migration of large population numbers from the local area. A diversity of actions is needed, as well as the interrelation of elements, for effective strategies to take place. Notably, many of the regeneration strategies try to re-orient the paradigm of growth to pragmatic downsizing (Germany) while in other cases the focus is on improving residential housing and living conditions, strengthening future socio-economic structures, and improving urban governance (Switzerland). Some countries continue their efforts towards brownfield site regeneration, social planning, and housing policy (Czech Republic), while others think in terms of a new urban governance system, regeneration strategies, and new development models for residential use (Spain) (OECD, 2012).

Source: Musterd and Murie (2010) and Musterd and Kovacs (2013)

Leipzig (Germany)²⁵ - a centre of commerce long before its famous trade fair began, the city concentrated its efforts on revitalising the historical centre, as can be seen from the gentrification of the main railway station, the old merchants' warehouses and the shopping streets. Although three-quarters of the old buildings were rehabilitated during the nineties, the migration of people away from the city could not be halted. Of 320,000 flats, 55,000 are still unoccupied today, although this figure is, fortunately, falling slowly.

In Leipzig, as in other cities, urban shrinkage exists side by side with suburban growth. 34,000 semi-detached houses alone have been built on its outskirts. Nearly half of the firms on the periphery have relocated there from a site in the city proper. Moreover, the first elements of a globally-oriented economy are growing on Leipzig's northern fringe, in the shape of the airport, motorway, freight transport centre, the new Trade Fair complex and the new BMW car plant, designed by Zaha Hadid.

In spite of enormous problems, not least in its eastern districts and the Grünau estate, Leipzig is seen as a winner in regards to German unification. The city has managed to maintain the high status of its Trade Fair; and even the Book Fair has stood up well to its competitor in Frankfurt. In 2003, Leipzig succeeded in its bid to become Germany's candidate for the Olympic Games in 2012.

²⁵ http://www.shrinkingcities.com/halle_leipzig.0.html

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ANNEXES

Annex 1 Study methodology

1. *Extensive statistical/data analysis* and building of demographic change dataset for the Netherlands and the three study regions from approximately 1990 to 2010, see table below for topic grouping. There were some difficulties experienced in finding all the data at the local level, however a comprehensive dataset was accomplished in the following indicators groups.

Indicators topic groupings

Groups	Indicators
Group 1: Demographic change	Total population, population growth rates; Population density; Median age; Birth and death rates; and Life expectancy
Group 2: Declining fertility	Fertility rates; Infant mortality rates; Income of households (measures the level of affluence); Female employment rate; and Female education
Group 3: Labour Markets	Economic active population; Employment rate; Employment by highest level of education; Number of employees by industry; Employment and commuting; Weekly hours worked; Number of establishments by industry; Migration; and Unemployment
Group 4: Older worker and the silver economy	Population aged over 55 and over 65; Employment rate by age cohort and gender; Retention rates for older workers; Hiring of older workers; Unemployed rate of older workers; Incidence of long-term unemployment for older workers; Full time earning for older workers; Education attainment (50-64); Participation in training for older workers; Older self-employed workers; Exit age from labour force; Average pension age; Disability benefits; and Pension rates.
Group 5: Infrastructure and social service adaption	Land use; Inland passenger transport; Good transport; Transport to work; Households with access to broadband; household with internet connection; Number of hospitals; Number of GPs; Employment in the health sector; Infrastructure expenditure; Property-real-estate investment; Social expenditure; Number of associations; Number of NGOs; Number of persons in receipt of benefits; Dependency ratio; Economic dependency ratio; and Lifestyle and mental health (suicide, depression, number of mental health consultants).
Group 6: Education development trends	Students enrolled in education; Participating of adults in education and training (by gender and labour status); and Education expenditure by government
Group 7: Environmental factors	Regional green attractiveness (green amenities, access to clean water, human exposure to air pollutants); Industry green attractiveness; Regulator framework; Resource efficiency (energy, waste and recycling, water usage); Green planning (Brownfield sites, contaminated land, land use changes, environmental protection expenditure)

2. *Analysis of policy indexes* – Elderly friendly places to live (ELFRI) questionnaire and Older workers friendly places to work (OLWOF) questionnaire (see table for themes) was distributed at the workshop and completed by participants in order to provide qualitative data for the regions under analysis.

ELFRI and OLWOF themes

Index	Themes
Elderly Friendly Places to Live (ELFRI Index)	1. Outdoor spaces and buildings (public areas and buildings) 2. Transport 3. Housing (public and private) 4. Social participation 5. Respect and social inclusion 6. Civic participation and employment 7. Communication and information 8. Community support and health services
Older Workers Friendly Places to Work (OLWOF index)	1. Recruitment 2. Work culture and opportunities 3. Training and skills development and opportunities 4. firm health and benefits (private and public organisations)

3. *Regional field mission and workshops* in which a film crew capturing the event and OECD expert panel provided comments and in deep discussions:

- Field study visits of selected cases where demographic change is prominent and/or where innovative strategies addressing demographic change have been put in place.
- Experts' consultations and meetings (academics, policy/institutional experts, practitioners, trade unions, business organizations). Workshops in each of the regions analysed cases within the domains of the project, and extract policy and strategic recommendations. The OECD expert panel provided workshop comments and feedback. Four focus groups topics was selected and analysed:
 - Labour markets and older workers: organisational approaches by businesses and trade unions
 - New business developments and entrepreneurship: the silver economy plus the white economy and the green economy
 - Sustainable local development models: the urban form and social and financial implications of an elderly society
 - Social transformations: dynamics of social inclusion, family development and intergenerational solutions

Annex 2 Decreasing labour force the effects on the labour market

As mentioned before, there is much disagreement between researchers on possible economic effects of a decrease in potential labour force and in the labour force. Some expect that it may lead to a shortage of labour, an increase in wages, a decrease in unemployment and an increase in the price of some services, while others do not believe this to happen. These discussions are briefly described below.

