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## **Networks versus Economic Incentives**

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## **Abstract**

*The article analyses the neglected relationship between networks and unemployment. It challenges the neo-classic understanding of the transition from unemployment to employment and elaborates the line of reasoning within economic sociology. Based on theories of information problems at the labour market it is argued that networks are of special importance for unemployed. At the same time unemployed is likely to lose network, which starts a vicious circle. Due to a formalised labour market, high integration of long-term unemployed and a number of other factors Denmark comes close to a worst case for this line of reasoning. However, based on comprehensive surveys it is shown that employers do hire through informal channels, do use referrals, and are suspicious when hiring unemployed. It is also shown that unemployed do lose network, especially so-called occupational ties, which significantly reduces their chances of employment.*

*Key words: Economic incentives, Networks, recruitment, social capital, unemployment*

## **Introduction**

In economic text books the labour market is often introduced as any other market; the commodity is labour, the price is the wage, the buyers are employers and the sellers are workers. The market fluctuates (in the short run) until it clears and thereby find an equilibrium. If the demand is larger than the supply then the wages will increase, whereby workers will supply more labour. If supply is higher than demand then wages will decrease, whereby more employers will demand more labour. In this perfect market there is only voluntary unemployment. If unemployment was not voluntary then unemployed would offer their labour at a lower price. Thereby demand for labour would increase until everybody works for the new equilibrium wage. This elegant package is, with a number of modifications, the point of departure for neo-classic labour market theory. Therefore it is a main line of reasoning that unemployment is caused by the fact that state intervention, e.g. through unemployment benefits and social assistance schemes, have disturbed the market by generating incentive problems – sometimes even labelled unemployment traps.

However, the idea of the perfect market is also a good point of departure for our alternative line of reasoning. The smooth mechanisms of the perfect market are namely dependent on full information and the exchange of standard commodities. Thus, employers have to be aware of all potential workers (and their wage demands) and workers have to be aware of all job openings (and the wage offered). It is also assumed that one worker easily can be replaced with another worker (that requires a lower wage) and that an employer easily can be replaced with another employer (that offers a higher wage). In any market it is impossible to fulfil these assumptions but the labour market comes close to a worst case. Human beings are clearly not a standard commodity and it is obvious that workers cannot be aware of all job openings and employers cannot be aware of all (potential) workers. Therefore the market mechanisms do not work smoothly, which especially becomes problematic for unemployed (see below).

The information problem is actually well recognised within modern economic theory. In 2001 Spence, Akerlof and Stiglitz got the Nobel Prize in economy for their work on economic models with lack of information. Most famous is Spence's Job market signalling model (1973). The idea is that employers cannot observe the true productivity of a given worker, which makes hiring a risky business. In such a market the applicants will be judged on some average assumption about productivity, so-called statistical discrimination. The media example is a high productive immigrant who never makes it to the job interview due to the fact that the average productivity of immigrant workers is low. However, Spence makes an important distinction between indices and signals. Indi-

ces are personal characteristics such as age, sex and ethnicity, which the workers cannot change. Signals are personal characteristics such as education, appearance etc., which the workers can change and invest in. Now the idea is that high productive workers more easily than low productive workers can obtain educational degrees. Therefore high productive workers will be inclined to invest in education, which then is a signal of their true productivity. Thus, the provoking claim is that education is a selection mechanism that works even in the case when education does not contribute to increased productivity in it selves. We just want to add that the line of reasoning is most suitable for a situation where someone outside the labour market wants to enter the labour market, i.e. unemployment is more interesting than transitions from one job to another.

Though information problems are recognised most economic theories are reluctant to see the market as an institution embedded in and dependent on a larger social context, which is the main claim within the small sociological tradition labelled economic sociology. Within this tradition the seminal work on labour market is Mark Grannovetter's book from 1974, "Getting a job", which had networks as the focal point. The crucial point is that networks, i.e. ties to family, friends and acquaintances, carry information about job openings (see Calvó-Armengol & Jackson, 2004, for a number of economic studies that also include networks). In the Boston area Grannovetter analysed 282 men working in professional, technical, or managerial occupations who had changed job within the last year. The main finding was that informal networks were used intensively when these workers got a new job. The high degree of informal recruitment has been confirmed by a number of following studies (see Grannovetter, 1995, Lin, 1999, or Marsden & Gorman, 2001 for an overview). The sociologists tend to take for granted that societies are made of networks and therefore they have not felt a strong need to explain why networks actually are of high importance for getting job. However, by combining the idea of networks with the economists' thinking of markets and information problems the line of reasoning can be improved quite a lot.

