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DYNAMIC AND COLLAPSING LOCAL LABOUR MARKETS

Demographically Determined Projections of Local Labour Market Performance

Lars Olof Persson

Nordregio

Box1658

SE-111 86 STOCKHOLM

+46 8 463 5434

larsolof.persson@nordregio.se

Abstract

In Sweden, as in several other European countries, population projections for the next decades indicate that the ageing process and low fertility rates eventually will reduce the size of the total labour force. In addition, an increasing proportion of labour demand will come from the ageing local population's need for basic services. The purpose of this paper is to project this demographically determined labour demand in different types of local labour markets. Many small regions are facing the risk that more or less their entire future labour supply has to match jobs and positions offered in health care and social services for immediate local consumption. We expect this development to become a challenge to both labour market and regional policy.

Introduction

In Sweden, as in several other European countries, population projections for the next decades indicate that the ageing process and low fertility rates eventually will reduce the size of the total labour force. This will be pronounced in the regions that already have a long history of population decline. In addition, an increasing proportion of labour demand will come from the ageing local population's need for basic services. The purpose of this paper is to project this demographically determined labour demand in different types of local labour markets in Sweden. Many small regions are facing the risk that more or less their entire future labour supply has to match jobs and positions offered in health care and social services for immediate local consumption. Besides the associated financial problems, which have to be solved within the national welfare systems, we expect this development to become a challenge to both labour market and regional policy.

We anticipate that in specific regions, the public sector will give priority to training, recruitment and motivating an increasing share of the local labour for this demographically determined welfare and service production. At the same time, this is likely to further reduce the local supply of labour for economic activities in the private sector. This clearly counteracts the regional policy goals stressing the importance of economic growth and well functioning local labour markets in all regions. Evidently, it has to be put into question whether the labour supply problem can be solved by traditional labour market mechanisms in these regions. It should also be questioned whether incentives to economic development and restructuring of the economy are feasible in these regions, which are likely to experience permanent shortage of labour due to the demographic structure of the local population.

Accentuated Bias of the Urban Structure

With only a few metropolitan regions, but numerous medium sized and small towns, Sweden faces problems in reaching a recently suggested objective for regional growth policy, i e to maintain and create well performing local labour markets in all parts of the country. The strategy proposed for achieving this is ”regional enlargement”, e g extended commuting areas, increased labour mobility and widened wage range. The current appr. one hundred local labour market areas range from the majority – roughly 60 - with less than 30 000 inhabitants to only four with more than 200 000. Upward labour mobility and inter-industry exchange options are severely constrained at the numerous small labour markets compared to the dynamic metropolitan regions.

During the last decades of the 20th century, out of these smallest labour markets 45 decreased their population (Figure 1). The performance of these declining labour markets is in general poor, not necessarily in terms of unemployment, but rather in terms of diversity of employment oppportunities. They are characterized by limited attraction to locals and migrants searching employment careers and experience a continous net loss of migrants. In addition most of the small LLMs supply a labour with low educational level – less than 25 percent of the labour force has more than 15 years of formal training (Figure 2). Already today, this is an obvious restriction for new economic sectors to establish and grow in these regions.

Out of the medium sized appr. 25 labour markets (30 000-100 000 inhabitants) only five increased in population numbers during the last 30 years, while 18 of the 24 largest labour markets 18 increased their population.