Some argue that for employers located in a region with a declining potential labour force, it could become more difficult to find enough qualified personnel within their shrinking region. The decreasing potential labour force may lead to a decreasing labour supply (labour force), and the tight labour market could then lead to labour shortages. This could result in employers competing for employees. Such a situation would negatively affect labour-intensive industries (e.g. service sectors), in particular. In these sectors, labour is an important factor, and for them little benefit may be expected from a growth in labour productivity.⁸³ However, in other sectors, a decrease in labour supply may be compensated by automation processes or innovations that result in an increase in productivity (Verwest 2011, 54-55; Euwals *et al.* 2009).⁸⁴

Government authorities and businesses in shrinking regions expect a rapid increase in labour shortages in the future; in particular, in the technology and health care sectors. This expectation is based on the coming increase in the number of people aged 65 and over, and the associated increase in demand for health-care services combined with a further decrease in the potential labour force (Euwals *et al.* 2009; Van Dam *et al.* in prep.). However, labour shortages for any particular sector are not only the result of demographic developments – educational and career choices made by young people have a substantial effect, as well. There is, for example, a decreasing interest in careers in technology and health care throughout the Netherlands (Verwest and Van Dam 2010, 12; SER 2011).

Furthermore, labour market developments are determined not only by labour supply, but also by labour demand, which can be affected by demographic decline, as well. The following section describes the way demographic decline may affect labour demand, in more detail (Verwest 2011, 55).

According to some researchers, a decrease in potential labour force or labour force may result in general wage rises. Most macro-economists strongly believe that shortages and competition will be reflected in pay rises, and that supply and demand on the labour market, through pricing mechanisms, may lead to a new equilibrium. However, others (e.g. Van Dijk and Pellenbarg (2006a, b, c) and Euwals *et al.* (2009) say that this is not inevitable. After all, most sectors follow national collective labour agreements (Collectieve ArbeidsOvereenkomsten (CAOs) that also include wage levels (Verwest 2011, 55). Euwals *et al.* (2009) are aware of the fact that the decrease in labour force may put pressure on these national collective labour agreements and on the basic principle on which the Dutch wage structure is based.⁸⁵ However, they also argue that because of the ageing of the population, it will become difficult to adjust wages for older employees. The share of elderly employees within the total labour force is high, which gives them a strong bargaining position. Moreover, trade unions have a strong say in wage negotiations, and most of their members are older (Euwals *et al.* 2009). Nevertheless, most macro-economists seem to believe that shortages and competition will be reflected in wage increases or may even lead to the employment of less qualified workers.

⁸³ This is in accordance with what is called the Baumol effect (or Baumol's cost disease). Baumol noticed that in some labour-intensive sectors (such as nursing) there is little or no growth in labour productivity over time (although there are wage increases in those sectors). This phenomenon which combines wage increases without increased labour productivity is called the Baumol effect. This is contrary to the theory of classical economics which states that increases in wage levels and labour productivity are always closely linked.

⁸⁴ Baumol shows that this does not occur in all sectors. He argues that in some sectors, especially those that are labour-intensive (such as nursing), increases in labour productivity are difficult to achieve.

⁸⁵ This principle means that older people's wage levels, which are relatively high compared to their productivity, are compensated by the relatively cheap wages of younger, more productive people.

Some (e.g. Derks *et al.* 2006; Derks 2006) argue that a decrease in potential labour force may benefit the unemployed and lead to a decrease in *unemployment* (to the fractional level). Van Dijk and Pellenbarg (2006a), De Beer (2008, 2009), Euwals *et al.* (2009) and Verwest (2011) disagree. Their research shows that a decrease in the potential labour force does not automatically result in lower unemployment, because of mismatches between labour supply and demand (qualifications sought by employers may not match those of people seeking employment) (Verwest 2011, 56).

De Beer (2008, 2009) argues that, not only in the Netherlands but also abroad, in the past (between 1997 and 2007) there have been no relationships between changes in labour force and unemployment. In European countries with a strongly declining labour force (e.g. Germany, Estonia, Latvia, Lithuania, Hungary and Romania), unemployment rates have been relatively high. The explanation for this is that unemployment levels are not directly determined by developments in labour force, but primarily by institutional factors, such as the flexibility of wages, the social security system (e.g. minimum wage levels), the power of trade unions, and the degree of centralisation/decentralisation of wage negotiations (De Beer 2008, 282; Euwals *et al.*, 2009; Verwest 2011, 57).

Despite the fact that these institutional factors are uniform, there may be regional differences in the degree to which a decrease in potential labour force affects unemployment. Broersma and Van Dijk (2002, 354-358), for example, show that unemployment rates, participation rates and migration flows differ between Dutch regions. They conclude that, in these regions, local labour markets adjust differently to employment shocks. They also point out that these differences are closely related to the qualifications of the unemployed. From this we can conclude that the effects of a decrease in potential labour force on unemployment are regionally different and depend on the qualifications of the pool of unemployed.

Finally, a decrease in population and household numbers could result in a decrease in the demand for certain goods and services, and therefore lead to a smaller local and regional market. This applies in particular to population-related economic activities, such as retail, hotel and catering services and personal services (De Graaff *et al.* 2008). Verwest (2011) concludes that, in the past, the average disposable income per household⁸⁶ in three shrinking regions (Parkstad Limburg, Zeeuws-Vlaanderen, and Eemsdelta) has been lower than the national average, and the percentage of low-income households with an annual income of around 9 200 euros in two shrinking regions (Zeeuws-Vlaanderen, and Eemsdelta) was higher than the national average.⁸⁷ A smaller market, in turn, may lead to the bankruptcy of consumer service businesses, which could result in an oversupply of commercial real estate (shops and restaurants), and therefore in vacancies (Verwest and Van Dam 2010, 11–12).

