

Demographic change in regional labour markets

Finding solutions for negative effects and searching for opportunities, first lessons from the DC NOISE labour markets demonstration projects.

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Introduction

This paper is based on the first results of the labour market demonstration projects within the Interreg IVB North Sea Region project. In DC NOISE 9 regions from 5 countries in Europe work together to deal with the consequences of demographic change. DC NOISE stands for Demographic Change: New Opportunities In Shrinking Europe.

The central aim of the DC NOISE project is to ensure that the North Sea Region is ready to cope with her new demographic future. That means both dealing with the negative effects of demographic change and at the same time taking advantage of the opportunities offered by this process.

Demographic change consists of different trends, like total population decline, diminishing number of young people, shrinking labour force, ageing society, changing ethnic composition of population and changing household composition. These trends will have negative effects on the labour market and through these negative effects on the labour market have effects on society. For instance a shrinking work force means that it will be difficult to find enough people to work in the health care, while at the same time because of demographic change more health care workers are needed. This eventually can lead to less quality in health care. Demographic change also means that there will be new opportunities. If there are less people available in the health care sector and we are forced to introduce new IT solutions, it could also be that quality of the health care is improved due to these new IT possibilities.

Problems with the labour market can be solved with national and European regulations and policies. For instance national governments can either force or financially motivate people to work longer and retire later. The demonstration projects in the DC Noise project concern regional and local measures.

This paper addresses the question *what can local and regional actors do to overcome the negative effects of demographic change on the labour market and seize opportunities of demographic change?*

We will discuss the changes in the regional workforce through demographic change and the relation to measures in the demonstration projects with the help of a simple input and output model, presenting the regional workforce as a stock of people. Measures within the demonstration projects will be described to illustrate how negative effects can be overcome and opportunities seized.

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Demographic changes and the labour market

Demographic trends can have direct implications for labour markets through three primary channels: labour supply, labour productivity, and labour demand (because of shifts in the structure of aggregate demand). It is generally recognized that ageing societies will face economic and social challenges. What will inevitably happen in the labour market is that the labour force will shrink as large numbers of workers retire and the characteristics of the labour markets change. The workforce will be on average older and there will be less young people in the workforce. A shrinking labour population causes shortages on the labour market but may also affect the labour productivity and the innovative capacity. This is related to general characteristics given to people of a certain age. Less young people is often viewed from the perspective of less people in the labour force who are recently educated with fresh ideas. And a loss of older people through retirement is often viewed from the perspective of a loss of senior knowledge and experience. Young people are given general characteristics like healthy, energetic, ambitious, motivated, etc. Older people are associated with health problems, risk avoidance, old ideas, low motivation and pre-pension behaviour. These views are of course generalizations and prejudices. Older people can through life long learning have fresh and state of the art knowledge, while freshly graduated can have knowledge who does not fit work expectations.

Even if we would not be confronted with demographic change, the regional labour market would still be changing due to other factors, like globalisation. There are many regional and interregional push and pull factors on people to move from region to region. This can range from differences in regional wages and costs of living to all kind of aspects of quality of life in regions. Quality of life can encompass such different things as crime rates and the availability of culture and good education. In how far general quality of life factors determines the attractiveness of a region depends on personal preferences and the appreciation of certain qualities in a region, which often depends on one's phase of life. For instance the situation if a person has a young family or is nearly retired. But the most important factor is of course the availability of jobs. However attractive a region is in terms of living quality, many people won't stay in or move to a region if there are no suitable jobs available. Suitable jobs are often not only a job for the person himself but also a suitable job for their partner. Even the availability of one job will not be enough because people will look upon a region from the perspective of a career perspective and the potential to job hop. The attractiveness of a region is also a cultural phenomenon. Many young people want to work where according to their feeling 'it is happening'. There will be difference between regions in how far people are willing to move away from the region where they have their roots.

The regional workforce needed depends on the general economic situation. Regions and certain economic clusters can become less or more important economically. What also can change the labour market are the regional ambitions. For instance the partner region Twente wants to create 10.000 new knowledge jobs in the region. In general the Lisbon process prioritised the importance of the knowledge economy in Europe and the need for higher educated and skilled people to realize this knowledge economy. This asks for a new labour market (see hereafter).