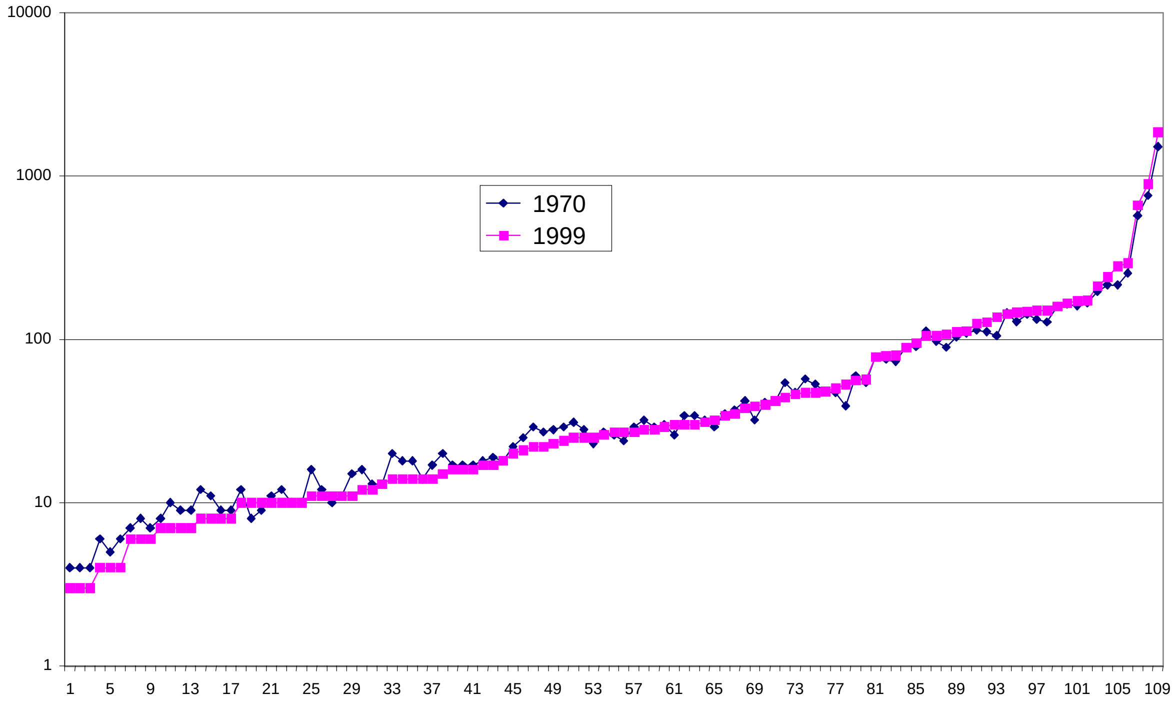

Figure 1. 109 local labour markets in Sweden ranked according to population numbers in 1999. Population in 1970 and 1999. Log scale.

