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# How Many Danish Jobs Can (Potentially) Be Done Elsewhere?

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## **Abstract**

This paper employs a new survey technique to arrive at estimates of the proportion of jobs with the characteristic that they can be performed elsewhere than currently, in particular in other countries. The results from the survey which was carried out in November 2008 indicate that the proportion of current jobs with offshorability characteristics in Denmark is in the 20 to 30 percent range. Danish jobs that could potentially be carried out elsewhere are primarily found in the services sector (financial and business services) and they are typically performed by employees from the middle of the wage distribution.

**Keywords:** Jobs, offshorability, outsourcing

**JEL Codes:** F16, J60

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*“.....international competition – which used to be primarily between firms and sectors in different nations – now occurs between individual workers performing similar tasks in different nations.” (Baldwin, 2006, p. 5)*

## **1 Introduction**

One of the key questions in the age of globalisation is: What proportion of jobs currently performed in advanced economies like ours can and will, now or in the near future, also be carried out elsewhere in remote locations?<sup>1</sup> Several analyses of the employment consequences of internationalisation so far have concluded that proportion of offshored jobs have been fairly low<sup>2</sup> and several commentators have concluded from the evidence that there is little reason to be worried. A typical argumentation on these lines is found in e.g., Baghwati et al. (2004). They conclude:

*“...it would help to admit that outsourcing is a relatively small phenomenon in the U.S. labor market and economy .....qualitative analysis also underlines that we do not face a precipice. High-value jobs arise and can be expected to continue to grow, even as low-value jobs disappear”<sup>3</sup>*

This may well turn out to be wrong, however.<sup>4</sup> We may be finding modest effects primarily because we are merely observing the beginning of what will be a long process and which could later accelerate. Earlier fundamental changes in job structures, like the industrialisation or the transformation of our societies into service economies, also to begin with seemed to have rather limited consequences for existing jobs. The same is true for computers and

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<sup>1</sup> Another related question is the extent to which jobs can be performed by computers, robots or be routinized so that they can be performed by unskilled, low-paid workers in developing countries; see Autor, Levy and Murnane (2003), Spitz-Oener (2006) and Goos and Manning (2007)

<sup>2</sup> See e.g., Görg et al. (2008) for a comprehensive survey.

<sup>3</sup> The Danish Economic Council's (2004) assessment is essentially the same.

<sup>4</sup> Several scholars of international trade have recently reconsidered their way of thinking. For a particularly interesting discussion, see Krugman (2008).

modern information technologies; their impact on the structure of employment came with a considerable time-lag.

This argument has special validity for service sector jobs; see e.g., Amiti and Wei (2005), (2009). Because of the relatively small size of the manufacturing sector in terms of employment and the fact that this sector has been subject to international competition for a considerably longer period, less jobs are likely to be offshored from it. Moreover, location of manufacturing is often limited by availability of or closeness to scarce natural resources, whereas the comparative advantages in services, and the new economy in particular, are to a higher extent reflecting people's ideas, decisions and efforts. Thus, there may be less rigidity within the services sector and as a consequence, developments within this sector are less predictable.

There is thus need for alternative and more future-oriented approaches. One is to consider some specific properties of jobs and to infer from these the extent to which they can be moved to other places (including other countries). Jensen and Kletzer (2005) use information about the geographical concentration of service jobs in the US to arrive at an estimate of how many service jobs could be traded internationally. The idea behind their study is that geographically concentrated jobs exploit some specific advantage related to their location and are therefore less "tradable". Jensen and Kletzer's estimate of the share of jobs in the services sector that are potentially tradable is as high as 38-39 percent. Another study by van Welsum and Vickery (2005), and van Welsum and Reif (2006) use ICT intensity by industry as a measure of offshoring potential and obtained an estimate of about 20 percent of total US employment.

More convincingly, Blinder (2009) uses the US Bureau of Labor Statistics 800 occupational codes and information about job content in the so called O\*NET data base to rank occupations according to how easy or hard it is to offshore the work electronically or physically. This ranking, which naturally will have some subjective elements in it<sup>5</sup>, suggests that 22-29 per cent of all US jobs are potentially offshorable.

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<sup>5</sup> A likely more important limitation of the ranking is that it assumes that all jobs within an occupation are (or are not) offshorable.