Demographic change, the labour market and sustainable development

Sustainable development is related with demographic change through the labour market in a number of ways. Demographic change influences the population in a community, region or country in terms of size and characteristics. Sustainable development means meeting the needs of present generations without compromising the needs of future generations. Sustainable development should involve economic, social and environmental issues and develop those in a mutually reinforcing way. The number of people in a region is often considered as a negative factor for ecological sustainable development through the factor overpopulation. More people lay a stress on the ecosystem. People through their economic activities contribute to the economic sustainable development.

Uneven population development between regions or countries threatens territorial cohesion and social development and touches on the equity dimension of sustainable development. The Lisbon strategy has prioritized socio-economic issues in the European development. Through the Lisbon strategy together with the Gothenburg strategy Europe is striving for a balance between the social, economic and ecological dimension of sustainable development. At the Lisbon meeting, the European Council set as the strategic goal for the Union: *“to become the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”*. The Stockholm European Council then decided that the EU sustainable development strategy should complete and build on this political commitment by including an environmental dimension. This recognizes that in the long term, economic growth, social cohesion and environmental protection must go hand in hand.

The relation between demographic change and sustainable development through the labour market lies in:

- the amount people available for economic and social activities;
- the skills and knowledge available for development, particular through innovation

For realising the Lisbon goals the labour market is very important because it stresses more and better jobs. On the other hand one of conditions that stimulates innovation is the presence of high educated and skilled people.

In this paper we take the valuing of stocks of capital, notably of social and human capital, as a framework to link demographic change, regional workforce and population size and it's characteristics to sustainable regional development and it's relations with the other two dimensions. In this conceptualization regional development is more sustainable as it maintains or increases the total stock of social and human capital in a region. Differences between these stocks of social and human capital in different regions lead to an unbalanced development and inequity between regions.

The capitals approach to sustainable development

The capitals approach takes as a starting point the idea that sustainable development can be defined by reference to changes in the stock of different forms of capital. Here we distinguish four different forms of capital:

- economic (manufactured or human made) capital;

- human capital (individual skills and resources);
- social capital (relating to norms and social relationships);
- natural (or environmental) capital.

A way of looking on sustainable development is that the sum of these four capitals, per capita, should not decline over time. This is than seen in terms of the total stock, so the decline of one form of capital can be compensated for by an increase in another, such that total stock per capita is maintained. Substitution would only be acceptable for the maintenance of sustainable development as long as the loss of capital doesn't represent a critical threshold beyond which the level of capital stock is deemed to be unacceptable. These acceptance would than be based on costs or social norms. For natural capital it is easy to image the type of threshold. For human and social capital it is much more difficult to image such a threshold. The concept human capital is frequently used in contemporary sociology and economics. It has numerous definitions. In economics the roots of the concept can be traced back to Adam Smith. In socio-economic sciences it was introduced in the sixties. Human capital was defined as the resources at the disposal of individuals and social communities. A relation was made with economic development. Baker emphasized the role of healthy and well-educated people who work actively and thus make decisions on human capital and economic development (Baker, 1964). More recently Richard Florida popularized the human capital factor in economic development. According to Florida economic growth appears where well-educated people are present, as they are advocates of creative capital (Florida, 2004).

The OECD (1998) defines human capital as the knowledge, abilities, competencies and other attributes embodied in individuals who are suitable for the economic activity required of them. This is a broad definition of human capital which does not include formal education received in the course of their learning but includes other skills learned by the individual during training courses (*life-long learning; job training*) and at work (*learning by doing*). These concepts play an important role in the Lisbon strategy.

Social capital is a related concept and often discussed together with human capital. Putnam (2000: 19) writes "whereas physical capital refers to physical objects and human capital refers to the properties of individuals, social capital refers to connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them. And 'interaction enables people to build communities, to commit themselves to each other, and to knit the social fabric. A sense of belonging and the concrete experience of social networks (and the relationships of trust and tolerance that can be involved) can, it is argued, bring great benefits to people'. Both human and social capitals are supposed to shape the level of economic development of countries and regions.