First of all, networks are an easy and cheap way to announce a vacancy, i.e. the transaction costs connected to spreading or gathering information (Williamson, 1985) are relatively low. Secondly, networks offer information that cannot be observed from either indices or signals. The employers do not only want to know about sex, age, race, educational level etc. Employers also want to know, especially when hiring an unemployed, about the general job motivation, whether he/she will be able to socialise with other employees, customers etc. Thus, networks give access to more sufficient information. Finally, and most interestingly for economic theory, networks also give access to trustworthy information. The market failure described by Akerlof, one the other Nobel



prize winners from 2001, in his famous article about used cars (1970) is caused by the fact that the information is asymmetric distributed. The owner knows something about the car that the buyers do not know, e.g. whether it is a “lemon” (a bad assembled car). And the owner has a clear incentive to hide the facts if the car actually is a “lemon”. Therefore the buyers are extremely cautious when buying a used car and the price is typically too low. The same is the case at the labour market. The workers have information about themselves, which the employers cannot access, and they have a clear incentive to present themselves in the best manner. And the other way around; employers have information about themselves, e.g. about the work pressure, limited carrier possibilities etc, which the applicants cannot access. Therefore there is a large demand for trustworthy information at the labour market. Especially in the case of hiring an unemployed employers can be expected to be cautious; the person could be a “lemon”, which already had been dismissed by other employers. When employers hire through an already employee the latter can provide trustworthy information about the new worker (given the assumption that the already employee wants to maintain a good relationship with the employers). Thus, based on an economic theoretical framework we can explain why networks are of great of importance in general and even more so in case of unemployment. For some reasons (see below) the sociological tradition following Grannovetter has not paid much attention to the question of networks and unemployment, which is the point of departure for this article.

The article is divided into seven sections. In the first section be briefly review the small discussion economic sociologists have had about networks and unemployment. The following sections add knowledge to these discussions by analysing how recruitment process takes places in a Western country, Denmark, where recruitment in general, and especially in the case of unemployed, is believed to be much formalised. By means of a comprehensive survey material collected in 2006/7 (see section two) the articles describes how employers actually recruit (section three), how employed and unemployed are embedded in different networks (section four), and how unemployed and employed actually got information about vacancies (section five). Section six establishes a statistical model that shows that networks seemingly are more important than economic incentives. The findings are summarised in the last section.

## **Networks and unemployment – a neglected theme**

Within the sociological research tradition, primarily American, the main focus has been how access to networks influences the overall societal stratification; typically measured as annual income. Especially, it has been discussed how so-called weak ties (acquaintances) are better than strong ties (family and close friends) to foster upwards social mobility. The argument is that strong ties only give access to information about job openings within the narrow social surroundings. In contrast weak ties give access to broader social surroundings and can cross social strata. Thereby they may give access to more jobs (Grannovetter 1973) and better jobs (Lin, Enselin & Vaughn, 1981). Most studies have also replicated Grannovetter's design where a group of employed that recently have changed jobs was asked how they got to know about this job. Using this procedure there are only few previously unemployed in the sample and therefore we do not have solid empirical evidence about how networks influence the transition from unemployment to employment. Furthermore, recent studies using better statistical modelling have questioned the link between networks and wages/job prestige (e.g. Mouw 2003), i.e. the impact on overall stratification, which makes the case of transition from unemployment to employment even more interesting.