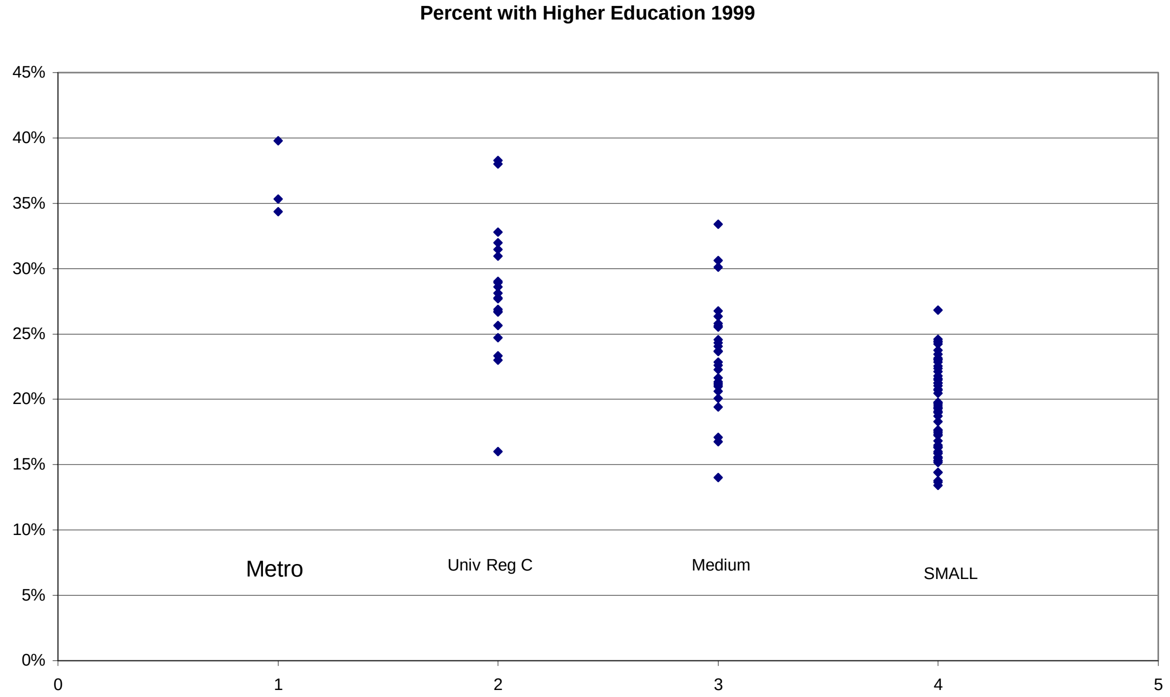

Figure 2. Employment with more than 15 years of formal training 1999. 109 local labour markets within four regional categories[1].

A population forecast for the period 2000-2010 and further on is based on the assumption that the migration pattern from the last decades of the 20th century is likely to persist. Out of the 60 smallest LLMs not less than 55 are expected to lose population in the coming ten years. Among medium sized LLMs only three are expected to ingrease in population, while the majority is likely to experience severe losses. Six of the LLMs with more than 100 000 inhabitants are predicted to increase in population numbers (Nygren & Persson 2000).

Increasing Demographically Determined Service Demand

[1] The 109 Swedish LLM areas are classified according to a selection of production conditions. The purpose is to identify similarities in the fundamental production conditions that prevail. This does not necessarily mean that we expect all LLMs within one and the same regional category perform at the same level in all respects. The LLM regions are analyzed and weighted on the basis of five fundamental production conditions.

This procedure resulted in four major regional categories:

- Metropolitan: Sweden's three main conurbations Stockholm, Gothenburg and Malmö
- 20 regions with a full university and main regional centers, with a regional institute of higher education.
- 27 medium sized manufacturing industrial regions or service centers
- 59 small, manufacturing industry-biased regions or with a high proportion of employees in the public service sector.

Mainly because of the ageing population, more employment will be generated in the local and regional economy. Currently, as an average for Sweden, approximately half of the labour market consists of jobs in the local economy, i e for a market within the borders of a functional commuting area. These jobs are largely in personal services - health care, schools, social services - and retail trade, local transportation and small business services. Such manual, social or communicative jobs have to be performed at a specific place and time, and most of them are not likely to be replaced by robots in a foreseeable future. This is particularly valid for personal services involving personal *attention*, which according to some authors are likely to become still more important in the future (Reich 2000). Figure 3 is a tentative model of the future labour market, focusing industries with differing demand for (a) local presence of labour force and (b) pridominantly manual or intellectual skills.

