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Growing surrounded by decline: do the growing sectors benefit from sharing a labour pool with declining sectors

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Abstract

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The existing state -of - the-art: The paper deals with the question: how the hiring behaviour of growing sectors is influenced by proximity to declining sectors? The current findings regarding the influence of proximity to other sectors on hiring behaviour mainly concern labour pooling in agglomerations. It has been shown that in addition to increasing the match quality, the sectoral agglomerations absorb the fluctuations in labour demand when these fluctuations are not correlated among establishments. A similar argument has been developed for sectors, that is sectors benefit from being close to each other since the sectoral shocks can be absorbed better. To our best knowledge the empirical evidence for the benefits of labour pooling among sectors has been limited (except Frenken et al (2010) showing that the Dutch sectors with greater unrelated variety have more favourable unemployment rates, that is the unemployment is effectively absorbed by growing sectors).

The contribution of this paper: We are going to further look into whether the proximity to declining sectors influence the hiring behaviour of the growing sectors. The paper contributes to understanding the intersectoral flows (since the role of geography has been largely neglected in research on intersectoral mobility) and the spatial hiring behaviour (so far the research delivers quite general results or is only descriptive). It has implications on regional development and smooth

sectoral shifts.

Theoretical arguments: We argue that the growing sectors benefit from being close to declining sectors due to access to a large labour pool in a close proximity. The geographical proximity is important provided well studied employees? and employers? aversion to distance when forming jobs matches. We hypothesize that 1) if the growing sectors are selected based on national growth rates, their regional growth rates are higher in the regions where declining sectors are present to a greater extent. The productivity of employees living close is higher and the costs are lower thus making additional hiring more desirable. 2) The average distance to new employees in growing sectors is shorter if they are situated close to declining regions due to a labour pool in vicinity. 3) The greater growth is (partially) explained by shorter distance, that is the growing sectors grow faster if they are located close to declining sectors because of labour pooling.
Data and methods: We use a unique microdataset provided by Statistics Netherlands. It covers all the jobs 2006-2010. The rich data enables us to effectively link firms, employees and locations at every given period of time 2006-2010 as well as determine various characteristics of firms (sector, location, size), jobs (location, wages, part time factor, type of contract) and people (residential location).
We classify the regions on the national level (based on Dutch Statistics classification at 3 digits level) into growing, declining, and stable. We run OLS for all 3 hypotheses above. In addition to considering proximity to declining sectors we also add a variable for proximity to declining sectors in the same 1 digit class to see how much relatedness matters. We control for the characteristics of the new inflows, firms and region.

Results: The preliminary results offer at the moment little support for the hypothesis that the intersectoral labour pooling benefits the growing sectors. Explanations for the lack of intersectoral labour pooling are proposed and suggestions for further extensions of the model are developed.

References: Frenken, K., van Oort, F., & Verburg, T. (2007). Related variety, unrelated variety and regional economic growth. Regional Studies, 41(5).

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Conference paper for DRUID Academy 2014

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Abstract

Background: there is some evidence accumulated that labour pooling is an important motive for agglomeration and that sectors experiencing more idiosyncratic volatility are indeed more likely to agglomerate in order to be able to absorb the labour demand shocks better. The same argument has been developed further to suggest that not only the firms of one sector benefit from a common labour pool, but also sectors benefit from a sectoral diversity in the region as their sector-level labour demand shocks can be absorbed better. This paper tests if indeed the growing sectors benefit from proximity to declining sectors. Data and methods: rich microdatasets are used with micro-level data on jobs, firms and employees. OLS regression is conducted. Results: The preliminary results show that while labour pooling with declining sectors has indeed a positive effects on the regional growth of nationally growing sectors, the total effects of collocation with declining sectors are negative for growing sectors, especially on a smaller geographical scale.

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Introduction

It has been argued that the famous Schumpeterian notion of creative destruction also has a distinct geographic dimension. For instance, Dumais et al (1997) observe the great scale of job creation and destruction in the United States in the last two decades of the twentieth century. While the levels of geographical concentration remained approximately the same over this period, the job destruction and creation process has shifted many employees across plants, firms, and locations. More recently, Essletzbichler (2004) analysed the geography of job creation and destruction from 1967 to 1997 in the United States uncovering 'a complex picture undermining the simple notion of the snowbelt-sunbelt shift'.

In their analysis on the manufacturing sectors, Atzema & Wever (1999, pp. 67-82)) argue that historically the Dutch manufacturing industry has also undergone considerable geographic shifts: from the process of regional specialization up to approximately 1963 to the spatial deconcentration that followed. They show that jobs were transferred, created and destroyed in different regions, heavily influenced by path dependency in response to regions' natural advantages, availability of labour force and the presence of other sectors. For instance, the foundations for Stork Technical Services, a Dutch firm currently employing approximately 14500 employees and numerous establishments all over the world, were laid in 1868, when Charles Stork started a firm in Hengelo to repair and construct machinery for the local textile industry (Atzema & Wever, 1991, p.68, Stork Technical Services website).

The processes of creative jobs destruction geography are governed by mechanisms, such as firms' location considerations for relocation or opening a new plant (see Duranton & Overman, 2008) and the distinct profiles of the regions in terms of natural advantages, dominating sectors, sectoral diversity, agglomeration, and labour force supply. Labour force supply is mentioned here separately from agglomeration (as opposed to Marshall's labour pooling as one of the agglomeration benefits) for reasons on which we expand below. The aforementioned processes create spatial distributions of displaced employees as well as employment growth, thus often creating various degrees of spatial mismatch and encouraging geographical or intersectoral mobility of the employees.

The existing cross-sectoral labour flows research largely neglects the role of geography. We argue that the role of geography cannot be ignored due to the following reasons: firstly, as argued above, the job seekers and the new vacancies are not uniformly spread in the space but rather have a distinctive pattern. Secondly, this distribution matters since both people and firms are distance-averse. As Sandow & Westin argue, relocation or long commutes deteriorate employee's personal relationships and community ties, and often put extra pressure on the spatially mobile employee's partner (2010). There are numerous studies showing that employees would be willing to pay considerable amounts of money to avoid/ reduce their commutes (e.g. Brownstone & Small (2004), Rouwendal (1999), van Ommeren et al (2000)). As far as the firms are concerned, Zenou (2002) suggests a model in which firms set efficiency wages and determine the optimal catchment area. Hiring from outside the area is avoided as the remote workers are more tired and less efficient at work. Hanson & Pratt (1992) interview employers and note that they perceive that workers living close to the plant are more productive, less stressed, and more motivated to work. Some findings indicate that the employees at least partially contribute to monetary relocation or commuting costs (e.g. Rupert et al. 2009, Mulalic et al, 2010, van Ommeren et al, 2007, van Ommeren & Rietveld, 2007). If the job-seekers and firms are generally distance-averse, this could be even more the case for cross-sectoral job matches. The match quality of an intersectoral job match is lower (here I follow the argument of van Ours & van der Tak (1992)), and therefore it is likely that the poor quality of the job match would not make the spatial mobility worthwhile.

It can be hypothesized that the skills transfer would be made easier if the growing sectors were located close to declining sectors. Thus the paper looks into how the growing sectors' hiring behaviour is influenced by the proximity to declining sectors. Answering such a question is important as the investments in human capital nowadays are greater than ever; therefore shifting to new sectors that leave

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the previously generated labour skills idle is also more costly than ever. Hindering the development of successful growing industries also hampers the economic growth and competitiveness of a country.