From the general study we can naturally deduce that ‘...where and how we spend our working hours ... depend very much on how we are embedded in networks of social contact’ (Granovetter, 1995; 141). And we can make the obvious claim that these networks of social contacts are not equally distributed among citizens. The family and the friends of the family are to a large extent inherited. Furthermore, it is well known that we tend to find friends that look very much like ourselves. So if one belongs to a stratum that is of high risk of unemployment it is likely that many of ones friends also are unemployed. In a US context this was e.g. believed to be an important factor in Wilson's study about the origin of the urban underclass (Wilson, 1996). Finally, Grannovetter found that the few responds that had an unemployment spell between the two jobs had used the strong ties more (1974:54), which turned into the argument that “strong ties have greater motivation to be of assistance and are typically more easily available” (1982:113). Therefore one could argue that the strong ties will be activated during unemployment.

To these ‘static’ lines of reasoning one could add the possibility of positive and vicious circles. Being employed normally increases a person's number of social contacts, which might start a positive circle that makes it easier and easier to get recommendations and information about job openings. The other way around being unemployed might make it more and more difficult to get recommendations and information about job openings. First of all unemployed loses contact

with former colleagues. Secondly, it is also a general claim that unemployed over time isolate themselves from other forms of networks (e.g. Jahoda, 1992). Thirdly, over time, the employers naturally become more and more afraid of hiring a “lemon”. Thus, unemployed can be caught in a trap whether they become more and more dependent on networks, which they at the same time gradually lose (see Calvó-Armengol & Jackson, 2004, for formal model for the latter proposition).

One exception to the rule of studying a sample of employed is a Swedish study where Korpi (2001) finds a relationship between the size of networks among unemployed and employment chances. However, even based on this study we do not know whether networks are more or less relevant for unemployed than for employed. Korpi suggests that networks might be more important for the less intense job search of the already employed and less important for the intense job hunt of the unemployed that often (at least in the Swedish case) is supported by public employment offices. As the Danish data also include a sample of ordinary employed it gives us a unique possibility to test this proposition. Finally, even though the article was titled “Good friends in bad times” Korpi’s data did not allow him describe the suggested impact of strong ties in bad times.

### **Country selection and data: A best case for formal recruitment**

Our empirical analysis is based on a comprehensive survey material from Denmark. We do not have much cross-country knowledge about recruitment processes but as already mentioned Denmark can be seen as a best case for formal recruitment of unemployed; 1) In contrast to the US, where most of the network studies have been conducted, Denmark has a national employment agency that operates a nationwide system of employment agencies. 2) Denmark is the OECD country that spends most money per unemployed one active labour market policy (2000). The unemployed are offered courses in writing applications, job training, education etc. Thus, as in the Swedish case, serious attempts to make unemployed less dependent on their networks have been implemented. 3) By comparative European standards the degree of job protection is very low, close to UK and US, which theoretically should make employers less worried about hiring a “lemon”. 4) Denmark is a country with very low corruption and one of the highest level of interpersonal trust (Larsen, 2007), which should enhance the faith in information that employers and employee give each other. 5) Finally, the level of unemployment was low at the time of interview, around 4 percent (OECD standardised). A number of studies of companies’ recruitment behaviour suggest that informal recruitment is used from frequently in times of recession, where it is easy to obtain labour and where the

screening costs connected to formal recruitment are higher (Wood, 1985, Windolf et. al. 1988, Russo et al. 2000).

Thus, we have reasons to believe informal recruitment is less frequent in Denmark than in most other countries. The assumption is supported by the only cross-national indicator of informal recruitment of unemployed, which we have been able to find. Studying youth unemployment in eight countries Harsløf (2006) found that the Danish youth was the least likely to enter the labour market through informal channels. Only 30 percent of the Danish youth entered through informal channels, which should be compared to 37 percent in Sweden, 39 percent in Finland, 39 percent in Scotland, 40 percent in Norway, 50 percent in Spain, 57 percent in Germany and 81 percent in Italy. This is not a perfect measure but it is fair proxy for the general degree of formality at the labour market. Finally it should be mentioned that Denmark have very generous unemployment benefits and social assistance, especially for low-income groups, which give Danish unemployed better resources to prevent the vicious circles related to unemployment (e.g. Galli & Paugam, 2000).

The Danish survey material was gathered in 2006 and 2007 and consists of three studies.