Increasing the stock of the four capitals

There is much literature on how to attain regional economic growth and how this is related to the other forms of capital. There are options to let natural capital grow, for instance by creating nature areas, but this would go on the expenses of economic capital. There has been a lot of discussion if we simultaneously could let the stock of economic and natural capital grow. This is the discussion about decoupling economic growth and environmental pressure, which is mostly about having economic growth without additional degradation of the environment

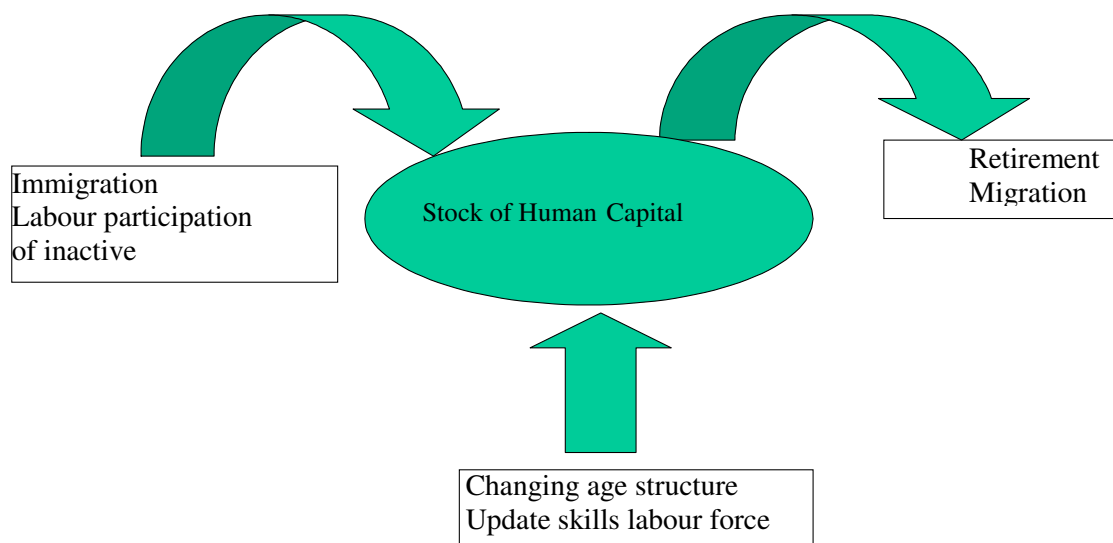
There is an increasing interest among academics and policy makers in the concept of social capital especially in social capital as an important factor in explaining economic success. Although the concept may be highly appealing it is hard to measure empirically. As a consequence empirically the question is still not answered if social capital in terms of generalised trust and association activity influences economic growth (Beugelsdijk and Van Schaik, 2003). If this relation is unclear it offers little possibilities for developing policies to stimulate social capital in a way that it would have a positive impact on economic growth.

Our focus here is human capital. We define human capital as the knowledge, skills, competencies, and attributes, embodied in individuals that facilitate the creation of personal, social and economic well-being (OECD, 2002).

We consider it as a form of ‘capital’, which can accumulate over time, were we can invest in and which can depreciate. Not everybody agrees about the use of human capital in relation to human development. The objections are that human (and social) capital are not a form of material, energy or money, it is not a good. Another objection is that human capital degrades people to only economic production factors. And indeed one way of looking on human capital is as a production factor to produce economic output. Human capital can not only be seen as a means for economic development were education makes people more productive in economy. Education (and other individual attributes like health) leads to the individual ability to lead a joyful, fulfilling life (Meadows, 1998). The end of a raise of human capital is than social well being (of individuals); the goal of the social dimension of sustainable development. As human capital is higher, especially if we operationalise it as a higher the level of education of the population, it can be more productive for both the economic and the social dimension of sustainable development. Sustainable development is the balancing of the various types of capital so that they do not hold back each other.

Changing the ‘regional stock’.

We translate the capitals approach here in ‘stock’ approach to show through what mechanism the regional workforce. This illustrated in the following model.



We will look here into four mechanisms related to this model;

- What adds to the stock?
- What reduces the stock?
- What changes the composition of the stock?
- What changes the need for a workforce of a certain size?

The first mechanism concerns factors that add to the stock. The first way to let a regional stock grow is new young people entering the work force. Due to demographic change less and less young people will be available. Some regions are lucky because they have the presence of a good infrastructure for (higher) education and maybe be able to keep a greater share of the graduates of this education in the own region. Another mechanism is to let more previously inactive people enter the workforce. Some speak here about a silent reserve of women not working yet or people who are unemployed, who could be used in the labour process. This means that although the population as a whole shrinks and the number of people who can work (roughly between 16-65) shrinks likewise, through a higher labour participation of those who do not work or work full time yet, the size of the labour force can stay on the same level.