The contributions of the paper are the following. Firstly, it contributes to incorporating the geographical distance into understanding cross-sectoral flows, which has been lacking in the intersectoral flows literature. Another contribution is made to understanding spatial hiring behaviour. The present research (focusing mostly on firm level) is quite scarce and delivers only very general findings (e.g. Zenou, 2002) or is only descriptive (Russo, 1996). The paper has far-reaching implications on regional development and smooth sectoral shifts.

Labour pooling among sectors

It has been already long conceptualised that firms have various collocation considerations, including also an easy access to labour force. Alfred Marshall has suggested in 1920 that labour pooling is one of the reasons for firms to agglomerate. The firms in agglomeration enjoy a shared labour pool and can form many high-quality labour matches with employees in the close vicinity. Labour pooling has since remained in the modern line of conceptualizing agglomerations, also supported by empirical evidence, as discussed below.

Rosenthal & Strange (2001) and Ellison et al (2007) test all three agglomeration mechanisms proposed by Marshal: lower transport costs, because of proximity to suppliers and consumers, labour pooling and knowledge spillovers. Rosenthal & Strange (2001) use the data on the United States manufacturing industries to regress Ellison-Glaeser measure of spatial concentration on the proxies of industry characteristics: knowledge spillovers, labour pooling, input sharing, product shipping costs and natural advantage. They repeat the regression for different geographical levels: state, county and zipcode. Proxies for labour pooling are found to have the most robust effect present at all geographic levels. Ellison et al (2007) find support for all of Marshall's mechanisms analysing the pairwise coagglomeration data 1972-1997 in United States manufacturing industries. They test whether sectors locate close to sectors that are their suppliers or customers, close to industries using similar working force or close to industries sharing ideas. Ellison et al find support for all of the mechanisms but their results suggest that input-output dependencies is the most important factor followed by labour pooling.

Two mechanisms are suggested to explain how labour pooling benefits the hiring firms (Moretti, 2012):

1. If a greater labour pool is available, the markets are 'thicker' and the matches are of better quality.
2. A laid-off employee can find a new job more easily in a thick labour market if the lay-off is caused by firm-specific problems and not recession. Similarly, firms can fill new vacancies better. A requirement is again that the firm labour demand growth is firm-specific only and not correlated across firms.

The focus of the paper lies predominantly on the second point. This point is also supported by empirical evidence: Overman and Puga (2010) show that the sectors, whose firms are more prone to idiosyncratic volatility, are indeed more likely to agglomerate. They argue ,'The crucial point, as previously discussed, is that a labor pooling advantage only arises if whenever a plant expands employment, many other plants using similar workers are contracting and vice versa. That is, what matters is the plants' idiosyncratic need to alter employment.'

However, labour demand changes are not always uncorrelated across firms but rather to great extent also depend on a broader economic environment. Following Overman and Puga' (2010) argument, in this case labour pooling might be more harmful to a firm that it would be advantageous. If many establishments experience growth in labour demand simultaneously, the negative effects of labour poaching would dominate the positive effects of absorbing the idiosyncratic volatility (see Combes & Duranton (2006) for analysis of positive effects of labour pooling versus negative effects of labour poaching). It seems

therefore that as firms' labour demand grow they benefit from sharing labour pool with the firms whose labour demand decreases.

In other words, firms do not want to be close to firms using the same labour skills as Marshall's labour pooling has been often conceptualized. As determined by the laws of demand and supply, firms benefit from being close to labour force, not to other firms. Though indirectly the presence of other firms enables generating a bigger labour pool , other firms are also direct competitors for the labour force. While it is likely that most of the times the magnitude of the desirable labour pool and the number of firms competing for it are in the state of equilibrium, certain (temporary) discrepancies are bound to arise if there indeed are patterns in labour demand growth of the firms located close to each other.

In order to address the issue that the labour demand changes are not always uncorrelated across firms but rather to great extent also depend on a broader economic environment an argument similar to that of Overman and Puga (2010) has also been developed for sectors. The argument states that sectors benefit from a greater sectoral diversity in the region as the sectoral labour demand shocks can be absorbed by other sectors more easily. The application of Overman & Puga's (2010) findings to sectors is meaningful in several ways. First of all, the magnitude of intersectoral labour flows suggest that the labour pooling is by no means limited to one sector (e.g. in Neffke & Henning's data (2013) 77.2% of all job changers have switched sectors measuring at four digit level). Secondly, the sectoral shifts can be of a more substantial importance in comparison to fairly short-lived and unpredictable idiosyncratic establishment-level labour demand fluctuations.

This argument has been presented in various manners. Pasinetti (1993) argues that due to technological change certain industries are inevitably experience declining unemployment. One way of dealing with technological unemployment is increasing the diversity by creating new goods and services to absorb the redundant employees. Boschma & Iammarino (2009) also speculate that a diverse economy can better absorb assymetrical and sectoral shocks through redirecting the redundant employees into other sectors. Frenken et al (2006) suggest 3 mechanisms through which the sectoral diversity benefit regions (distinguishing between related and unrelated variety): Jacob's spillovers, portfolio diversification protecting the region from external shocks in demand, and the easier redundant labour force absorption in growing sectors.

Similarly, the idea of (human) resources reallocation among firms and sectors has also been formulated in the release hypothesis (Brown et al, 2013). In attempt to explain the often observed correlation between firms' births and deaths, the release hypothesis proposes that when firms die, resources, such as cheap physical assets and skilled labour force, are released, which attracts new firms. However, no clear empirical evidence has been found for this hypothesis (Brown et al, 2013). In the case of this paper, it can be hypothesized that the presence of human resources (though possibly also other resources) in the vicinity encourages firms' births, expansion or immigration.

A natural objection to treating different sectoral agglomeration just as within-sector agglomeration is that transitions between jobs are simpler within the same sector. Since Becker (1964) started the discussion on the specificity of skills (general training versus firm-specific training) much research has focused on how general the human capital is. There is indeed some evidence that the skills are not fully transferred between sectors. The sector changers face a decrease in income (Neal, 1995, Haynes at al, 2002, Parent,2000). Greenaway et al (2000) argue that job seekers are reluctant to change sector and only do so if they cannot find a job in their previous sector for a long time. Bleakley and Lin (2007) indeed show that the employees switch occupations and sectors less often in more densely populated areas. This suggests that in thick markets the employees choose to stay within the same sector/ occupation and only when the job opportunities are sparse do they switch sectors/ occupations, inevitably lowering the quality of labour match.

Therefore while the human capital is to some extent sector-specific and the job seekers are quite averse to between-sectors mobility, under less favourable conditions (such as the decline of the old sector)

switching sectors becomes an acceptable option. It is quite unclear whether the firms are also unwilling to hire sector switchers or all the costs are endured by the employee.

Hypotheses

H1 Growing sectors grow more rapidly in the regions where they are located close to declining sectors. The productivity of employees living close is higher and the costs are lower. As discussed above, they are less tired, more efficient and motivated the firm does not have to compensate their relocation or commuting expenditures. This makes additional hiring more desirable.