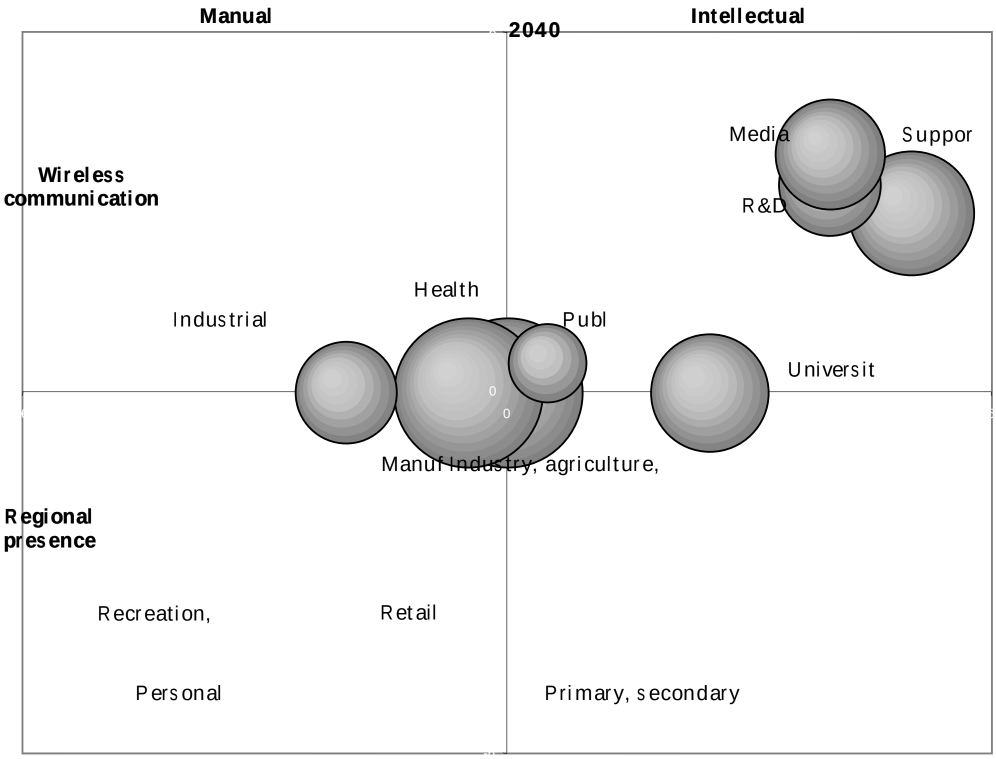

Figure 3. Future labour market. Industries with differing demand for local presence of labour force and predominantly requiring labour with manual or intellectual skills.

Already today, there are some local labour markets in Sweden which are to more than 60 percent depending on jobs for local the local market. The small rural municipality of Övertorneå – in the north - has 69 percent of the labour force in local employment, while the small but dynamic SME-dominated labour market of Gnosjö and Gislaved – in the south - only have 21 percent in jobs for the local market. These two examples of the wide variation is a reflection of a general north-south divide among small regions within Sweden in this respect.

From a local labour market perspective, it can be argued that strong dependence on local and demographically determined employment is a stabilising factor, since production of such services is largely financed by public funds within consolidated welfare programmes. However, the limited range of professions and industrial branches which are present, together with the dominance of public sector as employer, contributes to the rigidity at these labour markets.

Regions dominated by employment in exporting industries with more or less global markets are, looked upon from the same perspective, more vulnerable to downswings in business cycles. At the same time, with the presence of a large and competent labour force in innovative and productive economic sectors, the latter are better prepared for dynamic restructuring of the regional economy.

Projection of Demographically Determined Local Employment

A regional population forecast has been used in order to calculate future demand for local services. We have estimated that future labour demand will remain as it is specified today relating to the age structure. This can be viewed as a politically agreed minimum level of service quality. The main alternative for population in 2040 will generate a demograhically "determined" labour demand corresponding to 53 percent of total labour force in the country as a whole. This is a moderate increase as compared to today's 49 percent. The proportion is expected to increase at a similar rate in all local labour markets (Figure 4). However, it should be carefully noticed that in a not too distant future, we expect a number of local labour markets to be demanding more than 100 percent of the local labour force to supply the – more or less - politically decided objectives for local services.