- Firstly, we have a postal survey among private Danish employers with twenty employees or above (manufacturing) or ten employees or above (service). 4000 companies were selected from a national register and 1775 returned the questionnaire. The public sector, which probably has more formal recruitment procedures than the private sector, was not included in the survey.
- Secondly, we have conducted a survey (telephone combined with face to face interviews) among three different types of unemployed. The first sample was randomly drawn from a population that was fulltime unemployed in the second quarter of 2006. This group receives either unemployment benefits or social assistance but is not troubled by large social problems, which allow them not to be available for the labour market. Among the 1810 selected we managed to interview 969. The second sample was randomly drawn from the citizens that participated in activation measures (minimum one month in the second quarter of 2006). When participating in these measures these citizens are no longer registered in the former register. Therefore we had to take two samples. Among the 1023 selected we managed to interview 459. The third sample was taken among all social assistance claimants, also those

with problems besides unemployment, that had received benefits for a minimum of three months the second half of 2005. Among the 1248 selected we managed to interview 509. In the article these groups are merged into a sample of long-term unemployed. At the time of interview during the autumn 2006 and spring 2007 many of these unemployed had entered a wage earner job. This gives us a large group of “previously long-term unemployed” (N=487) and a group of “continued long-term unemployed” (N=737). Those who have become students, early retired, self-employed etc. have been excluded from the sample. In the sample unemployed above 54 years and immigrants between 18-54 years were over-sampled. Therefore we operate with weighted data that transform the sample into a representative sample.

- Thirdly, we have conducted a survey among citizens who are not registered as being early retired or unemployed. Among the 3902 selected we managed to interview 1875. Among this group only wage earners are included (N=1075). In the sample employed above 59 years old was over-sampled. Again the data is weighted in order to reach a representative sample of wage earners.

### **The employer’s recruitment behaviour**

In the survey among private companies the persons in charge of human relations has been asked through which channels the company normally announce a new vacancy. The most used channel for recruitment was through job bases at the Internet. 24 percent of the companies “always” use this channel and 47 percent “mostly” use this channel. Thus, the Internet has certainly become a very important tool that probably has reduced some of the information problems at the labour market. However, the second most used channel is to spread the word of a vacancy through the already employed. 16 percent of the companies “always” use this channel and 45 percent “mostly” use this channel. Furthermore, 9 percent “always” and 31 percent “mostly” spread the word among the employer’s others contacts in the branch. Thus, even at the formalised Danish labour market we find a large tendency to announce vacancies through informal channels. Actually, the national employment agency is not used very frequently. 32 percent of the private companies “never” and 40 percent “rarely” announce vacancies here. Therefore the unemployed is more on their own than one could expect from the institutional settings found in Denmark – and the money spent.

There is no doubt that the Internet can solve some of the problems about getting the knowledge about job openings. But it cannot solve the problem with asymmetric distributed and not trustworthy information. This can be seen by the fact that recommendations clearly affect employment chances. In the survey we asked to what extent various forms of recommendations improve the job chances (see table 1).

**Table 1. The importance of various forms of recommendations for employment chances. Percent.**

	Origin of recommendation:					
	Own employees	Former employer, orally	Other in the branch	Former employer, written	Educational institution	Personal at the employment agency
Decisive	13	10	6	5	1	1
Of great importance	51	46	47	39	13	6
Of some importance	30	34	39	47	52	36
Of no importance	4	8	7	8	28	49
Don't know	2	2	2	1	6	10
N	1723	1728	1723	1731	1711	1711

The results indicate that a recommendation from an already employed has the largest effect on the employment chances of an applicant. 13 percent of the employers say that such a recommendation is “decisive” and 51 percent say that it is of “great importance”. An oral recommendation from a former employer might also be of great importance. 10 percent indicate that it is “decisive” and 46 percent that it is of “great importance”. It is interesting that a written recommendation from a former employer is of less importance. 5 percent says it is “decisive” and 39 percent that it is of “great importance”. Our interpretation is that the face-to-face character of the oral recommendation increases the trustworthiness of the information. In between comes recommendation from other contacts in the branch. 6 percent says it is “decisive” and 47 percent says it is of great importance. Recommendations from educational institutions do not improve the employment chances much. 28 percent says it is of “no importance” and 52 percent that it is only of “some importance”. Finally the survey reveals that a recommendation from a job agent in the national employment agency is of least importance. 49 percent says it is of “no importance” and 36 percent says of “some importance”. That the trustworthiness of such a recommendation is low is actually very logical, as it is the job of the job agents to especially help the weakest unemployed.