H2 The average distance to new inflows in growing sectors is shorter when they are located close to declining sectors.

H3 The growth is (partially) explained by a shorter hiring distance.

That is, growing sectors grow faster when situated close to declining sectors and the reason for that is a labour pool close in the vicinity.

Data

The paper uses unique very rich microdatasets provided by Statistics Netherlands. The datasets contain detailed information on employment histories as well as characteristics of firms (sector, location, size), jobs (location, wages, part time factor, type of contract (fixed-term or indefinite duration)...) and employees (residential location). The constructed dataset covers all jobs in the Netherlands over the period from 2006 to 2011. However, the analysis is only conducted for years 2007 to 2011 as the data from 2006 is only used as an input to calculate the growth in year 2007.

The rich data enables us to effectively link firms, employees and locations at every given period of time between 2006 and 2011 as well as determine various characteristics of firms (sector, location, size), jobs (location, wages, part time factor, type of contract) and people (residential location).

However, the dataset has some limitations related to the location of the jobs. Statistics Netherlands provides two data sources: one of them records the location of the firms but the location for firms with more establishments is imputed to be the location of the main establishment. The second dataset registers the location of jobs. Here an algorithm is used to assign people to establishments, so that the number of jobs assigned to an establishment corresponds to the factual number of jobs in the establishment. Assigning jobs to establishments is, however, based on minimizing the home—one- of- the-establishments distances rather than the factual location of the job. Besides, the location of the jobs is only registered in December. Thus the location is unknown for jobs that only exist briefly between the Decembers of two years.

In addition to that, certain assumptions had to be made given the complexity of the data. There are numerous employees (typically with fixed-term job contracts) that have episodes of the same job with gaps of various length in between. This probably happens as employee's temporary contract expires and is not renewed straight away but only after a certain time. A question arises whether those episodes should be treated as a one job or several jobs, whether renewing a contract at a previous employer is comparable to finding a new job. Here those jobs are treated as a one job if the gap between two episodes is shorter than six months. Also a very small fraction of the employees (<0.005%) have two episodes of the same job at a time. This is probably attributable to hiring people on the project basis for more than one project at a time.

Model

Based on the growth rates the sectors (measured at three digits level at Standard Firms Classification 2008 (Dutch: Standaard Bedrijf Indeling 2008, further referred to as SFC2008)) are classified into stable, declining and growing. The analysis is conducted with several definitions of stable, declining and growing sectors to ensure the robustness of the results. According to the first definition, the categories are

assigned so that 25% the fastest growing sectors are considered to be growing (the percentage is based on the number of FTEs in the sectors rather than the number of sectors themselves) and 25% in the most declining sectors are considered to be declining. Other percentages, such as 20% and 30% are also used in the analysis (referred to as the second and third definition in the text). According to another definition (below referred to as the fourth definition) the sectors falling within the range mean sectoral growth at a certain year +/- ½ *standard deviation* are considered to be stable, sectors above and below these lines are considered to be growing and declining respectively. Again, the sectors are weighted by the number of FTEs they employ. Such a classification has little to do with actual growth or decline but rather concerns the relative position of the sector with regard to that of the other sectors in a certain year. After performing the analyses, the fourth definition seems to be inadequate due to the distribution of the sectoral growth at some years being far from normal.

A region is further defined a NUTS3 region though the analysis are also later conducted on municipality level as well for better understanding of the scale of geographical effects. While the data on jobs and people's location is also available on a smaller municipality level, the general feeling is that municipality offers a poor approximation for the geographical boundaries of a labour market. Only 42.9 % of the jobs that started over the period from 2006 to 2011 are in the same municipality as the residential location of the employee, while for NUTS3 area the percentage reaches 65.5%. On a more practical note, since the distance is measured between the centres of municipalities, using the municipalities as the units of analysis seems to be too a fine level to combine with the distance data.

The regression is conducted for the three hypotheses. The distance to new inflows and regional growth of the growing sectors (in FTEs) is regressed on the share of declining sector employment (in FTEs) in the region. In addition to that, it is also checked what role the sectoral relatedness plays by including not only the declining sectors employment, but also the declining sectors employment in the same one-digit or two-digits group in SFC2008.

We control for regional factors, such as average wages in the region, diversification level of the region, agglomeration effects. The rationale for controlling for average wages and diversity is that better educated and more diverse regions are known to be more innovative and adaptive to new technologies (Lin, 2011). At the times of sectoral shifts such regions might be better than the others in finding new niches for their skills and adapting the old skills for new tasks. We also control for agglomeration effects since the thickness of the labour markets can also easily affect at which geographical and skills distance the new employees are hired (as shown by e.g. Bleakley & Lin, 2007). The sectoral diversity of the region is operationalized as Herfindahl-Hirschman index, calculated at two digits level. Since the complete data on educational levels of the regions is lacking, average wages, known to correlate strongly with the education levels, are used instead. The agglomeration effects are operationalized as the working age (20-65) population density in the region and location quotient of the sector.

The characteristics of the inflows (average wage, average part-time factor, share with fixed duration contracts) and the firm size are also controlled for. Accounting for the characteristics of the inflows is important since different groups of employees are averse to distance and restricted to their local labour market to different extent. The research findings indicate people tend to have different spatial search strategies with regard to the skills level (e.g. Bound & Holzer, 2000, Reisinger, 2003). The part-time jobs or flexible jobs offer lower returns from accepting a job and therefore spatial mobility might become less acceptable.

Following Frenken et al (2004) and Frenken et al (2007), we also include control variables, such as the level of investment into the sector in a region area (though the sector in the available data is defined more broadly than the 3digits group definition used here), the change of dwelling stocks in the region, the change in business area in the region.

1. The effects of proximity to declining sector on the growth of the growing sectors.

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$$\boldsymbol{y = \beta_1 x + \beta_2 x + \beta_3 x + \beta_4 x + \beta_5 ln(x) + \beta_6 x + \beta_7 x + \beta_8 ln(x) + \beta_9 x + \beta_{10} x + \beta_{11} x + \beta_{12} x + \beta_{13} x + \beta_{14} x + \beta_{15} x + C,}$$

Where y=adjusted growth rate in the sector in the region, β_1=sector dummy at one digit level, β_2=province (NUTS2 areas) dummy, β_3=the ratio of FTEs lost in declining sectors in the region to the total number of FTEs in the region, β_4=the percentage of FTEs in declining sectors sharing two (one) first digits with the growing sector in the region, β_5=average wages in the region, β_6=diversification level of the region, β_7=working age population density in the region, β_8=average wage level of the new inflows, β_9=share of the employees with vast contract in the new inflows, β_{10} =average part-time factor of the inflows, β_{11}= average firm size of the sector in the region in FTEs, β_{12}=location quotient, β_{13}=the investment level in the (broadly defined) sector in the region, β_{14}=changes in dwelling stock in the region, β_{15}=the change in business area in the region.