However, some services (e.g. health care) in shrinking regions may become more expensive for consumers, because the demand for those (labour-intensive) services is expected to increase (as local populations age) while labour supply is expected to decrease (Euwals et al. 2009).

⁸⁶ The average disposable income of a household was calculated as follows: for each region, the incomes of individual household members, per household were added together. The income consists of the gross income (earnings from work plus incomes from social security and subsidies) minus premiums of social security, other financial transfers, and tax on wages, earnings (revenues) and capital (CBS 2012). The results were subsequently divided by the total number of households in the region.

⁸⁷ It is important to notice that in most shrinking regions the costs for day-to-day live are lower in comparison to growing regions (i.e. Randstad). The average housing prices are for example lower than elsewhere. However, Van Middelkoop shows that in some shrinking regions private owners can run into financial problems when they want to sell their houses (Van Middelkoop 2010).

Annex 3 Geographical distribution of municipalities in Limburg



Annex 4

Table A.1 Population growth differentiated by gender, 1972-2011

		1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Netherlands	total	13269563	13387625	13491019	13599092	13733578	13814495	13897874	13985526	14091014	14208586	14285829	14339551	14394589	14453833	14529430	14615125	14714948	14805240
Netherlands	males	6624210	6675533	6722092	6771613	6836875	6871547	6907216	6945442	6994280	7048474	7081566	7102598	7124152	7149620	7184538	7224323	7273611	7316590
Netherlands	females	6645353	6712092	6768927	6827479	6896703	6942948	6990658	7040084	7096734	7160112	7204263	7236953	7270437	7304213	7344892	7390802	7441337	7488650
Limburg	total	1022361	1030242	1038260	1043793	1051628	1055627	1060953	1065491	1069046	1073411	1077201	1080524	1083569	1085674	1088339	1091562	1095433	1099631
Limburg	males	514756	518413	522362	524650	528304	529926	532188	533994	535213	536949	538315	539548	540673	541269	542308	543568	544996	546556
Limburg	females	507605	511829	515898	519143	523324	525701	528765	531497	533833	536462	538886	540976	542896	544405	546031	547994	550437	553075
North Limburg	total	226442	229623	233763	236160	238556	241361	244066	245968	247461	248874	250247	251150	251993	253288	254417	255835	257234	258112
North Limburg	males	115016	116575	118692	119754	121085	122524	123807	124664	125255	126025	126619	127050	127407	127960	128407	129010	129616	130016
North Limburg	females	111426	113048	115071	116406	117471	118837	120259	121304	122206	122849	123628	124100	124586	125328	126010	126825	127618	128096
Mid Limburg	total	198271	201068	202617	204561	207634	208754	210849	212806	213991	215555	216589	217197	217444	217411	218093	218769	219590	220766
Mid Limburg	males	100247	101454	102188	103178	104723	105224	106158	107136	107622	108341	108805	109054	109086	109134	109540	109856	110108	110614
Mid Limburg	females	98024	99614	100429	101383	102911	103530	104691	105670	106369	107214	107784	108143	108358	108277	108553	108913	109482	110152
South Limburg	total	597648	599551	601880	603072	605438	605512	606038	606717	607594	608982	610365	612177	614132	614975	615829	616958	618609	620753
South Limburg	males	299493	300384	301482	301718	302496	302178	302223	302194	302336	302583	302891	303444	304180	304175	304361	304702	305272	305926
South Limburg	females	298155	299167	300398	301354	302942	303334	303815	304523	305258	306399	307474	308733	309952	310800	311468	312256	313337	314827

Source: CBS

Table A.1 Population growth differentiated by gender, 1972-2011 (continued)

		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	total	14892574	15010445	15129150	15239182	15341553	15424122	15493889	15567107	15654192	15760225	15863950	15987075	16105285	16192572	16258032	16305526	16334210	16357992	16405399	16485787	16574989	16655799
Netherlands	males	7358482	7419501	7480422	7535268	7585887	7627482	7662289	7696803	7740074	7793271	7846317	7909855	7971967	8015471	8045914	8065979	8077407	8088514	8112073	8156396	8203476	8243482
Netherlands	females	7534092	7590944	7648728	7703914	7755666	7796640	7831600	7870304	7914118	7966954	8017633	8077220	8133318	8177101	8212218	8239547	8256803	8269478	8293326	8329391	8371513	8412317
Limburg	total	1103969	1109850	1115494	1119942	1125187	1130050	1133669	1136199	1137935	1139902	1141192	1142679	1143296	1141889	1139935	1136695	1131938	1127805	1123705	1122604	1122701	1122627
Limburg	males	548396	551530	554139	556195	559040	561577	563467	564487	565169	565845	566575	567459	567732	567009	565577	563869	561127	558886	556603	556268	556598	556638
Limburg	females	555573	558320	561355	563747	566147	568473	570202	571712	572766	573457	574617	575220	575564	574880	573758	572826	570811	568919	567102	566336	566103	565989
North Limburg	total	259497	260913	262420	264375	265940	267718	268842	269788	270820	271717	273000	274603	276488	277748	277966	278526	278385	278712	278818	279355	280037	280103
North Limburg	males	130730	131512	132318	133295	134139	135010	135494	135834	136279	136766	137304	138204	139174	139821	139801	139903	139797	139844	139859	140153	140518	140489
North Limburg	females	128767	129401	130102	131080	131801	132708	133348	133954	134541	134951	135696	136399	137314	137927	138165	138623	138588	138868	138959	139202	139519	139614
Mid Limburg	total	221759	223237	224319	225361	227015	227874	229437	229959	230671	231437	232383	233231	233775	234089	233808	234255	234202	234251	234019	234364	234880	235211
Mid Limburg	males	111037	111853	112217	112672	113508	114026	114866	115085	115457	115904	116384	116799	116988	117083	116912	117005	116857	116985	116769	116968	117365	117589
Mid Limburg	females	110722	111384	112102	112689	113507	113848	114571	114874	115214	115533	115999	116432	116787	117006	116896	117250	117345	117266	117250	117396	117515	117622
South Limburg	total	622713	625700	628755	630206	632502	634458	635390	636452	636444	636148	635809	634845	633033	630052	627561	623914	619351	614842	610868	608885	607784	607313
South Limburg	males	306629	308165	309604	310228	311393	312541	313107	313568	313433	313175	312887	312456	311570	310105	308864	306961	304473	302057	299975	299147	298715	298560
South Limburg	females	316084	317535	319151	319978	320839	321917	322283	322884	323011	322973	322922	322389	321463	319947	318697	316953	314878	312785	310893	309738	309069	308753