Finally the survey shows that the employers are extremely sensitive to the length of unemployment when hiring an unemployed. 42 percent of the employers indicated that there was particular risks connected to hiring unemployed above 50 years old and 84 percent indicated particular risks connected to hiring unemployed immigrants. But 100 percent indicated that there were particular risks connected to hiring unemployed with long previous unemployment. The employers also indicated that the two former groups have much better employment chances than the latter group. Thus, being unemployed for a longer period is a very bad signal, which is likely to increase the importance of referrals; at least if they are to enter the private sector. Therefore it is highly interesting to measure these ties to the labour market.

### **Differences in networks between ordinary employed, continued unemployed, and previously unemployed**

As already mentioned the tradition that follows Grannovetter's seminal work distinguishes between strong and weak ties. Below it is argued that, at least in the Danish context, the suggested impact of strong ties in the case of unemployment, such as family, and even 'medium' ties such as friends, seem to be exaggerated. First of all the data show that in terms of contact with the close family (parents, brothers, sisters and children not living at home) there are no large differences between our samples of continued unemployed, previously unemployed and ordinary employed. With 58 percent being in contact "weekly or more" with their close family, and 32 percent approximately "every month" the ordinary employed are only slightly more in contact with the close family and the two other figures. The figures were respectively 51 percent and 24 percent for previously unemployed and 54 percent and 21 percent for continued unemployed. Thus, the traditional isolation thesis does not seem to hold for the contact with close family.

It is also remarkable that the isolation thesis neither seem to hold for contacts with friends. The continued unemployed and the previously unemployed actually seem to be more in contact with friends than the ordinary employed. In the former two groups the share that had weekly contact is respectively 62 percent and 66 percent compared to 57 percent among ordinary employed. This finding is confirmed in previous Danish studies (Goul Andersen, 2002). It should be mentioned that in our sample 6 percent of the continued unemployed indicate that they have no friends. However, in most cases the strong ties to the close family and the "medium ties" to the friends seem to be upheld during periods of unemployment. The weak ties, such as participation in associations, are more endangered. 40 percent of the ordinary employed have actively participated

in associations within the last year, which should be compared to 25 percent of the previously employed and 25 percent of the continued unemployed. This finding is also supported by previous results (ibid) but the lack of differences between two latter groups seems to indicate that it does not make a large difference for employment chances. Thus, as expected long-term unemployed is well-integrated into Danish society, which actually makes it a worst case for showing the importance of networks.<sup>1</sup>

However, no matter how well-integrated Danish long-term unemployed are in the broader society it is fairly obvious that they still lose the most relevant ties; occupational ties, i.e. ties to persons and employers within the given sector of the individual. To put it bluntly; if you are a mechanic it is not of much use to be in regular contact with family, friends, or even a high status acquaintance, e.g. a doctor (Lin 1999) if they cannot provide information from the relevant branch. The company survey clearly demonstrated that the most important contacts were those to already employed at the company. Unfortunately, it is not an easy task to compare these occupational ties across our three samples; those who become employed naturally get these ties at the new job. Therefore it is more interesting to measure to what extent the ties of the continued employed are still active. We have asked about the frequency of contact with former colleagues, other employees and employers in their former sectors of work (see table 2).

**Table 2. Ties to the labour market among continued unemployed**

	All	By length of previous unemployment		
		<1 year	2-4 years	4 years or more
Contact with former colleagues				
Monthly or more	24	49	28	12
Less than monthly	14	14	20	13
No contact	47	38	52	74
Never been employed	15			
Contact with other employees in the branch				
Monthly or more	26	46	26	23
Less than monthly	13	18	17	10
No contact	47	36	58	68
Never been employed	15			
Contact with former employers				
Monthly or more	11	22	12	4
Less than monthly	10	16	13	7
No contact	65	62	75	89
Never been employed	14			
N (unweighed, minimum):	723	160	247	207