2. The effects of proximity to declining sector on the distance to new inflows of the growing sectors.

$$\boldsymbol{y = \beta_1 x + \beta_2 x + \beta_3 x + \beta_4 x + \beta_5 ln(x) + \beta_6 x + \beta_7 x + \beta_8 ln(x) + \beta_9 x + \beta_{10} x + \beta_{11} x + \beta_{12} x + \beta_{13} x + \beta_{14} x + \beta_{15} x + C,}$$

Where y=average distance to new inflows in the sector in the region, β_1=sector dummy at one digit level, β_2=province (NUTS2 areas) dummy, β_3=the ratio of FTEs lost in declining sectors in the region to the total number of FTEs in the region, β_4=the percentage of FTEs in declining sectors sharing two (one) first digit with the growing sector in the region, β_5=average wages in the region, β_6=diversification level of the region, β_7=working age population density in the region, β_8=average wage level of the new inflows, β_9=share of the employees with vast contract in the new inflows, β_{10} =average part-time factor of the inflows, β_{11}= average firm size of the sector in the region in FTEs, β_{12}=location quotient, β_{13}=the investment level in the (broadly defined) sector in the region, β_{14}=changes in dwelling stock in the region, β_{15}=the change in business area in the region.

3. The effects of proximity to declining sector on the growth of the growing sectors including the distance to new inflows.

$$\boldsymbol{y = \beta_1 x + \beta_2 x + \beta_3 x + \beta_4 x + \beta_5 ln(x) + \beta_6 x + \beta_7 x + \beta_8 ln(x) + \beta_9 x + \beta_{10} x + \beta_{11} x + \beta_{12} x + \beta_{13} x + \beta_{14} x + \beta_{15} x + \beta_{16} x + C,}$$

Where y=adjusted growth rate in the sector in the region, β_1=sector dummy at one digit level, β_2=province (NUTS2 areas) dummy, β_3=the ratio of FTEs lost in declining sectors in the region to the total number of FTEs in the region, β_4=the percentage of FTEs in declining sectors sharing two (one) first digit with the growing sector in the region, β_5=average wages in the region, β_6=diversification level of the region, β_7=working age population density in the region, β_8=average wage level of the new inflows, β_9=share of the employees with vast contract in the new inflows, β_{10} =average part-time factor of the inflows, β_{11}= average firm size of the sector in the region in FTEs, β_{12}=location quotient, β_{13}=the investment level in the (broadly defined) sector in the region, β_{14}=changes in dwelling stock in the region, β_{15}=the change in business area in the region, β_{16}= average distance to new inflows in the sector in the region.

Results

The microdata reveals a much more complex image of the Dutch labour market dynamics than individuals switching between discrete clearly-defined episodes of employment and unemployment as postulated in the theory of labour economics. Rather it is possible for individuals to have more than one job at a time, to be employed and simultaneously have other activities/ statuses (studying, receiving unemployment benefits etc) or to have short employment spells at the same or different firms. Indeed it seems that the long-lasting full-time secure jobs can be largely considered to be a thing of past (owing to the growing flexibilization of labour market in the last years (van Gaalen et al, 2013)) or only reserved to certain groups of employees (women are known to often hold part-time jobs in the Netherlands; part-time

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jobs are also quite common among students). As the data shows, an average job that started over the period from 2006 to 2011 had a workload of 0.54 FTEs. In addition to that, of all the jobs that started in year 2006 48.9 % lasted 6 months or less, 64.9 % lasted a year or less and only 14.1 % were censored at the end of 2011. Recruiting employees via temporary employment agencies is a wide-spread phenomenon in the Netherlands. Of all new jobs that started between year 2006 and 2011 26.12 % jobs were classified in SFC2008 as 78: jobs mediation, temporary employment agencies and personnel management. Even though such jobs typically have a lower workload (the abovementioned 26.12% of jobs only equals 21.78% of new FTEs) and are short-term, they still account for a great share of all jobs. Seemingly such labour market dynamics lends itself easily to the framework described above: due to the flexibility of the labour market the labour force can be reallocated fairly easily according to the labour demand of the employer. It can be argued that the abundance of the short-term part-time jobs from the employee's perspective makes the geographical distance an important factor in the job search behaviour. Firstly, the employees are likely to be less willing to relocate or commute far for a flexible job with a low workload. Secondly, it can be argued that having a flexible and/or part-time job often signals a less strong labour market orientation but instead an orientation towards other place-bound activities, such as parenting or studying.

The data indeed indicates reallocation of employees from declining sectors to growing sectors: the mean sectoral growth of the jobs starting from 2006 to 2011 was significantly higher than the sectoral growth of the jobs that the same individuals held one year before the start of the new jobs. However, it must be said that only in 39.7% of the cases over the period 2007-2011 individuals had a job one year before starting the new job. There are a few possible explanations of this fact. Firstly, the new entrants to the labour market are overrepresented among the individuals starting a job as compared to the individuals holding a job at a certain point in time. Secondly, the individuals with many short jobs are overrepresented in the labour market dynamics as compared to those with more stable jobs. But such individuals are also more likely to have longer spells of unemployment and more likely not to have a job one year prior to accepting a new job.

The Dutch employment in total as measured in FTEs was growing for most of the time over the period from 2007 to 2011 (2,07% growth in 2007, 1,13% growth in 2008, 0.68% decline in 2009, 0.26% growth in 2010 and 0.58% growth in 2011). The sector-region combinations growth patterns how some inertia: being classified as growing or declining according to various definitions is statistically significantly correlated to being classified in the same group in the previous year. It can also be noticed that the regions tend to have a mixture of growing and declining sectors with no considerable differences in this pattern among the parts of the country (figure 1).

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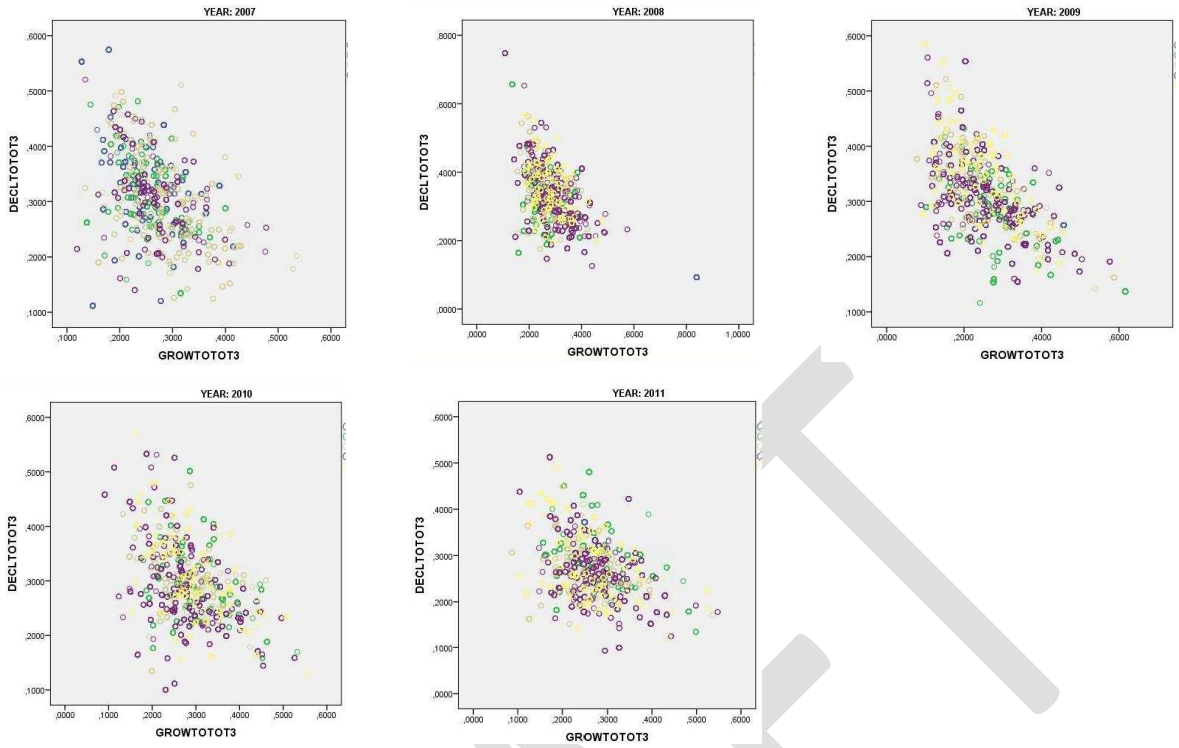