Another mechanism to raise the regional stock is immigration from other regions in the country. This means that through economic and quality of life factors mentioned before people would decide to move to the region to work and live there. Some factors as for instance higher wages could potentially also bring more commuters to the region. The last factor, immigration from other countries where there are still people available could be another mechanism. This factor is politically strongly contested. First there is the question if these people, particular if they concern skilled people, can be missed in their home country. And secondly there is political opposition, mostly from right wing parties who oppose against bringing foreigners with different religions and ethnic and cultural background to the country. The exception seems to be higher educated for whom they are willing to make an exception. And short term seasons workers, who do not want to settle permanently are more accepted, but they only form a solution for particular shortages in the labour force.

The second type of mechanism concern the factors that reduce the stock. Here the relation between demographic change and the shrinking work force is the most obvious one. These factors are old people leaving the work force because of retirement and the migration of people to other regions in the country or the migration to other countries. If this migration concerns skilled or higher educated workers we often talk about brain drain.

Demographic change does not only concern the size of the regional stock but also changes in the composition of the regional stock. Characteristics of a stock can be the type of economic clusters in the region, the average age of the working population, the level of skills and education, labour participation within the stock (number of part-timers), the number of commuters to the region or the number of commuters in the stock. The composition will depend on factors as the peripherality of the region, transport infrastructure, availability of natural resources, etc. The average age of the work force changes because of ageing. Another characteristic that can change is the average level of skills and of education due to for instance life long learning. And also the labour participation level (of part timers) in the work force can change.

As we have mentioned before the size of a stock is relative anyway, depending on the demand for labour caused by changes in the economy and economic clusters. The changing demand can be initiated by policies and investments. And the demand for labour of certain clusters can change due to rationalisation of services and production (IT), the outsourcing of production and services to other regions and countries

Examples from the DC NOISE labour market projects

The labour markets in the action regions in the DC NOISE project face similar challenges within the different situation and characteristics of their own region. Changes in the labour markets are not homogenous. The main changes in demographic characteristics in the labour markets like ageing, depopulation, shortage of highly educated employees, etc will depend on regional characteristics. Also the effects of demographic change on sectors of the labour market can be quite different. For example, the effects on the health care sector is different in comparison with the effects on the industrial sector where potentially more labour could be rationalised or outsourced to other parts of the world. There will also be a difference in labour mobility. Higher educated will more easily go to other regions or even other countries, a phenomenon known as brain drain.

Some regions in the project are more peripheral and others are more core economic regions. They have their own economic structures and have undergone very different regional structural economic changes. Migration of the labour force to other regions is more likely in peripheral regions as core economic regions will have more economic power and a different salary structure. The acceptance of solutions will also be different between the different regions. For instance the level of immigration is influenced by political decisions.

The measures in the demonstration projects are focussing on what is seen as a specific problem within the regional labour market because of demographic change. There is no objective reason why a stock of a certain size or with certain characteristics would pose a problem for a region. Where a certain stock would lead to problems in one region it does not have to lead to problems in another region. This is relative to the demand and supply of labour in the region. This does not just have to be a problem with a general lack of supply. In the first place there could be a specific demand of a certain economic or service cluster for a workforce of a certain size, age and education level which is not or will not be present anymore in the future in the region. Secondly a problem could be that although there is enough supply of labour in the future, there is mismatch in supply and demand. For instance labour of a certain qualification level is asked while there is an oversupply of low qualified labour. Problems can also lie more specifically in the characteristics of the workforce. So although there is enough supply of people with the right qualifications to fulfil all jobs there can be a loss of senior knowledge because of ageing. Or there might be a lack of young, recently educated. This could threaten the innovative capacity of the workforce because an ageing could become more risk avoiding and less ambitious. The measures in the demonstration projects at the one hand address these problems and on the other hand use the mechanism to change or stop the change of the regional stock as described in this paper.

The first type of measures in the demonstration projects concern creating enough supply of in a specific labour cluster. When labour supply gets short the public

services have to compete for people. Particular in economic good times a government job is seen as less favourable compared with private business where jobs are attributed characteristics like more dynamics and wages are presumed to be higher than in the public sector. In economic bad time people are more willing to accept a public service job with more job security.