Source: CBS

Annex 5

Table A.2 Share GDP Limburg of total Dutch GDP (%), 1995-2009

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Limburg	6.4	6.3	6.4	6.5	6.5	6.4	6.3	6.3	6.3	6.3	6.1	6.1	6.1	6.0	5.9

Source: Eurostat

Annex 6

Table A.3 Total employment rate (%), 1996-2011

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	58.7	60.4	62.1	63.5	64.5	64.2	64.5	63.9	63.5	63.7	64.8	66.6	68.2	67.8	67.1	67.2
Limburg	56.7	58.8	60.7	60.7	62.2	60.1	60.9	60.1	60.9	61.4	62.2	63.0	64.7	64.3	63.5	64.7
North Limburg	59.7	62.8	65.0	62.8	65.4	64.5	65.6	66.0	64.3	65.7	66.4	66.4	68.5	68.5	67.1	68.1
Mid Limburg	59.1	58.6	61.3	62.2	65.4	62.0	64.2	62.6	62.7	62.7	65.3	63.1	65.5	67.8	67.6	65.0
South Limburg	54.5	57.2	58.7	59.2	59.7	57.4	57.4	56.6	58.7	59.1	59.2	61.5	62.7	61.1	60.3	62.9

Source: CBS

Annex 7

Table A.4 Youth (15-24 years) participation rate (%) differentiated by gender, 1996-2011

Males:	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	41.2	43.2	42.9	46.2	46.6	47.2	46.2	44.3	41.8	41.0	41.5	43.4	44.5	41.6	39.1	39.3
Limburg	39.3	40.8	39.3	43.2	38.7	41.2	44.0	38.9	39.1	38.7	37.0	39.3	38.7	37.4	38.7	36.5
North Limburg	42.3	47.5	40.9	47.3	44.9	46.0	48.8	45.8	45.2	43.2	43.1	46.5	40.8	44.2	41.7	36.1
Mid Limburg	32.0	42.3	35.5	42.4	37.9	45.1	51.8	35.6	39.8	43.8	42.6	37.2	40.4	42.6	40.8	34.1
South Limburg	40.6	37.2	39.9	41.7	36.3	37.3	39.0	37.4	36.5	34.7	32.0	36.9	37.2	32.8	36.5	37.6
Females:	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	37.8	39.9	39.3	42.1	41.4	42.9	42.3	39.9	37.3	36.1	36.8	38.7	39.6	38.7	36.2	36.6
Limburg	38.2	38.3	39.0	41.2	39.1	36.8	37.8	34.4	34.1	32.8	32.1	34.9	38.3	36.2	32.7	33.9
North Limburg	43.1	48.8	41.4	45.1	42.8	43.2	47.5	39.1	36.8	37.0	34.6	37.0	32.4	34.7	35.0	38.4
Mid Limburg	45.2	41.0	47.1	28.8	40.3	35.7	37.2	33.4	36.0	33.7	38.2	34.7	38.0	40.4	40.8	34.8
South Limburg	33.5	32.5	35.1	43.7	37.2	34.2	34.1	32.8	32.1	30.7	29.1	34.0	40.9	35.3	28.6	31.6

Source: CBS

Annex 8

Table A.5 Older workers' (55-64 years) participation rate (%) differentiated by gender, 1996-2011

Males:	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	39.2	40.4	43.2	45.0	47.4	45.8	50.2	51.9	52.4	52.9	53.2	57.0	60.3	61.2	61.2	63.1
Limburg	34.8	34.0	40.7	39.7	43.7	38.8	40.7	45.7	45.9	48.3	48.1	51.0	57.3	56.0	56.1	58.9
North Limburg	37.6	36.1	50.6	43.7	46.5	44.2	43.5	50.8	46.0	50.7	51.4	55.1	57.1	61.3	57.2	57.9
Mid Limburg	37.9	33.6	41.6	48.8	54.4	42.8	44.8	49.1	48.9	52.9	50.7	51.5	56.6	53.8	56.9	64.7
South Limburg	32.4	33.2	36.7	34.4	38.3	35.3	38.2	42.7	44.7	45.3	45.8	49.3	57.6	54.7	55.4	56.8

Females:	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	13.7	14.8	15.3	17.3	19.8	19.5	21.7	22.7	24.7	25.7	27.5	29.9	32.3	34.5	36.2	38.9
Limburg	10.7	12.7	12.5	14.0	16.4	15.3	15.6	18.4	20.5	21.5	21.6	26.2	25.7	31.7	31.0	34.6
North Limburg	14.1	13.7	18.5	13.1	16.4	21.8	19.4	25.1	27.8	24.2	22.2	28.3	31.7	38.9	37.3	42.2
Mid Limburg		14.7	13.0	24.2	20.6	12.2	16.7	17.5	17.6	19.6	21.3	23.6	21.1	31.3	31.1	33.6
South Limburg	10.7	11.6	9.9	11.0	15.1	14.1	13.7	16.1	18.2	21.2	21.5	26.3	25.1	28.7	28.5	32.0