Figure 1 The proportion of FTEs in declining sectors in the regions plotted against the proportion of jobs in growing sectors in the regions 2007-2011 (different colours refer to different parts of the Netherlands)

Pooled OLS has been conducted weighing the cases by the number of FTEs. The baseline model specifications were the following: the first definition of growing and declining sectors was used (so that approximately 25 % FTEs are considered to be in growing sectors, around 25 % FTEs re considered to be in declining sectors, and the rest approximately 50% are considered to be in stable sectors); the related sectors were defined as sharing the first two digits in SFC2008, the model has been ran on NUTS3 level and all the new inflows from year 2007 to year 2011 have been included.

The results show that proximity to all declining sectors is negatively related to regional growth of sectors growing nationally (further referred to as growth), but the proximity to declining related sectors is positively related to growth (table1). It was also hypothesized that the distance to new inflows serves as a mediating variable between the proximity to declining sectors (proximity to declining sectors further refers to the totality of the variables proximity to all declining sectors and proximity to declining related sectors) and growth. The results do not confirm that. The greater proximity to all declining sectors is related to smaller distance to new inflows but the proximity to declining related sectors works the opposite direction (table 2) The shorter distance to new inflows is indeed associated with higher growth, (table 3). However, in the full model when proximity to declining sectors and distance to new inflows are included as independent variables to explain growth, the effects of proximity to declining sectors differ only slightly from the effects in the same model without distance to new inflows (table 4).

R squared=0.867

Variable	Coef.
Province of Groningen	-
Province of Friesland	.007***
Province of Drenthe	.043***

R squared=.329

Variable	Coef.
Province of Groningen	-
Province of Friesland	-.007
Province of Drenthe	,143***

Province of Overijssel	.018***
Province of Flevoland	-
Province of Gelderland	.049***
Province of Utrecht	.011***
Province of Noord-Holland	-
Province of Zuid-Holland	-.031***
Province of Zeeland	.077***
Province of Noord-Brabant	.010***
Province of Limburg	-.013***
Sector: Agriculture, forestry and fishery; extraction of natural resources	.037***
Sector: Manufacturing:I	.021***
Sector: Manufacturing II	.032***
Sector: Manufacturing III	.032***
Sector: Construction, trade, transportation	-.024***
Sector: Hotels and catering,; information & communication	.563***
Sector: Financial institutions, real estate	-.032***
Sector: Consultancy, research and other other commercial services	-.016***
Sector: Governmenteal institutions, education, healthcare	-
Sector: Culture, sport and recreation, other services	.099***
Proximity to all declining sectors	-.033***
Proximity to declining related sectors	.392***
Natural logarithm of average wage in the region	-.022***
Herfindahl-Hirschman index	.010***
Working age population density	.125***
Natural logarithm of the average wage of the inflows	-.008***
Share of FTEs in inflows with flexible contracts	-.025***
Average FTEs per person in inflows	-.138***
Average establishment size in FTEs	.095***
Change in business area	.136***
Changes in dwelling stock	-.019***
Location quotient	-.043***
Investment level	.096***

Table 1. Regressing the growth on proximity to declining sectors. * - significant at 0. 001 level, ** - significant at 0.05 level.**

Province of Overijssel	,041***
Province of Flevoland	-
Province of Gelderland	.123***
Province of Utrecht	.084***
Province of Noord-Holland	-
Province of Zuid-Holland	-.123***
Province of Zeeland	-.023***
Province of Noord-Brabant	.100***
Province of Limburg	.146***
Sector: Agriculture, forestry and fishery; extraction of natural resources	.039***
Sector: Manufacturing:I	.006
Sector: Manufacturing II	.046***
Sector: Manufacturing III	.106***
Sector: Construction, trade, transportation	.070***
Sector: Hotels and catering,; information & communication	-.060***
Sector: Financial institutions, real estate	-.177***
Sector: Consultancy, research and other other commercial services	.051***
Sector: Governmenteal institutions, education, healthcare	
Sector: Culture, sport and recreation, other services	.010**
Proximity to all declining sectors	-.078***
Proximity to declining related sectors	.042***
Natural logarithm of average wage in the region	.064***
Herfindahl-Hirschman index	.136***
Working age population density	-.157***
Natural logarithm of the average wage of the inflows	.138***
Share of FTEs in inflows with flexible contracts	-.028***
Average FTEs per person in inflows	.160***
Average establishment size in FTEs	-.064***
Change in business area	.119***
Changes in dwelling stock	-.113***
Location quotient	.022***
Investment level	.001

Table 2. Regressing the distanc eto new inflows on proximity to declining sectors. * - significant at 0. 001 level, ** - significant at 0.05 level.**

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R squared=.810

Variable	Coef.
Province of Groningen	-
Province of Friesland	.055***
Province of Drenthe	.195***
Province of Overijssel	.088***
Province of Flevoland	-
Province of Gelderland	.138***
Province of Utrecht	.045***
Province of Noord-Holland	.083***
Province of Zuid-Holland	.139***
Province of Zeeland	.081***
Province of Noord-Brabant	.071***
Sector: Agriculture, forestry and fishery; extraction of natural resources	.017***
Sector: Manufacturing:I	.024***
Sector: Manufacturing II	.038***
Sector: Manufacturing III	.027***
Sector: Construction, trade, transportation	.050***
Sector: Hotels and catering,; information & communication	.784***
Sector: Financial institutions, real estate	.042***
Sector: Consultancy, research and other other commercial services	.021***
Sector: Governmenteal institutions, education, healthcare	-
Sector: Culture, sport and recreation, other services	.102***
Average distance to new inflows	-.018***
Natural logarithm of average wage in the region	.104***
Herfindahl-Hirschman index	-.015***
Working age population density	.188***
Natural logarithm of the average wage of the inflows	-.081***
Share of FTEs in inflows with flexible contracts	-.097***
Average FTEs per person in inflows	-.139***
Average establishment size in FTEs	.117***