In the DC Noise partner region Knutepunkt Sørlandet, in the city of Kritiansand coordinated actions are undertaken to recruit and keep highly qualified personnel for public services. For instance by collecting the public sector vacancies on one website. The project particular focuses on the fields of social health care, the technical branches in public services and the school network were the competition with the private sector is felt the strongest.

The public service where the problem of getting enough people is largest, because more people are needed as a result of the ageing population, is the health care sector. In the partner region Groningen the demonstration project focuses on interesting new people for health care jobs, but also on motivating healthcare workers to stay in the sector. To interest more young people to work in the health care sector innovative care solutions like IT are stimulated. Though process of mentoring and coaching, knowledge and skills of older, experienced people in the health care sector are transferred to new people and this is also used to motivate people for health care jobs. Unfortunate many older workers in the health care sector quit there job, while as we have seen the workforce in general is becoming older. The partner region East Flanders focus in their demonstration project on a better labour market participation in the health care sector, especially of 50plus people as a way to not only keep workers in the healthcare system but also to find new people.

As we mentioned above part of the solutions for a shrinking workforce is working on the mismatch between supply and demand, were at the one hand people are not active on the labour market because there are for instance unemployed, and on the other hand more people will be needed in the future. In the partner city region Hamburg the demonstration project concerns the integration of long term unemployed elderly (50plus) into the labour market through extensive processes of matching, education and coaching of people. Part of the supply problem is not only people being unemployed, but also people leaving the region. In our partner region Groningen part of the demonstration project is the long-term retention of poor educated people for the region by offering them training and/or guiding them towards health care jobs.

As we mentioned before particular higher educated are very mobile on the labour market. Higher educated are crucial for a strong regional competitive economy in sense of the Lisbon strategy.

In the partner region Twente the demonstration project is about getting and keeping enough higher educated and skilled people in the workforce. Measures concern interesting graduates to work in the region and attract people from other regions by publicity campaigns and facilitating their move to the region. As we have seen above, to interest people for a region has much to do with the attractiveness of a region. The labour market demonstration project in the city region Bremen therefore focuses on raising the attractiveness of a city region to highly trained employees.

The problem with a shrinking work force not just lies in to few people but also in the loss of senior knowledge due to retirement. In the partner region Knutepunkt Sørlandet, in the town of Venesla, the demonstration project focuses on keeping senior staff (and their knowledge) in the municipal organizations by motivating and facilitating people that run towards their retirement to keep longer in the organization. To secure that the knowledge of employees stays in (smaller) companies a

demonstration project is set up in our partner region Zeeland to document knowledge, skills and procedures with means like videos.

To keep older people in the workforce is not just a matter of motivating the employees but we also need an age-conscious staff policy in organisations, particularly towards 50plus citizens. In the province of West Flanders the demonstration project works on sensitizing the labour market for the particular problems of 50plus employees and reinforcing their position.

Conclusions

This paper addressed the question *what can local and regional actors do to overcome the negative effects of demographic change on the labour market and seize opportunities of demographic change?*

We discussed the changes in the regional workforce through demographic with the help of a simple input and output model, presenting the regional workforce as a stock of people. The underlying mechanisms were used to describe a number of measures within the DC Noise demonstration projects that to illustrate how negative effects can be overcome.

What we can learn is that the regions face very similar problems but come up with different solutions depending on different mechanisms. Starting point for all projects is however that we have to raise awareness on demographic change and the effect on the labour market to create (new) solutions. Transnational cooperation plays an important role to help to achieve this. Through transnational cooperation we learn about solutions tailored to the specific region, but also learn from good examples for other regions within the North Sea Region. We learn about obstacles and changes, and do's and don'ts. The exchange of regional consequences and solutions are an important tool for raising the awareness and the problem perception in the DC NOISE regions. All regions are forerunners in some aspects, due to their demonstration projects and can thus inspire the other regions.

An important starting point underlying many of the demonstration projects is that we should not accept the relative low labour participation rates of the elderly. The process of an ageing society will then automatically result in a shrinking labour force. We have to develop a different view towards the traditional labour force age (16-64) and its characteristic (silent reserves). Furthermore, we have to realize that, in the end, demographic change is all about sustainable development. There can only be a sustainable future if all capitals (ecological, economic, human) are in balance in a region.

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