The surveys indicate that the unemployed lose many of the occupational ties. 13 percent of the continued unemployed have never had employment, 47 percent indicate that they have no contact with former colleagues, 47 percent have no contact with other employees in the sector where they have formerly worked, and 65 have no contact to employers. However, a fair share of the continued employed also have active ties to the labour market. 24 percent have monthly (or more) contact with former colleagues. 26 percent and 11 percent have monthly contact respectively with other employees and employers in the sectors they have formerly worked. But the table clearly shows that these occupational ties erode over time. 74 percent of those who have been unemployed for four years or more have no contact to former colleagues. The share is 52 percent among those who have been unemployed between one to four years and 38 percent among those who have been unemployed less than a year. The share with no contact to other colleagues in former sectors decreases from 68 percent to 36 percent. And the share with no contacts to employers decreases from 89 percent to 62 percent. Thus, the long-term unemployed do lose contacts to the persons, which according to the employers are best to be recommended by.

### **Roads into employment**

In the previous section we demonstrated a correlation between occupational ties and employment status. However, one could still discuss whether it is a causal effect or not (e.g. Mouw, 2003). The question about how various groups got their present employment takes us somewhat closer to causal mechanism. As in the other surveys within the field we have asked how the respondents got information about the job but in contrast to the other surveys we have distinguished between general ties to family, friends and acquaintances and ties that originate from the respondents former jobs.

When we ask the ordinary employed how they heard about their present job we get results that confirm the results from other countries; a large group, in this case 38 percent, got job informal through informal channels. 35 percent got information through the mass media and 29 percent through various other channels; the respondents could indicate more than one channel but the vast majority (1181 out of 1194) was able to pin point one channel. The use of informal channels underpins the argument of network. However, more interesting is the fact that contacts from former jobs, the occupational ties, with 13 percent seem to be more important than the strong ties of the family (6 percent) and as important as friends/acquaintances (13 percent); if a person both is a friend and a colleague her or she was coded as the latter. Furthermore 6 percent had heard about their job from former activation i.e. periods of job training in private companies or the public sector,

education program, job search courses etc. These ties could also be labelled occupational ties. The same could be the 8 percent that was directly contacted by their employers. Thus, one could argue that occupational ties actually are used much more than the friends/acquaintances.

**Table 3. How ordinary employed and previously unemployed heard about their present job. Percent<sup>1</sup>**

	Ordinary employed:	All previously unemployed	Previously unemployed by unemployment within five years:		
			Below one year	One to two years	Above two years
Informal ties in all (1-4)	38	35	43	33	23
1: Occupational ties - contacts from former jobs (ordinary)	13	7	12	10	0
2: Contacts from former activation	6	6	4	6	7
3: Weak ties: Friends/acquaintances	13	16	19	11	11
4: Strong ties: Family	6	6	8	6	5
5: Mass media (incl. Internet)	35	37	33	34	36
Other channels in all (6-9)	29	32	29	35	42
6: Emp. office	1	8	10	9	12
7: Contacted by employer	8	5	4	4	5
8: Not invited application	9	8	5	12	12
9: Others	10	11	10	10	13
N (weighted)	1194	482	155	115	85

<sup>1</sup>The categories add up to more than 100 percent because it is a multiple choice question.

When we compare the channels of job information of all the previously unemployed with the ordinary employed the overall shares that got informal through informal channels, mass media or other channels do not differ very much. The largest differences are that the previously unemployed, as expected, rely more on the employment office, 8 percent compared to 1 percent, and less on the occupational ties, 7 percent compared to 13 percent. However, the average figures hide large variations within the group of previously unemployed. Those who had been unemployed less than year within the last five years have actually used informal channels, 43 percent, more often than ordinary employed. Thus, in contrast to Korpi's reasoning they actually make more use of informal contacts than ordinary employed. The short-term unemployed use occupational ties as much as ordinary employed (12 percent compared to 13 percent) and rely even more on friends/acquaintances (19 per-

cent compared to 13 percent). In the group of short term unemployed the strong ties of the family is also used a little more (8 percent) than among ordinary employed (6 percent).