R squared=.870

Variable	Coef.
Province of Groningen	-
Province of Friesland	.029***
Province of Drenthe	.080***
Province of Overijssel	.051***
Province of Flevoland	-
Province of Gelderland	.078***
Province of Utrecht	.033***
Province of Noord-Holland	.044***
Province of Zuid-Holland	.104***
Province of Zeeland	.030***
Province of Noord-Brabant	-.003
Sector: Agriculture, forestry and fishery; extraction of natural resources	.034***
Sector: Manufacturing:I	.020***
Sector: Manufacturing II	.030***
Sector: Manufacturing III	.029***
Sector: Construction, trade, transportation	-.023***
Sector: Hotels and catering,; information & communication	.565***
Sector: Financial institutions, real estate	-.028***
Sector: Consultancy, research and other other commercial services	-.016***
Sector: Governmenteal institutions, education, healthcare	
Sector: Culture, sport and recreation, other services	.100***
Proximity to declining sectors	-.033***
Proximity to declining related sectors	.391***
Average distance to new inflows	.023***
Natural logarithm of average wage in the region	-.030***
Herfindahl-Hirschman index	.006**
Working age population density	.155***
Natural logarithm of the average wage of the inflows	-.012***
Share of FTEs in inflows with flexible contracts	-.026***

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Change in business area	.058***
Changes in dwelling stock	-.015***
Location quotient	-.025***
Investment level	.119***

Table 3. Regressing the growth on average distance to new inflows. * - significant at 0. 001 level, ** - significant at 0.05 level.**

Average FTEs per person in inflows	-.134***
Average establishment size in FTEs	.095***
Change in business area	.137***
Changes in dwelling stock	-.016***
Location quotient	-.045***
Investment level	.103***

Table 4. Regressing the growth on proximity to declining sectors and average distance to new inflows. * - significant at 0. 001 level, ** - significant at 0.05 level.**

Other specifications of the model have also been tested (see appendix 1). Using other definitions of growth and decline have not changed the results much, except when using the third definition (so that approximately 30% FTEs are considered to be in growing sectors, around 30 % FTEs re considered to be in declining sectors, and the rest approximately 40% are considered to be in stable sectors) both proximity to all declining sectors and related declining sectors were associated to shorter distance to new inflows, but the differences disappears in the full model when also the distance to new inflows is added.

The analysis has also been conducted using different definitions of declining related sectors when the declining related sectors were defined as sharing the same one digit or two digits in SFC2008. The different definitions capture the scale of the skills distance. However, the results of the two models differed only very slightly (appendix 1).

In addition to that, another specification of the model has been tested where only the new inflows that have had a job one year before accepting the analyzed jobs have been included. In this case both proximity to all declining sectors and proximity to related declining sectors are positively related to growth, the effects of distance to new inflows on growth become much smaller and insignificant though they are negative and significant in the full model when accounting for proximity to declining sectors.

The same relationships have also been tested on municipality level for a better understanding of the scale of geographical effects. The relationships on municipality level are quite different from those at NUTS3 areas level: while both the proximity to all declining and all related declining sectors are related to smaller distances to new inflows which in turn are related to a greater growth (the coefficient is much higher than in the models on NUTS 3 areas level), next to this effect, proximity to all declining sectors and related declining sectors also have adverse effects on the growth. Also, in the full model where the growth is regressed on proximity to declining sectors and distance to new inflows, the coefficients of proximity to all declining sectors and related declining sectors do not change much in comparison to the model without the distance (appendix 1, please mind that the coefficients of region and sector dummy variables are not comparable between the models at NUTS3 and municipality level as different reference categories have been used).

Some results are at the moment difficult to interpret due to the possible interaction effects among the proximity to all declining sectors and proximity to related declining sectors. In the future the model would benefit from analysing the proximity to related declining sectors and other declining sectors instead, now as a temporary solution to disentangle their effects the model has also been run only including one of the aforementioned variables at a time. The coefficients of the variables using them separately change only very slightly in the baseline model but if only proximity to all declining sectors is used in the full model the effects of distance to new inflows become negative and significant.

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Conclusions and further research

The influence of proximity to declining sectors seems to not only be limited to positive effects. Generally, if only the distance to all declining sectors is included, it indeed leads to smaller distances to new inflows which in turn is associated with a greater growth but next to this beneficial labour pooling effect the proximity to declining sectors have also negative effects.

The geographical scale also matters greatly. The positive effects of the distance to new inflows on growth are much greater on the municipality level, but the negative effects of proximity to declining sectors on growth are also much stronger. It seems that indeed also the skills relatedness between the growing and the declining sectors matter greatly up to a certain point (while the effects of the proximity to declining related effects are often very different than that of proximity to all declining sectors, at which level the skill relatedness is defined seems not to matter much anymore). As mentioned above, variables such as the proximity to declining related sectors and proximity to other declining sectors need to be created in order to better capture the importance of skills relatedness and disentangle the interaction effects. Especially puzzling is at the moment that in the baseline model and a few other specifications the proximity to all declining sectors is associated with shorter distances to new inflows but the proximity to declining related sectors is related to longer distances to new inflows.

The proximity to declining sectors has negative effects on growth next to positive labour pooling effects as the decline is likely to diminish other positive agglomeration effects: in areas with much decline firms are likely to witness decreasing numbers of suppliers and clients and benefit less from knowledge spillovers – there would be less of knowledge to share and in the case of structural sectoral shifts the declining sectors are likely to only possess knowledge that is outdated and irrelevant. Great decline also makes region less attractive both to employees and firms due to high unemployment levels, neglected properties and lower government investment .

The sign of the distance to new inflows coefficient in the full model is sensitive to the model specification. In any case, adding the distance to new inflows to the model hardly changes the effects (coefficients or significance) of proximity to declining sectors on growth. The negative sign suggests that the positive effects of hiring at shorter distance on growth stretch beyond the declining sectors and possibly beyond the boundaries of geographic units used (supported by the fact that the coefficient of distance to new inflows is negative and fairly high at municipality level as compared to the models at NUTS3 areas level). If this coefficient is positive, it suggests that while the growing sectors benefit from the declining sectors in the vicinity, they are also able to attract people from further away.

The analysis has also been conducted including only the new inflows that have had a job one year before starting at the jobs analyzed. Since the theoretical framework concerns primarily jobs switchers and not new entrants or re-entrants, (and provided the magnitude of new employees that previously were not employed as well as Fallick's (1996) findings on employers' preferences on previous employees' jobs statuses), distinguishing between different groups of inflows seems to be an important extension. A possible addition is creating a proxy that captures the previous status of a new employee better, e.g. whether the employee had a job within one year period before starting at the new job.

A possible shortcoming is that the distance to new inflows data is incomplete. The distance to new inflows is known better for firms constituting of only one establishment and the jobs that exist in December, therefore the results might be biased towards smaller firms and longer jobs.

Another possible extension of the model is including the spatial interactions to the model to analyse how the presence of declining sectors in the regions areas affect the employment growth in the neighbouring regions at different geographic levels.

Time effects are also worth researching. The present set-up hardly allows for a time-series analysis. The possible solutions to analysing the hiring behaviour of growing sectors while having a balanced panel are defining growing sectors based on the 5 year period so that the same sector- region combinations are

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followed the whole period of 5 years. Such a modification is also meaningful in a way that it allows to distinguish between short-term labour demand fluctuations, which, as shown above, can be problematic with the dataset used, and long-term growth. Another possibility is using the Overman & Puga's (2010) approach and focus on idiosyncratic volatility rather than actual growth.