In this paper I adopt a method to arrive at measures of the offshorability of Danish jobs that has originally been developed within the framework of the Princeton Data Improvement Initiative and has recently been used by Blinder and Krueger (2009) for the United States. More specifically, I carry out a survey which contains a battery of questions regarding various aspects of the job currently held by the interviewed person, such as its location specificity, interdependence with other workers, need of face-to-contacts with customers, clients, etc., and the importance of local language skills. This information is then used to produce estimates of the proportion of the jobs that could be performed abroad without, or with only minor, reductions in quality of performance. That is, these jobs have the characteristic that they could in principle be offshored.

I find that these estimates vary between 20 and 30 per cent depending how many requirements for the jobs to be located in Denmark are accounted for. Whether you think this is a high number or not, and whether it should be a cause for concern or not, depends on whether a “destruction” of jobs at this scale during a period of similar length represents a departure from earlier developments or not. Unfortunately, that is something we know very little about because labour market statistics have almost exclusively described the people holding the jobs rather than the jobs themselves.

## **2 The Survey Results**

The questionnaire has been sent out to a stratified sample of 3,362 employed individuals in the age range 16 to 65. The survey was carried out in mid-November 2008 by a firm called *defgo*, which is specialised in carrying out internet-based surveys. Table 1 contains some key descriptive statistics. From this it can be seen that the sample characteristics, with the exception of the proportion of male employees, correspond quite closely to those in the relevant population.<sup>6</sup> Thus, we may note three distinguishing features of the Danish labour market: almost 40 percent of employees work outside the private sector, a little over 80 percent of the employees are union members and about 40 percent have been in their current jobs for more than ten years.

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<sup>6</sup> Also the age structure differs somewhat from that of the workforce population: young employees are overrepresented while age groups 46-55 and 56-65 are underrepresented. This is not surprising in view of the fact that the survey was carried out using the internet.

Before turning to look at some of the characteristics of the jobs held by the respondents, it should be noticed that the respondents were not informed about the purpose of the questionnaire except that the questions concerned different aspects of their current jobs. In all questions related to the offshorability of the job, the respondent also had the option to answer “I do not know”, an option that was occasionally exercised, but never in more than three percent of the answers. It is important to be aware of the fact that many respondents in answering the question are likely to be mainly thinking of the way the job is currently carried out and to a lesser extent consider alternative ways of carrying out the tasks associated with the job. Thus, the answers regarding possible changes in how the job could be done should be interpreted as a lower bound estimate.

*Table 1. Sample: descriptive statistics*

<i>Proportion:</i>	
Males	47.8
Married or cohabiting	70.7
Private sector employee	58.5
Service sector employee	77.4
Union member	82.1
<i>Age:</i>	
Under 18	6.2
18-24	19.2
25-35	19.6
36-45	28.7
46-55	21.2
56-65	5.0
<i>Tenure in current job (%):</i>	
Less than 1 year	12.3
1-2 years	16.5
3-5 years	15.4
5-10 years	16.9
More than 10 years	38.9

Let us to begin with consider the location specificity of the job. Some jobs can be carried out at remote locations by means of telephone or a computer, whereas other jobs requires that the employee meets face to face with customers, clients, suppliers or students or that physical presence at a certain site (like a farm or a mine) is necessary for other reasons. The respondent

was given a few examples of both types of jobs before she was asked whether her current job could be carried out from other locations or whether it is necessary she is physically present at a specific workplace. The distribution of the answers is given in Table 2.

*Table 2. Location-specificity of the job (%)*

(A) The job can be carried out from other locations	13.7
(B) The job could in principle be carried out from other locations, but with difficulty	8.5
(C) Parts of the job requires presence at a specific location (current workplace) of the employee	24.2
(D) Presence of the employee at a specific location is sometimes necessary	11.2
(E) Presence of the employee at a specific location is required	42.4
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Of jobs that could be carried out from other locations (A+B), this could be done:	
By phone	49%
Via internet	90%
At another location, but the product could be sent to another place for finishing, packing, etc.	8%
By other means	15%

Location specificity turns out to be a quite important feature of jobs. A little over 40 percent of the jobs held by the respondents are such that the employee's physical presence at a given workplace (location) is required. In one out of four jobs presence is required for performing part of the tasks involved and in 11 percent of the jobs is physical presence occasionally required. Thus, in at least about 20 percent of the jobs do the holders think that they could in principle be carried out at other than at the current locations. These jobs are typically service jobs. When asked how they could be performed at other than the current location, 90 percent of the respondents answered by means of the internet and 40 percent by phone. Notably only

eight percent thought that production could occur at one place while further handling of the product would take place elsewhere.