Source: CBS

Annex 9

Table A.6 Unemployment rate (%) differentiated by gender, 1997-2011

Males:	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	4.6	3.6	2.8	2.7	2.5	3.4	4.7	5.7	5.6	4.5	3.6	3.3	4.5	5.0	4.5
Limburg	4.9	3.8	3.1	3.0	2.8	3.7	5.0	6.0	5.8	4.8	4.0	3.6	4.8	5.4	4.8
North Limburg	3.9	2.8	2.2	1.9	1.8	2.6	4.0	5.0	4.9	3.9	3.1	2.8	3.9	4.5	4.0
Mid Limburg	4.6	3.5	2.7	2.6	2.4	3.3	4.7	5.6	5.5	4.5	3.6	3.3	4.4	5.0	4.4
South Limburg	5.5	4.5	3.8	3.7	3.5	4.3	5.6	6.6	6.4	5.4	4.5	4.2	5.4	5.9	5.4

Females:	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	9.1	7.2	6.0	5.4	4.8	5.1	6.3	7.6	7.8	6.9	5.8	4.8	5.2	6.0	5.2
Limburg	10.3	8.4	7.2	6.5	6.0	6.3	7.4	8.6	8.9	8.0	6.9	5.9	6.3	7.1	6.3
North Limburg	9.1	7.2	6.0	5.3	4.8	5.1	6.3	7.6	7.9	6.9	5.8	4.8	5.2	6.1	5.2
Mid Limburg	10.0	8.2	6.9	6.3	5.7	6.1	7.2	8.4	8.7	7.8	6.7	5.7	6.1	6.9	6.1
South Limburg	10.9	9.0	7.8	7.1	6.7	6.9	8.1	9.2	9.5	8.6	7.5	6.5	6.9	7.7	6.9

Source: CBS

Annex 10**Table A.7** Youth (15-24 years) unemployment rate (%), 1997-2011

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	10.1	8.2	7.3	6.8	7.3	8.5	10.5	13.5	13.2	10.7	9.2	8.7	11.0	11.8	11.0
Limburg	11.8	9.9	9.0	8.5	9.0	10.2	12.2	15.2	14.8	12.4	10.9	10.3	12.6	13.3	12.5
North Limburg	9.1	7.1	6.2	5.7	6.2	7.5	9.6	12.8	12.3	9.8	8.3	7.7	10.1	10.8	10.0
Mid Limburg	10.0	8.0	7.1	6.5	7.0	8.3	10.3	13.4	13.0	10.5	9.0	8.4	10.8	11.5	10.7
South Limburg	13.8	11.9	11.1	10.6	11.1	12.2	14.2	17.0	16.7	14.2	12.8	12.3	14.5	15.2	14.4

Source: CBS

Annex 11**Table A.8** Unemployment rate (%) among elderly (55-64 years), 1997-2011

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Netherlands	3.4	3.0	3.2	2.9	2.3	2.9	3.8	5.0	6.0	5.7	5.4	4.6	4.5	4.9	4.4
Limburg	3.8	3.5	3.8	3.5	2.9	3.5	4.4	5.6	6.6	6.4	6.0	5.3	5.1	5.6	5.0
North Limburg	3.7	3.4	3.6	3.3	2.8	3.4	4.2	5.5	6.5	6.2	5.9	5.2	5.1	5.5	5.0
Mid Limburg	3.1	2.8	3.1	2.8	2.2	2.7	3.6	4.9	5.9	5.6	5.3	4.5	4.4	4.8	4.3
South Limburg	4.2	3.9	4.1	3.9	3.3	3.9	4.8	6.0	7.0	6.7	6.4	5.6	5.5	5.9	5.4

Source: CBS

Annex 12**Table A.9** Development of participation in adult education and training (%), 25-64 years old, 2006-2011

Males:	2006	2007	2008	2009	2010	2011
Netherlands	2.0	2.0	2.1	2.1	2.2	2.3
Limburg	1.7	1.7	1.8	1.9	1.9	2.1
North Limburg	1.3	1.3	1.3	1.4	1.6	1.8
Mid Limburg	1.4	1.5	1.5	1.5	1.7	1.9
South Limburg	2.0	2.0	2.1	2.3	2.2	2.4

Females:	2006	2007	2008	2009	2010	2011
Netherlands	1.9	1.9	1.9	2.0	2.1	2.2
Limburg	1.3	1.3	1.4	1.7	1.7	1.8
North Limburg	1.1	1.1	1.2	1.3	1.7	1.8
Mid Limburg	1.2	1.1	1.6	1.2	1.3	1.3
South Limburg	1.4	1.4	1.5	2.0	1.8	2.0

Source: CBS/ABF

Annex 13DART demographic change indicator set

Indicators to measure demographic change	Total population by gender Population density Proportion of foreign citizens in the population Gender age structure of the population Migration
Indicators to predict the demographic change	Population projections Fertility rate Mortality rate Net balance of natural population movement Life expectancy
Indicators for the classification of the regions in demographic change	Qualitative data – decrease or increase of the total population at specific time intervals (annually, etc.) and cluster
Indicators to measure social participation and quality of life	Structure of households/size of households Marital status of persons in private households Education/educational structure by age group Number of students or trainees Proportion of employees/workforce per sector of the economy Participation (economically active population) Employment rate of old and young people Development of unemployment Number of death by gender or causes of death Human resources development in the health and care sector

Source: Table development from INTERREG VIC and European Union, 2012, p. 22

Annex14 Demographic Change Dashboard

The Dashboard tool was developed by the Consultative Group of Sustainable Development Indices (CGSDI) in an attempt to help and launch the process of putting indicators at the service of democracy. Their website (<http://esl.jrc.it/envind/dashbrds.htm>) is a free, non-commercial software, allowing the opportunity to download ‘the Dashboard Development Kit’ which has a dashboard Excel template allowing the setup of personal dashboards.