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Appendix 1. Models comparison

1. Regressing growth on proximity to declining sectors.

	Baseline model	Baseline model, third definition of growing and declining sectors	Baseline model, second definition of growing and declining sectors	Baseline model, related sectors are defined as sharing one first digit in SFC2008	Baseline model, only the new inflows that had a job one year ago are included	Baseline model ran on the municipality level	Baseline model without proximity to declining related sectors
R squared	0.867	0.835	0.867	0.839	.978	.190	...
Province of Groningen	-	-	-	-	-	-.006	...
Province of Friesland	.007***	-.004*	.019***	.009***	.022***	-.008	...
Province of Drenthe	.043***	.077***	.068***	.059***	.037***	-.073***	...
Province of Overijssel	.018***	-.009***	.030***	-.017***	.031***	.306***	...
Province of Flevoland	-	-	-	-	-	-.040***	...
Province of Gelderland	.049***	.053***	.061***	.081***	-.028***	.112***	...
Province of Utrecht	.011***	.003	.018***	-.024***	.011***	.250**	...
Province of Noord-Holland	-	-	-	-	-	-	...
Province of Zuid-Holland	-.031***	-.067***	.-030***	-.037***	-.020***	.021***	...
Province of Zeeland	.077***	.079***	.096***	.099***	.082***	-.022***	...
Province of Noord-Brabant	.010***	.015***	.018***	.056***	-.014***	.124***	...
Province of Limburg	-.013***	-.030***	.005	.053***	-.051***	-.024***	...
Sector: Agriculture, forestry and fishery; extraction of natural resources	.037***	.021***	.024***	.049***	.009***	-.101***	...
Sector: Manufacturing:I	.021***	.021***	.022***	.016***	.016***	-.060***	...
Sector: Manufacturing II	.032***	.021***	.034***	.000	.008***	-.159***	...
Sector: Manufacturing III	.032***	.037***	.038***	.035***	.009***	-	...
Sector: Construction, trade, transportation	-.024***	-.079***	-.019***	-.041***	-.041***	-.121***	...
Sector: Hotels and catering,; information & communication	.563***	.654***	.564***	.676***	.643***	-.048***	...
Sector: Financial institutions, real estate	-.032***	-.009***	-.017***	.011***	.017***	.178***	...
Sector: Consultancy, research and other other commercial services	-.016***	-.020***	.003	-.106***	-.067***	-	...
Sector: Governmenteal institutions, education, healthcare	-	-	-	-	-	.008	...
Sector: Culture, sport and recreation, other services	.099***	.074***	.104***	.161***	.025***	-.015*	...
Proximity to declining sectors	-.033***	-.026***	-.030***	-.056***	.024***	-.170***	-.030***
Proximity to declining related sectors	.392***	.291***	.399***	.284***	.327***	-.180***	-

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Natural logarithm of average wage in the region	-.022***	-.033***	-.041***	.097***	-.161***	.115***	...
Herfindahl-Hirschman index	.010***	-.009***	-.005*	-.017***	.039***	.092***	...
Working age population density	.125***	.178***	.174***	.070***	.136***	-.26***	...
Natural logarithm of the average wage of the inflows	-.008***	-.021***	.002	-.062***	.026***	.226***	...
Share of FTEs in inflows with flexible contracts	-.025***	-.035***	-.017***	-.139***	.012***	.162***	...
Average FTEs per person in inflows	-.138***	-.122***	-.139***	-.180***	-.060***	.160***	...
Average establishment size in FTEs	.095***	.110***	.077***	.227***	.133***	-.204***	...
Change in business area	.136***	.070***	.140***	.031***	.107***	-.001	...
Changes in dwelling stock	-.019***	-.022***	-.004*	-.034***	.056***	.091***	...
Location quotient	-.043***	-.032***	-.043***	-.096***	-.108***	-.118***	...
Investment level	.096***	0.56***	.096***	.120***	.000	.044***	...

***** - significant at 0. 001 level, ** - significant at 0.05 level**

2. Regressing distance to new inflows on proximity to declining sectors

	Baseline model	Baseline model, third definition of growing and declining sectors	Baseline model, second definition of growing and declining sectors	Baseline model, related sectors are defined as sharing one first digit in SFC2008	Baseline model, only the new inflows that had a job one year ago are included	Baseline model ran on the municipality level	Baseline model without proximity to declining related sectors
R squared	.329	.321	.315***	.329	.516	.838	...
Province of Groningen	-	-	-	-	-	.015***	...
Province of Friesland	-.007	.052***	.040***	-.009*	.064***	.032***	...
Province of Drenthe	,143***	.290***	.205***	.135***	.277***	.110***	...
Province of Overijssel	,041***	.164***	.099***	.026***	.053***	.066***	...
Province of Flevoland	-	-	-	-	-	.045***	...
Province of Gelderland	.123***	.196***	.194***	.121***	.253***	.048***	...
Province of Utrecht	.084***	.142***	.154***	.079***	.272***	.090***	...
Province of Noord-Holland	-	-	-	-	-	-	...
Province of Zuid-Holland	-.123***	.106***	.077***	-.127***	.036***	-.019***	...
Province of Zeeland	-.023***	.016**	.051***	-.024***	.091***	.044***	...
Province of Noord-Brabant	.100***	.121***	.170***	.103***	.202***	.098***	...
Province of Limburg	.146***	.197***	.191***	.150***	.208***	.046***	...
Sector: Agriculture, forestry and fishery; extraction of natural resources	.039***	.038***	-.003	.045***	.054***	-.110***	...
Sector: Manufacturing:I	.006	.045***	.007	.007	.088***	-.164***	...

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Sector: Manufacturing II	.046***	.026***	.057***	.041***	.103***	-.355***	...
Sector: Manufacturing III	.106***	.077***	.112***	.108***	.214***		...
Sector: Construction, trade, transportation	.070***	.068***	.085***	.057***	.201***	.043***	...
Sector: Hotels and catering,; information & communication	-.060***	-.046***	-.054***	-.067***	-.174***	.008***	...
Sector: Financial institutions, real estate	-.177***	-.146***	-.152***	-.178***	-.271***	-.433***	...
Sector: Consultancy, research and other other commercial services	.051***	.082***	.074***	.038***	.096***		...
Sector: Governmenteal institutions, education, healthcare						-.318***	...
Sector: Culture, sport and recreation, other services	.010**	.004	.035***	.023***	.048***	-.346***	...
Proximity to declining sectors	-.078***	-.047***	-.037***	-.084***	-.042***	-.021***	-.078***
Proximity to declining related sectors	.042***	-.012***	.039***	.060***	.167***	-.020***	-
Natural logarithm of average wage in the region	.064***	.022*	.023	.061***	-.067***	-.013***	...
Herfindahl-Hirschman index	.136***	.106***	.105***	.133***	-.027***	-.060***	...
Working age population density	-.157***	-.095***	-.068***	-.166***	.204***	.113***	...
Natural logarithm of the average wage of the inflows	.138***	.163***	.148***	.140***	.195***	.050***	...
Share of FTEs in inflows with flexible contracts	-.028***	-.102***	-.027***	-.038***	.032***	-.056***	...
Average FTEs per person in inflows	.160***	.144***	.147***	.152***	.132***	-.055***	...
Average establishment size in FTEs	-.064***	-.098***	-.064***	-.042***	-.066***	.463***	...
Change in business area	.119***	.140***	.092***	.113***	.049***	.008***	...
Changes in dwelling stock	-.113***	-.048***	-.129***	-.116***	-.335***	.054***	...
Location quotient	.022***	.065***	-.036***	.012	-.100***	.010	...
Investment level	.001	-.038***	.029***	.0003	.065***	.126***	...