However, only 23 percent the long-term unemployed (above two years within last five years) had got their job information through informal channels, which supports Korpi's line of reasoning. None of them had used occupational ties, only 11 percent had used friends, and most interesting only 5 percent used the family. Thus, based on a large sample of previously unemployed the thesis of strength of strong ties when it comes to unemployed cannot be confirmed. The data suggest that the trade-off is not between weak and strong ties but between informal and formal recruitment. Thus, the long-term unemployed have to rely more the employment offices and not invited application. The higher degree of formality is not interpreted as a sign of these channels being more effective for this group but rather as consequence of the fact that many simply have lost their occupational ties. Based on the findings from the company survey we actually suggest that recommendations would be of even more importance for this group and the higher degree of formality is interpreted as a sign of the suggested vicious circle of unemployment.

### **Economic incentives versus networks**

Whether the effect from networks emphasised by economic sociology is something that force us to slightly adjust or totally dismiss the neo-classic understanding on the labour market cannot be solved on empirical grounds; it is a matter of perspective. Nevertheless, in the last part of our analysis we will try to formalize the argument and estimate the relative importance of (short-term) economic incentives and networks. Our data are not truly longitudinal but by asking in retrospect we are able to build a time dimension into the data. The previously unemployed and the ordinary employed that have been unemployed within the last five years (N=166) have been asked about the number of people they knew within their current sector at the time of unemployment (the independent variable). They have also been asked about the economic gain of being employed, when tax and extra expenses to transport and childcare are subtracted (the competing independent variable). As to the dependent variable we use the average duration of unemployment spells in the past five year period and the overall length of unemployment within last five years.

**Table 4. Relationship between economic incentives, occupational ties, contact with family, contact with friends and duration of unemployment spells within last five years. MCA-analysis, Beta and level of significance.**

	Model I:			Model II:		
	Duration of spells (months) (bivariate)	Estimated duration of spells, months (controlled)	Beta	Overall length within five years (bivariate)	Estimated Overall length within five years (controlled)	Beta
Contact in the sector at time of unemployment						
0	12,3	12.3	0.18**	19.3	17.2	0.16**
1- 4	12,4	13.0		22.2	21.2	
5 – 9	11,9	11.1		18.0	20.1	
10 – 19	7,5	7.9		12.2	12.8	
20 – 49	7,3	7.5		12.2	13.9	
50 or more	5,1	4.8		9.7	13.7	
Gain from employment per month:						
Below 500 DKR (65 euro)	11,3	11.1	0.05 <sup>ns</sup>	25.1	23.7	0.15**
500 to 3000 DKR	11,0	11.0		16.5	14.7	
3000 to 6000 DKR	10,4	10.4		15.7	16.3	
Above 6000 DKR (780 euro)	8,7	9.1		14.1	16.8	
Male			0.05 <sup>ns</sup>		16.8	0.01 <sup>ns</sup>
Female					17.3	
17-29		7.7	0.18**		12.5	0.18**
30 – 39		10.0			15.8	
40 – 49		12.9			18.9	
50 - 59		11.8			23.0	
60 or above		8.8			17.2	
No education above basic school		11.1	0.11 <sup>ns</sup>		21.2	0.17**
Unskilled worker (education below one year)		7.7			9.7	
Skilled worker		8.7			13.7	
Further education (short)		11.7			17.7	
Further education (medium)		11.7			17.2	
Further education (long)		10.3			16.1	
Danish		9.6	0.17**		16.2	0.12**
Immigration (first / second generation)		15.7			23.0	
Sample 1: Ordinary unemployed		10.9	0.21**		18.0	0.20**
Sample 2: Activated		13.8			19.1	
Sample 3: Social assistance		12.8			23.7	
Sample 4: Ordinary employed		6.7			11.3	
R <sup>2</sup>			0.20			0.20
N (Not weighted)			405			431

Note: \*\* significant at 0.01 level, \* significant at 0.05 level, ns above 0.05.