The Dashboard presents sets of indicators in a simple pie chart based on three principles

1. The size of a segment reflects the relative importance of the issue described by the indicator
2. Colour codes signal relative performance, with green meaning “good” and red meaning “bad”
3. A central circle, the Policy Performance Index (PPI), summarizes the information of the component indicators.

The demographic change dashboard is an evolving tool to assess the performance levels of demographic transition at a regional scale. The Netherlands dashboard provides a comparison ‘with and between’ the Netherlands and the case study regions – Groningen, Drenthe, Limburg and Zeeland (thus green indicates the region’s performance is better (good), red indicates its performance is behind or lower (bad) than the comparison regions)

2000-2010 – current indicators included

Theme: Demography

Population growth (%)

Population 0-14 years old (%) of the total population

Population 15-64 years old (%) of the total population

Population 55-64 years old (%) of the total population

Population 65+ years old (%) of the total population

Life Expectancy (Years)

Life Expectancy – Male (Years)

Life Expectancy – Female (Years)

Crude Birth Rates (number of births per 1,000 per year)

Crude Death Rate (number of deaths per 1,000 per year)

Fertility Rate

Infant Mortality Rates (death per 1,000 births)

Theme: Economy

Primary Income (millions of national, currency, current)

Regional GDP (US\$ current PPP, current prices)

Regional GDP per capita (Current prices, millions of national currency)

Youth Dependency

Elderly dependency

Economic dependency

Theme: Labour

Codes

PopGR

PopYR

PopWR

PopOWR

PopER

LifeE

LifeEM

LifeEF

Cbrate

Cdrate

Fert

InMort

Codes

PrIn

GDP

GDPcap

YDR

EDR

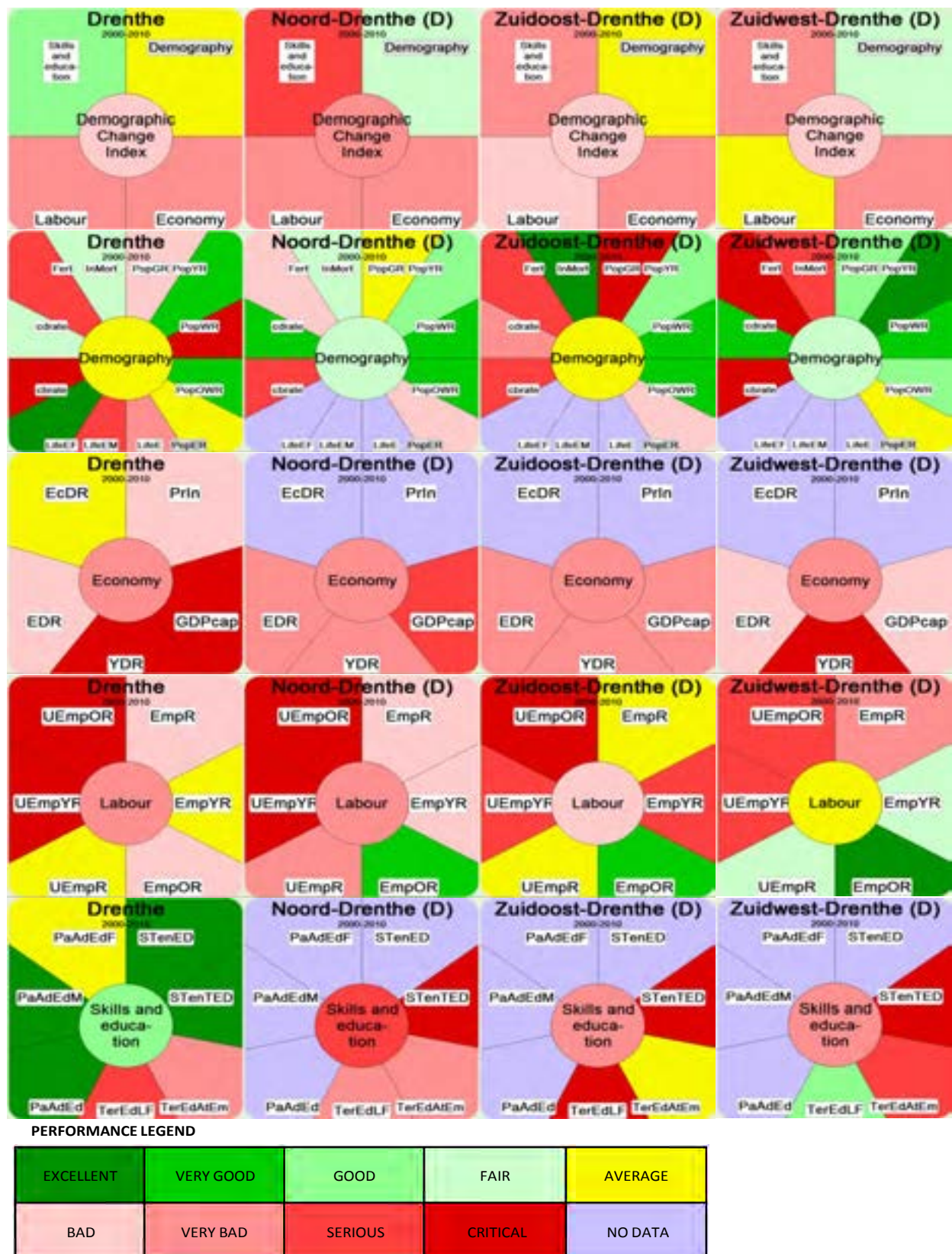
EcDR

Employment Rate (%) (15-64)	EmpR
Employment Rate – Young adults (15-24) (%)	EmpYR
Employment Rate – Older workers (55-64) (%)	EmpOR
Unemployment Rate (%)	UEmpR
Unemployment Rate – Young adults (15-24) (%)	UEmpYR
Unemployment Rate – Older workers (55-64) (%)	UEmpOR
<i>Theme: Skills and Education</i>	
Students enrolled in education (% of total population)	STenED
Students enrolled in tertiary education (% of total students enrolled)	STenTED
Tertiary education attainment (% total employment)	TerEdAtEm
Tertiary education attainment (% of labour force)	TerEdLF
Participation of adults in education (%)	PaAdEd
Participation of adults in education – males (%)	PaAdEdM
Participation of adults in education – females (%)	PaAdEdF
LIST:	Dashboard name
EU27	EU27
OECD total / ave	OECD