In Figure 4, these LLMs are represented as having 100 percent of the future labour force bound for local service production. They are all quite small. Some of the are located in southern Sweden – Eksjö, Laxå, Hällefors - with options to rely on labour supply from neighbouring urban centres. Some of the - Gällivare, Kiruna, Lycksele and Storuman - however are located in remote and isolated parts of the country and will experience difficult problems in recruiting qualified labour for the local service production (cf Appendix Table 1)

The regional planning problem is obvious. In a future situation, where two thirds of the labour force in some thirty of the Swedish LLMs has to be occupied in health care, social services, and other mainly publicly financed jobs, the market for labour is likely to collaps. In addition, there is an obvious risk that at the same time, the labour market for private business in service and goods production will erode as well, simply because of increasing shortage of local labour.

Figure 5, showing the proportion of labour supply “unbound” by local service demand in the 109 LLMs, clearly illustrates the projected wide variation both between and within four regional categories in terms of labour market performance. While all metropolitan regions typically will be able to supply half of their labour force for competitive industries penetrating non-local markets, only a few of the medium sized an small regions will be able to do that.

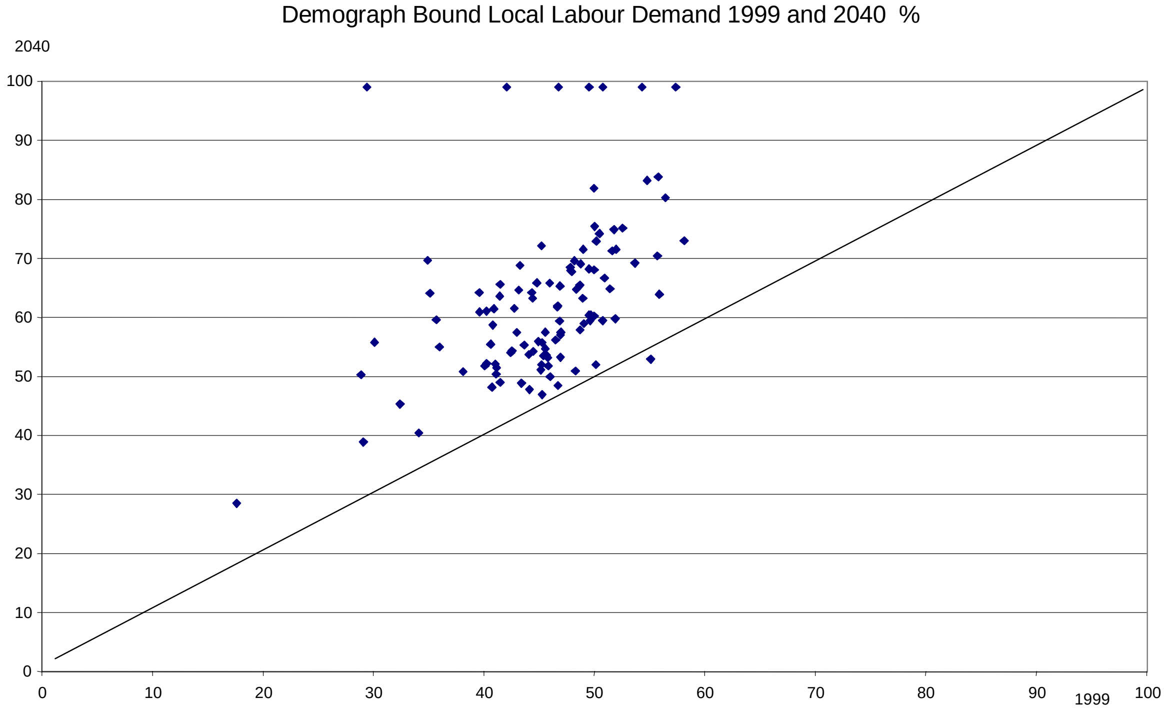

Figure 4. Local service employment in % of total 1999 and 2040 (projection) at 109 Swedish local labour markets. *Tcoloksyss (RAAB)*