Table 3 addresses the question concerning the location specificity of the job from another angle, namely by asking first (A) about the proportion of the job that could be carried out by the employee but at another location than her current workplace. It then turns out that 29 percent of the respondents think that most or a large part of the job could be done without the employee being physically present at a specific location. This is about the same proportion that answered that it would possible to perform none of the job without physical presence. In question B the only difference is that now the physical presence does not pertain to the current workplace. However, as can be seen from the last column, the differences compared to question A are only marginal.

*Table 3. Question A: How big proportion of the employee's job could be carried out at another location than the job holder's current workplace? Question B: How big proportion of the employee's job could be carried out without the employee being physically present at a specific location?*

	A (%)	B (%)
The whole job	3.6	4.7
A large part of the job	25.4	25.7
A small part of the job	39.2	41.6
None	31.1	26.9
Do not know	0.7	1.0
	100.0	100.0

The questions above do not account for possible changes in the quality of the product or the services provided if the job would carried out at different locations than currently or by the employee not being physically present at a specific location. This is done in Table 4, from which we may note that in both cases, about a fifth of the current job holders expect no decline in output quality and 16-17 percent expect a small reduction in quality. A significantly lower quality is expected to be the outcome in 43-44 percent of the jobs.

One reason for why a job cannot easily be moved to another location or be performed at locations remote to the current workplace is that the tasks involved are highly independent



with tasks carried out by coworkers in the workplace. This is typically the case for work carried out in teams.<sup>7</sup> Consequently, the respondents were asked whether the important tasks

*Table 4. Question A: If the job would be carried out at another location, how would its quality be affected? Question B: If the job would be carried out without the employee being physically present at a specific location, how would its quality be affected?*

Question	A (%)	B (%)
To a high degree	44.2	42.6
To some extent	19.7	20.7
To a small extent	16.6	17.5
Not at all	19.5	19.2

in their jobs were carried out in a team or a work unit framework, or whether the tasks could be considered as individual tasks, that is, if they are predominantly carried out the employee herself. According to the answers set out in Table 5, half of the employees are performing the key tasks in their jobs in an individual manner.<sup>8</sup> In view of recent discussions (see e.g., chapter 6 in Lazear and Gibbs (2009)) about the changing work organisations, job enrichment, broadening job designs, etc., this strikes me as a rather high proportion, in particular because only 28 percent said the main tasks were performed in a team or work group setting.

*Table 5. Are most of the key tasks in your job performed as a part of a working unit or team or primarily individually? (in %)*

Mainly in team/work unit	27.8
Mainly individually	50.0
Varies	22.0
Do not know	0.2

Now, although the tasks are carried out individually, it is still possible that successful performance of the job requires that the employee is interacting with other people, and that this limits the possibilities to carry out the job from other than current locations. The two next tables give the answers to questions regarding this aspect of the respondents' jobs. First, in

<sup>7</sup> Organising work in teams has become more common in recent years in Danish firms.

<sup>8</sup> Cross-tabulation of the answers to tables 2 and 5 show interestingly that the proportion of low location specific jobs are mainly carried out individually (62.5 per cent) is higher than the share of individually performed jobs which are tied to a specific location ((45.8 per cent).

Table 6, the employees are asked about their contacts with other people than colleagues and superiors (note, contact does not imply physical presence of colleagues and supervisors at the same workplace). The table shows that sixty percent of the respondents work with people, and Table 7 furthermore documents that a considerable fraction of these people are customers or clients. (Only 18 percent of the employees say they do not have personal contact with a customer or client.) Also suppliers, students and trainees are groups of people with whom employees often or occasionally are in personal contact with.