Annex 15 Notes for the Dashboard

- PopYR – OECD 2010 is estimate; local data 2000 (is 2003)
- PopWR - local data 2000 (is 2003)
- PopOWR – OECD 2000 (is 2008)
- PopER - local data 2000 (is 2003); OECD 2010 is estimate
- LifeE – EU27 2000 (is 2002 for least than 1 year); EU27 2010 (is 2009 for least than 1 year); Regional data 2000 (is 2001); Local data 2000 is missing; Local data 2010 (is 2008)
- Life EM - EU27 2000 (is 2002 for least than 1 year); EU27 2010 (is 2009 for least than 1 year); Regional data 2000 (is 2001); Local data 2000 is missing; Local data 2010 (is 2008)
- LifeEF - EU27 2000 (is 2002 for least than 1 year); EU27 2010 (is 2009 for least than 1 year); OECD 2000 and 2010 (ave of 31 countries excluding Israel); Regional data 2000 (is 2001); Local data 2000 is missing; Local data 2010 (is 2008)
- Cbrate – EU27 average for the 27 countries excluding Ireland; OECD missing data
- Cdrate – EU27 average for the 27 countries excluding Ireland; OECD missing data; Regional data 2000 (is 2001)
- Fert – EU27 2000 (is 2002); EU27 2010 (is 2009); OECD average; Regional data 2000 (is 2001)
- InMort – OECD average; Regional data 2000 (is 2001); Local data 2000 (is 2004)
- PrIn – EU27 and OECD missing data; Regional data 2010 (2009); Local data missing
- GDPcap – OECD was converted from US to Euro; Regional data 2010 (2009);
- YDR – OECD 2000 (is 2008)
- EDR - OECD 2000 (is 2008); Regional data 2010 (is 2009)
- EcDR - EU27, OECD and Local missing data
- UempYR and UempOR – OECD 2000 (is 2005)
- StenED – OECD ave (not including Slovenia – missing data); Local data missing data
- Sten TED- OECD ave (not including Slovenia – missing data); Local data 2000 (is 2006)
- TerEdAtEm – OECD missing data;
- TerEdLF - OECD Average 2000 (Australia, Italy - 2001 data. Not data from: Canada, Chile, Estonia, Ireland, Israel, Japan, Slovenia and Turkey); OECD 2010(is 2008, Australia – 2005, Iceland, Korea, NZ, US – 2006, Switzerland – 2007, Not data from: Canada, Chile, Estonia, Ireland, Israel, Japan, Slovenia and Turkey); Local data 2000 (is 1999/2001); Local data 2010 (is 2009/2011)
- PaAdEd, PaAdEdM and PaAdEdf – OECD and Local missing data; EU27 estimated; Regional data 2010 (is 2009)
- There was a discrepancy between the EuroStat and OECDStats databases and the statistics provided by the Ministry, no clear explanation was provided