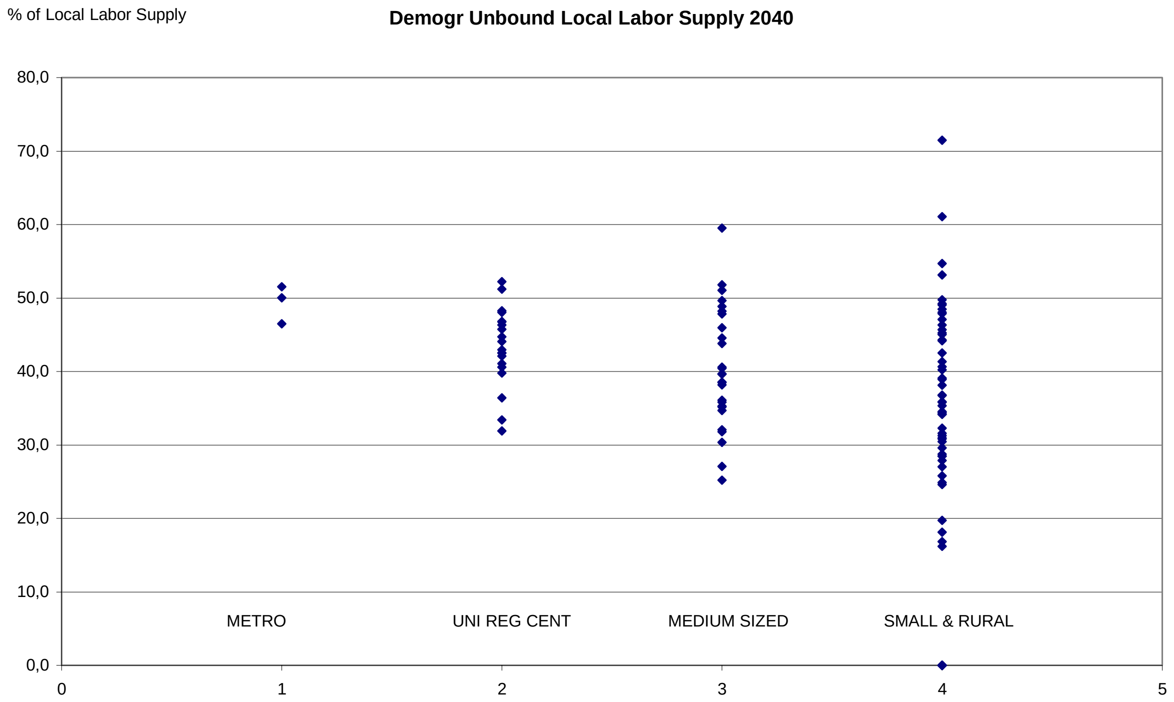

Figure 5. Labour supply "unbound" by local service demand in % of total labour supply in 109 local labour markets in four regional categories. tjömdata (RAAB)

Preliminary Results and Concluding Remarks

Population projections for the next 30-40 years illuminate that the ageing process will reduce the labour force in Sweden, starting from 2020. Long before that, however, this process will continue in the regions that already have a long history of population decline. At most local labour markets an increasing proportion of labour demand will come from the ageing local population's need for basic services. This will not only stress the problems of service provision in several small and remote regions, but – and probably more important - also restrict the local supply of labour for other economic activities. We anticipate that these problems can not be solved by traditional labour market mechanisms.

A classification of 109 local labour markets 2040 by estimated proportion of (1) labour force with long formal education (>15 years) and (2) labour unbound by local service demand reveals that appr. 20 LLMs are likely to have difficulties in developing as efficient markets for labour (Figure 6). Projections of the future education level in each region are based on historical trends of participation rates in higher education in specified age groups and on the assumption that the present government's goal that 50 percents participation rate in post secondary education will be fulfilled at the national level. The low education level of the future labour force is likely to hamper development of competitive industries in these regions, at the same time as the supply decreases - or even empties - of labour unbound by the local demand for services and personal attention. We expect the social policy in Sweden to give priority to such services to be supplied with qualified local work force.