Using a multi-classification analysis (MCA) model I shows that the number of occupational ties significantly reduces the duration of unemployment spells. In the sample the average duration of an unemployment spell is 10.3 months. However, among those with 0 to 9 occupational ties the average spell was around 12 months. Among those with 50 occupational ties or more the average duration was only around 5 months. The relationship is strong and significant even after controlling for variations in sex, age, education, ethnicity, sample type, and economic incentives. The beta value, measuring the impact of all the brackets of occupational ties, is 0.18. Naturally, there still might be unobserved heterogeneity (see Larsen et al, forthcoming from a more thoroughly control procedure) but from what we can observe there is a strong impact. Knowing '50 persons or more' compared to only knowing '1 to 4 persons' in a given sector is e.g. estimated to reduce the duration of unemployment spells from 13.0 to 4.8 months. In contrast the economic incentives do not even have significant impact on the duration of unemployment spells. Those who gained below 65 euros a month from employment do not have much longer spells (estimated to be 11.1 months) than those who gained above 780 euros (estimated to be 9.1 months). The beta-value is 0.05 and it does not even turn significant. The modest effect of variations in economic incentives on the escape rate of long-term unemployed in the Danish context is confirmed by two recent longitudinal studies (Larsen, 2003; Smith et. al. 2003). This would suggest that the economic sociological position is able to explain much of the transition from unemployment to employment whereas the neo-classic position seems more or less irrelevant in the Danish context.

However, model II, measuring the length of overall employment within the last five years, moderates the conclusion. The number of occupational ties still has a strong and significant impact on overall length of unemployment (beta value 0.16) but the extreme position of the very well connected (50 or above contacts) found in model I is moderated. Actually, it is understandable that having a lot of contacts does not necessarily prevent workers from being fired but certainly allow them to find new job very quickly; i.e. the average duration time of spells decreases. In terms of overall length of unemployment within the last five years the main divided seem to be between those who know less than 10 persons (estimated duration between 17.2 – 21.2 months) and those who know more (estimated duration between 12.8 to 13.7 months). Furthermore, economic incentives are estimated to have a significant impact, beta 0.16, on the overall duration of unemployment. It is caused by the fact that those who gain below 65 euros have experienced 25.1 months of unemployed (controlled 23.7 months), whereas there are no significant differences between the other three groups. As the group with very low incentives does not have much longer duration of spells (estimated to 11.1 months) the effect is caused by the fact that this group simply have more spells. In

a neo-classic line of reasoning the interpretation could be that very low economic incentives do not reduce your chances of getting a job, maybe helped by the active Danish labour market policy, but increase the chances of leaving a job. Nevertheless, in terms of overall unemployment occupational ties are still as strong a predictor (beta 0.16) as economic incentives (0.15). As to the control variables age, ethnicity and sample origin is shown to have a significant effect on the average duration of unemployment spells, whereas sex and level of education turns insignificant. In terms of overall unemployment length the level of education also turns significant.

## **Conclusion**

Though neglected by the neo-classic literature and to some extent also by the sociological literature following the seminal work by Mark Granovetter (1974) the article has shown that the network perspective contributes significantly to our understanding of the transition from unemployment to employment. Based on recent economic literature on information problems it was argued that it is fairly easy to understand that networks should be of special importance in the case of unemployment; both seen from an employer perspective, as unemployed might be perceived as “lemons”, and from an individual perspective, as unemployed gradually lose networks. This is believed to constitute two importance elements in the vicious circle of unemployment.

In many respects Denmark provided a worst case for verifying this line of reasoning. However, using comprehensive survey material the article showed that Danish employers do use informal channels of recruitment, do emphasise the importance of referrals from own employees, and are suspicious when hiring a long-term unemployed. The article also showed that even though most Danish long term unemployed are not isolated from family, friends and the broader society they do lose contacts to the labour market. By comparing the roads into employment of ordinary employed and unemployed it was also shown that short term unemployed make more use of informal channels than ordinary employed, whereas the long term unemployed were left with the formal channels. Thus, in contrast to previous suggestions the trade-off was not between weak and strong ties but between formal and informal recruitment. Finally, it was shown that in the Danish case occupational ties was a better predictor of the average duration of unemployment spells than economic incentives; an as a good predictor for the overall length of unemployment. One can naturally discuss the possibilities for generalising but we suggest that the presented network effects would be of even higher importance in countries without national employment agencies, less active labour market policy, less generous benefits, higher job protection and less demand for labour.

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## Notes

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<sup>1</sup> We have also asked about the labour market positions of partners, close families and friends. The findings verifies previous findings that show a low family concentration of unemployment in the Danish case (Goul Andersen, 2002).

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