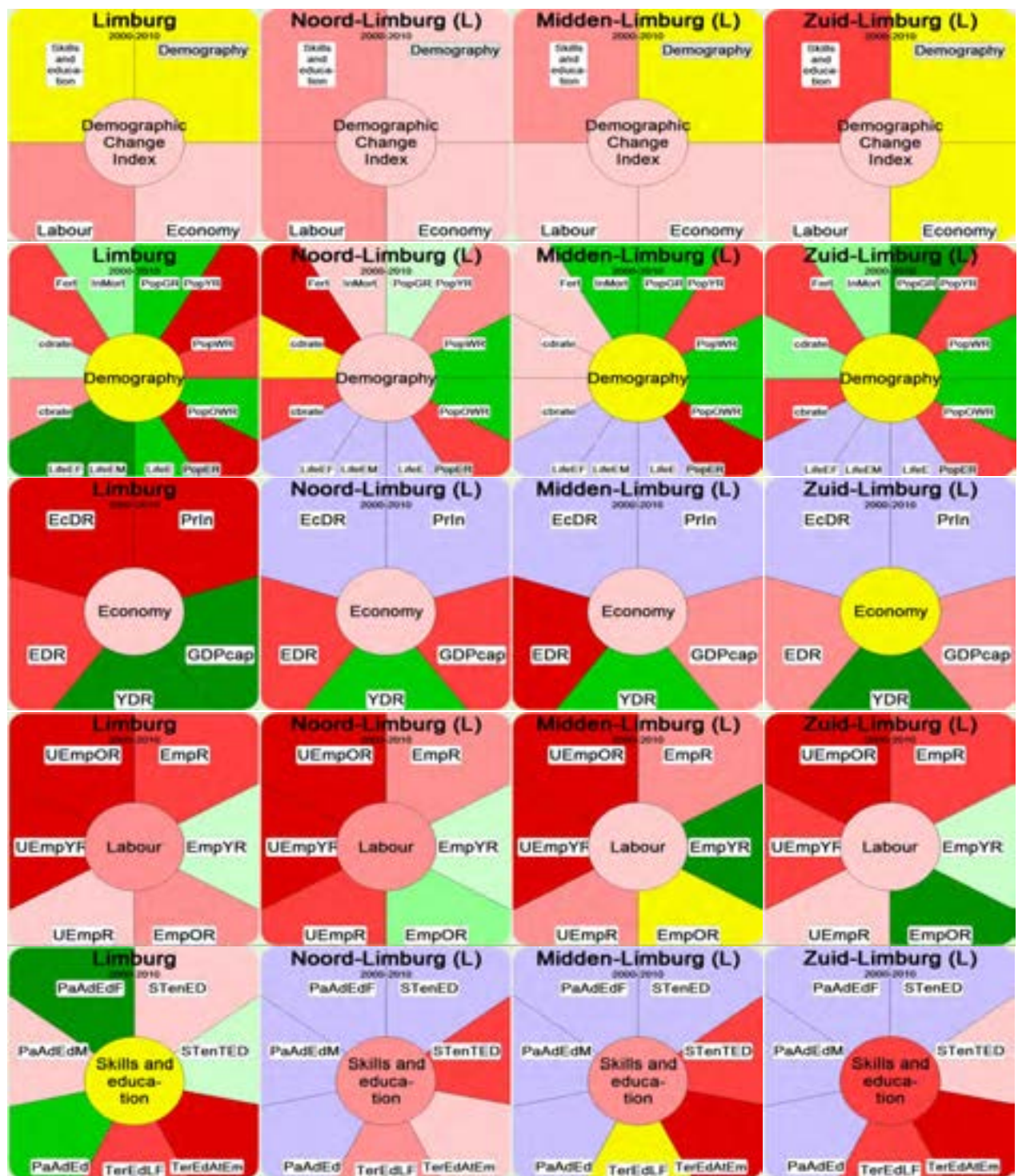
Annex 16 Detail Dashboard results





PERFORMANCE LEGEND

EXCELLENT	VERY GOOD	GOOD	FAIR	AVERAGE
BAD	VERY BAD	SERIOUS	CRITICAL	NO DATA



PERFORMANCE LEGEND

EXCELLENT	VERY GOOD	GOOD	FAIR	AVERAGE
BAD	VERY BAD	SERIOUS	CRITICAL	NO DATA



PERFORMANCE LEGEND

EXCELLENT	VERY GOOD	GOOD	FAIR	AVERAGE
BAD	VERY BAD	SERIOUS	CRITICAL	NO DATA

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Prof. Frank Cörvers (1966) is leader of the Dynamics of the Labour Market research programme at the Research Centre for Education and the Labour Market (ROA), Maastricht University. He studied general economics at the universities of Maastricht and Hanover, and in 1999 he obtained his doctorate at the Maastricht University. Frank Cörvers has much experience in both national and international commissioned research, e.g. for the Dutch ministries (Education, Social Affairs, Economic Affairs, Public Health), the Dutch National Employment Office, various employers' organisations, the European Commission, the European Centre for the Development of Vocational Training (Cedefop), etc. He participated in many international short term missions as independent consultant and published numerous policy reports and various articles in academic journals. Professor Cörvers has been appointed part-time Professor in the Teacher Labour Market at the Reflect Institute of Tilburg University.

Dr. Jouke van Dijk (1956) is Professor of Regional Labour Market Analysis and Chair of the Department of Economic Geography at the Faculty of Spatial Sciences of the University of Groningen. He also is President of the Board and Scientific Director of the Board of the Wadden Academy-KNAW, an institute of the Royal Netherlands Academy of Arts and Sciences. His research has a strong focus on labour market issues like unemployment, employment, the dynamics of regional labour markets and migration. He has worked on and been successful in obtaining substantial funding for several major multi-disciplinary projects of research on labour market issues. He is supervisor of 15 PhD-project of which nine have been completed successfully. Jouke van Dijk is Editor-in-Chief of Papers in Regional Science, Editor of the Springer Regional Science Series 'Advances in Spatial Science' and Overseeing Editor Journal of Economic and Social Geography. He is advisor and consultant for the European Union, various ministries, Provinces and municipalities, private firms and research institutes, the public employment service, educational institutes, unions and other organizations dealing with labour market issues and regional development. He is a member of the Socio Economic Council for the Northern Netherlands.

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Dr. Femke Verwest works as a researcher at PBL Netherlands Environmental Assessment Agency. She graduated in 2002 from the Leiden University in the field of Public Administration, and in 2011, she obtained the degree of doctor in the field of Management Sciences from Radboud University Nijmegen (title of her thesis ‘Demographic decline and local government strategies. A study of policy change in the Netherlands’). Since 2006, she has been studying demographic decline, its spatial consequences, and spatial planning policies. She wrote 4 books, several chapters, articles and papers about this subject, and gave many presentations for a policy, scientific and political audience.

Dr. Tamara Weyman works as a contracted expert for the OECD, working on various projects involving employment and skills, SMEs development, South-East Asia, territorial development policy, and demographic change and sustainability. Recently Tamara has been involved in publications such as ‘Martinez-Fernandez, C.; I.Miles; T.Weyman (2012) *The Knowledge Economy at Work: Skills and Innovation in Knowledge Intensive Services Activities*, Edward Elgar; Martinez-Fernandez, C.; P.Chorazy; T.Weyman; and M.Gawron. (2011), *The Territorial Dimension of the European Social Fund: A Local Approach for Local Jobs*, OECD; OECD (2012) *Skills development and Training in SMEs*, OECD publishing; Martinez-Fernandez, C.; N.Kubo; A.Noya; and T.Weyman (2012), *Demographic Change and Local Development: Shrinkage, Regeneration and Social Dynamics*, OECD; and a chapter in a forthcoming book Schatz, L.; D.Leadbeater; C.Martinez-Fernandez; and T.Weyman (2013), ‘From “up north” to “down under”’: Dynamics of shrinkage in mining communities in Canada and Australia’ in *Stories of Tough Times: International perspectives and policy implication in shrinking cities*, Routledge. Tamara worked as a Research Associate at the Urban Research Centre, University of Western Sydney (UWS) and completed her PhD on Spatial Information Sharing for Better Regional Decision Making in 2007 at UWS. Since 2009, Tamara has been involved in the COST Action TU 0803 “Cities Regrowing Smaller”.

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Demographic Change in the Netherlands: Strategies for resilient labour markets