*Table 6. In your job, to which extent do you have personal contact with other people than your colleagues or superiors? (in %)*

To a high degree	59.8
To some degree	24.1
To a little extent	15.8
Do not know	0.3

Again, it should be remembered that personal contact does not necessarily imply location specificity. However, although regular or even frequent contact does not mean face to face contact, it usually implies written or oral communication using a common language. An oft repeated argument about the limits of offshoring of jobs, and service jobs in particular, is that the quality of services decreases substantially if communication is in another than the customer's/client's/patient's native language. One would expect this to maybe be even a stronger argument in case of small languages (like Danish), although it should also be noted that countries with small languages often has a population that understands and speaks a major language (like English). When asked about the necessity that the employee's job is carried out by a person who speaks Danish, 10 (20) percent of the respondents considered it

*Table 7. In addition to your colleagues or superiors, what other types of people do you have personal contact with at your workplace (in %)?*

	Often	Occasionally	Not at all	Do not know	Sum
Customers or clients	50.9	29.3	18.0	1.8	100
Suppliers	14.7	46.8	37.3	1.2	100
Students, trainees	16.0	38.4	44.2	1.4	100
Patients	9.3	3.9	83.8	3.0	100
Other	16.8	46.7	26.7	9.8	100

(entirely) necessary in their jobs; see Table 8.<sup>9</sup> In view of the very strong emphasis in the recent public discussion in Denmark of the key importance of the Danish language skills, these numbers appear quite high (especially if considered as lower boundary estimates).

*Table 8. How necessary is it that the job is performed by a person, who speaks Danish? (in %)*

Highly necessary	68.2
Not entirely necessary	21.4
Not necessary	10.4

### **3 Offshorability: Econometric Analysis**

Next, I will carry out some simple empirical analyses of the offshorability of jobs by estimating probit models for the self-reported offshorability of the job using traits of the employee (age, education, gender, and tenure) plus industry as explanatory variables. Thus, the analysis aims at informing us about who are in jobs which are potentially offshorable, and where are we likely to find these jobs. For this purpose a measure of offshorability is needed. I will adopt the measure which is based on the answers given in Table 2 above. More precisely, I define a job as offshorable if the holder of the job has answered either A or B to the question regarding the location specificity of the job, that is, the job is such that it can be performed from other locations.

The estimated marginal effects from a probit model using this definition of offshorability are provided in the first column of Table 9. In order to gauge the magnitude of the effects it should be noted that the proportion of offshorable jobs (as defined here) in the estimation sample is 28 percent.<sup>10</sup> Turning now to the results we may first note that there are no differences between age groups nor the genders with respect to the likelihood of holding a potentially offshorable job. Offshorability is remarkably higher for jobs where the employees

<sup>9</sup> Simple cross-tabulations with answers to other questions show expectedly that Danish language skills are particularly important in jobs that involve a high extent of personal contacts with other people than colleagues and superiors. Danish language skills are not relatively more necessary in work carried in teams than individual work, nor are jobs that require a specific location associated with language skill requirements that differ from those in jobs which are not tied to a certain location.

<sup>10</sup> The estimation sample is somewhat smaller, due questions unanswered, than the one that answered the question in Table 2, where the proportion of holders of offshorable jobs were 22.2 per cent.

have higher educational qualifications than those obtained in compulsory education. Notably, the marginal effects are of the same magnitudes for jobs held by workers who have vocational and university education. There is no clear tenure pattern, but jobs in which employees have been for the last five to ten years have a higher potential for being offshored.<sup>11</sup>

Union membership is negatively, but not significantly, related to offshorability. As over 80 per cent of Danish workers and the respondents in our sample are union members, this is not completely surprising. Nor it is surprising to find that there is a large difference in the offshorability potential between private and public sector jobs. As for industries, offshorability is a more likely (than in manufacturing, the omitted reference category) characteristic of jobs in (somewhat surprisingly) construction and utilities, and in particular in the services sector. The marginal effects for jobs in the financial and business services industries are notably large, but it is worth remarking that the smaller marginal effect for the “other services” masks quite large differences; especially jobs in the other business services industry are according to estimations with a more detailed industry classification highly offshorable. Not only are the marginal effects large in some industries like finance and insurance and business services, the proportion of respondents working holding offshorable jobs within them is also high: 50 and 55 per cent, respectively. Other industries with potential offshorability rates exceeding 30 per cent include: energy and water supply, wholesale trade, post and telecommunications, and “other services”. Within the manufacturing sector, the rates are low with the exceptions of metal and “other manufacturing” (23 and 25 per cent, respectively).

The survey does not ask respondents about their current wages, but as several explanatory variables commonly included in conventional earnings equations are also included in Table 9, some tentative conclusions regarding where in the wage distribution the holders of the more likely offshorable jobs are located can be drawn. Factors normally associated with higher wages, such as more human capital (education, tenure), private sector employer, and the financial and business services sectors affiliations are all positively associated with a higher

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<sup>11</sup> As the probability of leaving a job drops quickly in the beginning of an employment relation and reaches relatively low levels after a few years, this implies that many of the employees with five to ten years of tenure are in jobs they are likely to be for another five-to-ten year period.