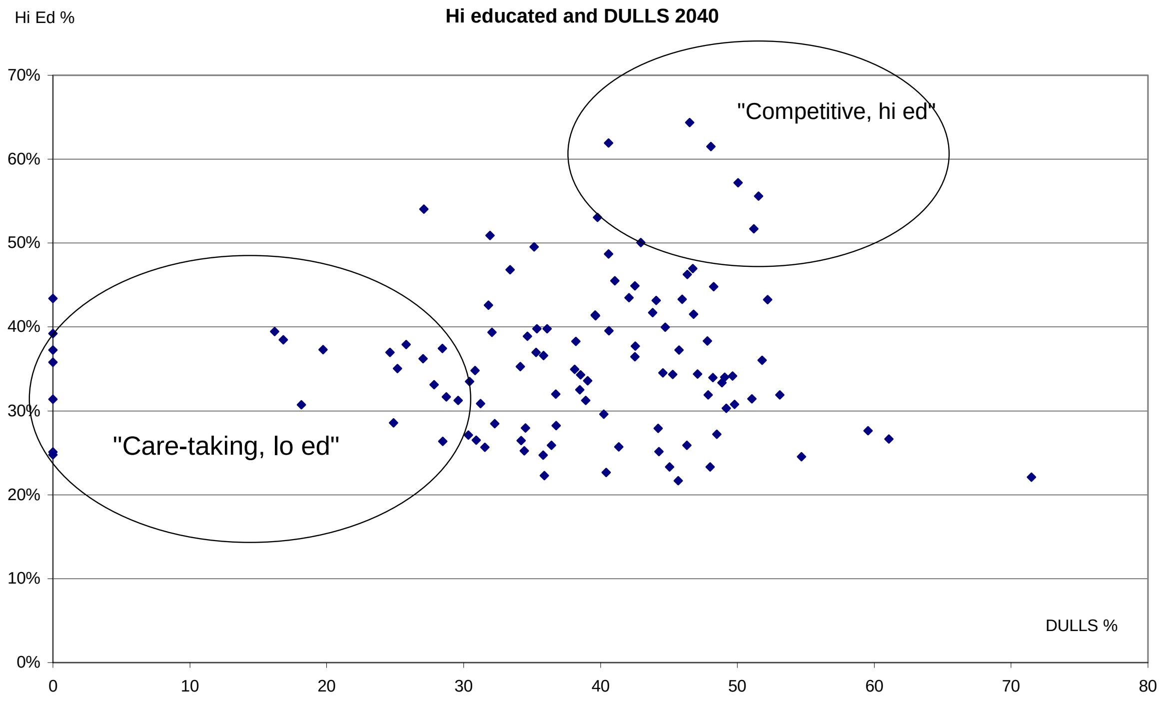

Figure 6. Classification of 109 local labour markets 2040 by projected proportion of (1) total work force with > 15 years formal education and (2) supply of labour unbound by local service demand (DULLS).

These LLMs, each with more than 70 percent of employment in local services and less than 40 percent of labour force with more than 15 years of training are located in all parts of the country:

Southern Sweden*:* Hagfors, Hedemora, Västervik, Eksjö, Hällefors and Laxå

Northern Sweden: Arjeplog, Arvidsjaur, Bollnäs-Ovanåker, Jokkmokk, Kalix, Pajala, Sollefteå, Strömsund, Torsby, Övertorneå, Gällivare, Kiruna, Lycksele-Malå, Storuman

In these regions, the labour supply problem can not be solved by traditional labour market mechanisms. We expect this development to become a major challenge to labour market, social and regional policy in the coming years. To implement social policy programmes, local service production has probably to be planned at the regional level and in municipal co-operation. This is obvious for regions where we project that the local labour supply will not sufficient to match the local demand for social services, i e in the LLMs of Eksjö, Gällivare, Hällefors, Kiruna, Lycksele, Laxå and Storuman. It should also be questioned which public incentives to economic development and restructuring of the economy are feasible in these regions, which are likely to experience permanent shortage of labour due to the demographic structure of the local population.