***** - significant at 0. 001 level, ** - significant at 0.05 level**

3. Regressing growth on distance to new inflows

	Baseline model	Baseline model, third definition of growing and declining sectors	Baseline model, second definition of growing and declining sectors	Baseline model, related sectors are defined as sharing one first digit in SFC2008	Baseline model, only the new inflows that had a job one year ago are included
R squared	.810	.802	.811	.969	.163
Province of Groningen	-	-	-	-	-.007
Province of Friesland	.055***	-.001	.037***	.009***	.000

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Province of Drenthe	.195***	,119***	.150***	.026***	-.041***
Province of Overijssel	.088***	-.005*	.047***	.008***	.350***
Province of Flevoland	-	-	-		-.017***
Province of Gelderland	.138***	-.061***	.106***	-.016***	.151***
Province of Utrecht	.045***	.003	.010***	-.008***	.282***
Province of Noord-Holland	.083***	-.076***	-.063***	-.043***	.074***
Province of Zuid-Holland	.139***	.085***	.120***	.038***	-.005
Province of Zeeland	.081***	.016***	.052***	-.014***	.153***
Province of Noord-Brabant	.071***	.008***	.037***	-.026***	-.011
Sector: Agriculture, forestry and fishery; extraction of natural resources	.017***	-.002	.019***	.005***	-.028***
Sector: Manufacturing:I	.024***	.028***	.023***	.009***	-.055***
Sector: Manufacturing II	.038***	.027***	.034***	.009***	-.173***
Sector: Manufacturing III	.027***	.037***	.026***	.008***	-
Sector: Construction, trade, transportation	.050***	.041***	.050***	.014***	.003
Sector: Hotels and catering,; information & communication	.784***	.799***	.783***	.895***	-.020***
Sector: Financial institutions, real estate	.042***	.034***	.035***	.027***	.244***
Sector: Consultancy, research and other other commercial services	.021***	.006**	.017***	-.029***	
Sector: Governmenteal institutions, education, healthcare	-	-	-		-.046***
Sector: Culture, sport and recreation, other services	.102***	.085***	.100***	.022***	-.055***
Average distance to new inflows	-.018***	-.020***	-.015***	-.002	-.173***
Natural logarithm of average wage in the region	.104***	.016**	.102***	-.063***	-.027*
Herfindahl-Hirschman index	-.015***	.006*	-.014***	.045***	.048***
Working age population density	.188***	.173***	.201***	.068***	-.134***
Natural logarithm of the average wage of the inflows	-.081***	-.051***	-.080***	-.011***	**.082*****
Share of FTEs in inflows with flexible contracts	-.097***	-.067***	-.094***	-.013***	.218***
Average FTEs per person in inflows	-.139***	**-.147*****	-.133***	-.038***	.134***
Average establishment size in FTEs	.117***	.118***	.117***	.097***	-.147***
Change in business area	.058***	.088***	.062***	.083***	-.032***
Changes in dwelling stock	-.015***	-.016***	-.015***	.024***	.078***
Location quotient	-.025***	.008**	-.009**	.022***	-.176***
Investment level	.119***	.090***	.117***	.008***	.048***

***** - significant at 0. 001 level, ** - significant at 0.05 level**

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4. Regressing growth on proximity to declining sectors and distance to new inflows

	Baseline model	Baseline model, third definition of growing and declining sectors	Baseline model, second definition of growing and declining sectors	Baseline model, related sectors are defined as sharing one first digit in SFC2008	Baseline model, only the new inflows that had a job one year ago are included	Baseline model ran on the municipality level	Baseline model without proximity to declining related sectors
R squared	.870	.840	.870	.844	.979	.195	...
Province of Groningen	-	-	-	-	-	-.010*	...
Province of Friesland	.029***	-.002	.026***	.037***	.020***	-.005	...
Province of Drenthe	.080***	.075***	.076***	.112***	.041***	-.053***	...
Province of Overijssel	.051***	-.009***	.034***	.023***	.035***	.326***	...
Province of Flevoland	-	-	-	-.	-	-.033***	...
Province of Gelderland	.078***	.055***	.067***	.116***	-.027***	.120***	...
Province of Utrecht	.033***	.000	.016***	.008***	.009***	.269***	...
Province of Noord-Holland	.044***	-.072***	-.036***	.051***	-.014***	.021**	...
Province of Zuid-Holland	.104***	.084***	.107***	.132***	.081***	-.014**	...
Province of Zeeland	.030***	.014***	.019***	.085***	-.016***	.150***	...
Province of Noord-Brabant	-.003	-.046***	-.009***	.075***	-.052***	-.026***	...
Sector: Agriculture, forestry and fishery; extraction of natural resources	.034***	.017***	.023***	.047***	.006***	-.116***	...
Sector: Manufacturing:I	.020***	.017***	.020***	.017***	.010***	-.078***	...
Sector: Manufacturing II	.030***	.018***	.031***	.002	.007***	-.217***	...
Sector: Manufacturing III	.029***	.033***	.035***	.039***	.006***	-	...
Sector: Construction, trade, transportation	-.023***	-.080***	-.020***	-.044***	-.036***	-.102***	...
Sector: Hotels and catering,; information & communication	.565***	.654***	.567***	.677***	.611***	-.045***	...
Sector: Financial institutions, real estate	-.028***	-.006**	-.010***	.007**	.017***	.117***	...
Sector: Consultancy, research and other other commercial services	-.016***	-.026***	.003	-.094***	-.082***	-	...
Sector: Governmenteal institutions, education, healthcare		-	-	-	-	-.047***	...
Sector: Culture, sport and recreation, other services	.100***	.073***	.106***	.166***	.026***	-.070***	...
Proximity to declining sectors	-.033***	-.028***	-.038***	-.060***	.021***	-.172***	-.038***
Proximity to declining related sectors	.391***	.297***	.403***	.287***	.346***	-.179***	-
Average distance to new inflows	.023***	.030***	.034***	-.013***	-.012***	-.184***	-.025***
Natural logarithm of average wage in the region	-.030***	-.040***	-.051	.070***	-.135***	.110***	...
Herfindahl-Hirschman index	.006**	-.008***	-.013***	-.017***	.045***	.083***	...

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Working age population density	.155***	.193***	.209***	.113***	.115***	-.249***	...
Natural logarithm of the average wage of the inflows	-.012***	-.026***	-.002***	-.048***	.007***	.229***	...
Share of FTEs in inflows with flexible contracts	-.026***	-.029***	-.015***	-.138***	.005***	.167***	...
Average FTEs per person in inflows	-.134***	-.115***	-.143***	-.185***	-.037***	.157***	...
Average establishment size in FTEs	.095***	.113***	.079***	.222***	.146***	-.111***	...
Change in business area	.137***	.072***	.143***	.038***	.112***	-.001	...
Changes in dwelling stock	-.016***	-.020***	-.001	-.037***	.060***	.102***	...
Location quotient	-.045***	-.037***	-.044***	-.090***	-.133***	-.120***	...
Investment level	.103***	.064***	.103***	.125***	.003**	.068***	...

***** - significant at 0. 001 level, ** - significant at 0.05 level**

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