References

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Reich, R.B, 2000, *The Future of Success*

Appendix

Table A1. Labour supply unbound by local service demand (% of total labour supply at 109 local labour markets) and % with higher education 2040 (projection).

LLM	DULLS2040	Univ2040%	Class
Arjeplog	18	31%	CT
Arvidsjaur	26	38%	CT
Arvika	45	34%	
Avesta	31	31%	
Bengtsfors	45	23%	
Bollnäs	29	32%	CT
Borås	46	37%	
Dorotea	32	26%	
Eksjö	0	43%	CT
Emmaboda	50	31%	
Eskilstuna	44	42%	
Fagersta	39	31%	
Falkenberg	49	33%	
Falun	41	46%	
Filipstad	34	25%	
Gislaved	61	27%	
Gnosjö	71	22%	
Gotland	38	38%	
Gullspång	40	23%	
Gällivare	0	36%	CT
Gävle	44	43%	
Göteborg	50	57%	CO
Hagfors	28	26%	CT
Halmstad	48	45%	
Haparanda	47	34%	
Hedemora	25	35%	CT
Helsingborg	52	43%	
Hofors	30	27%	
Hudiksvall	35	37%	
Hultsfred	36	25%	

Hylte	55	25%	
Hällefors	0	25%	CT
Härjedalen	35	28%	
Härnösand	27	54%	
Jokkmokk	28	33%	CT
Jönköping	46	46%	
Kalix	17	38%	CT
Kalmar	42	44%	
Karlshamn	35	39%	
Karlskoga	36	37%	
Karlskrona	41	49%	
Karlstad	40	53%	CO
Katrineholm	43	36%	
Kiruna	0	37%	CT
Kramfors	30	33%	
Kristianstad	45	40%	
Kristinehamn	32	39%	
Köping	45	35%	
Laxå	0	25%	CT
Lidköping	48	38%	
Linköping	51	52%	CO
Ljungby	39	34%	
Ljusdal	40	30%	
Ludvika	34	35%	
Luleå	32	51%	
Lycksele	0	39%	CT
Lysekil	52	36%	
Malmö	52	56%	CO
Malung	34	26%	
Mariestad	48	34%	
Markaryd	36	22%	
Mora	28	37%	CT
Munkfors	41	26%	
Norrköping	47	41%	
Nyköping	40	41%	
Nässjö	50	34%	
Olofström	44	28%	
Oskarshamn	38	32%	
Pajala	20	37%	CT
Skellefteå	32	43%	

Skövde	43	38%	
Sollefteå	16	39%	CT
Sorsele	31	27%	
Stockholm	47	64%	CO
Storuman	0	31%	CT
Strömstad	49	34%	
Strömsund	25	29%	CT
Sundsvall	33	47%	
Sunne	53	32%	
Säffle	38	35%	
Sävsjö	48	27%	
Söderhamn	37	32%	
Tidaholm	60	28%	
Torsby	30	31%	CT
Tranås	51	31%	
Trollhättan	46	43%	
Uddevalla	36	40%	
Umeå	41	62%	CO
Uppsala	48	62%	CO
Vansbro	46	22%	
Varberg	40	41%	
Vetlanda	49	30%	
Vilhelmina	31	35%	
Vimmerby	46	26%	
Värnamo	39	34%	
Västervik	25	37%	CT
Västerås	43	50%	CO
Växjö	43	45%	
Ånge	36	26%	
Åre	41	40%	
Årjäng	48	23%	
Åsele	32	28%	
Älmhult	48	32%	
Älvdalen	44	25%	
Örebro	47	47%	
Örnsköldsvik	35	40%	
Östersund	35	50%	
Överkalix	37	28%	
Övertorneå	27	36%	CT