Table 9. Probit models of offshorability and outsourcability, marginal effects estimates

Dependent variable:	Offshorable	Outsourcable (1)	Outsourcable (2)
<u>Age:</u>			
25-45	0.012 (0.029)	0.168*** (0.046)	0.161*** (0.045)
46-55	-0.003 (0.028)	0.136*** (0.051)	0.138*** (0.049)
56-65	-0.002 (0.029)	0.158*** (0.057)	0.124** (0.053)
Female	0.001 (0.011)	0.003 (0.012)	0.011 (0.013)
Vocational training	0.181*** (0.044)	0.195*** (0.046)	0.204*** (0.046)
University education	0.174*** (0.022)	0.255*** (0.025)	0.250*** (0.025)
<u>Tenure:</u>			
1-2 years	0.031 (0.021)	0.011 (0.022)	0.004 (0.023)
3-5 years	0.012 (0.021)	-0.011 (0.021)	-0.011 (0.022)
5-10 years	0.062** (0.024)	0.010 (0.022)	0.007 (0.023)
10+ years	0.008 (0.018)	-0.016 (0.019)	-0.005 (0.020)
Union member	-0.018 (0.014)	-0.029* (0.016)	-0.035 (0.047)
Private sector employee	0.135*** (0.015)	0.141*** (0.017)	0.147*** (0.017)
<u>Industry:</u>			
Agriculture, fishing	-0.042 (0.034)	-0.041 (0.042)	-0.035 (0.047)
Construction, utilities	0.058** (0.030)	0.054* (0.032)	0.064* (0.034)
Commerce	-0.001 (0.025)	-0.007 (0.028)	0.027 (0.034)
Transports, communication	0.053* (0.033)	0.057 (0.036)	0.072* (0.039)
Financial and business services	0.171*** (0.039)	0.219*** (0.044)	0.255*** (0.045)
Other services	0.054*** (0.017)	0.060*** (0.020)	0.076*** (0.021)
Pseudo R <sup>2</sup>	0.176	0.211	0.199

likelihood of offshorability. While it is a commonplace to expect increased competition from low-wage countries to affect the least skilled, and hence lowest paid, workers most, this is not the message that stands out from the estimations in Table 9. Rather, it seems as if the potentially most offshorable jobs are held by employees that are fairly well paid.<sup>12</sup> Thus, offshoring of jobs might have the same consequences as have been demonstrated for computerisation: a hollowing out of the occupation distribution of employment.

In the second and third columns in Table 9, I use two other dependent variables that measure how outsourcable (rather than offshorable) jobs are. The first operationalisation of outsourcability is answers “all” or “very much” to the question, discussed in connection to Table 3A: to which extent it would be possible to perform the job outside the current workplace but deliver the work product by mail, telephone, internet or other means to the workplace. The second operationalisation builds on the answers from the question in Table 3B: whether the job can be performed without its holder being physically present at a specific place. Inspection of the answers to these two questions shows that positive answers overlap.<sup>13</sup> Consequently, it is not surprising that the estimated marginal effects are quite close in magnitude. In the main, the results are also quite similar to those obtained for the offshorability variable in the first column.<sup>14</sup>

#### **4 Respondents’ Perceptions of the Future of Their Current Jobs**

After having answered the questions concerning different properties of their jobs, the respondents were asked a few additional questions regarding their experience of job loss or job switch in recent years and about the future risk of losing their jobs.<sup>15</sup> Table 10 describes the respondents’ answers to three questions: about the risk of job loss, the risk of the job being

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<sup>12</sup> Thus, the results are in congruence with those obtained by the studies of the “polarization” hypothesis (Autor et al. (2003), Spitz-Oener (2006) and Goos and Manning (2007). However, these studies focus on the technological changes and changes in ICT in particular, as a source of job destruction.

<sup>13</sup> Thus 66.9 (67.5) per cent of the offshorable jobs are also outsourcable according to definitions 1 and 2. The overlap between outsourcable (1) and outsourcable (2) is as high as 84.7 per cent.

<sup>14</sup> The only marked difference is that in columns 2 and 3 the age dummies also attach statistically significant estimates. However, they are all about the same magnitude and show that jobs held by teenagers and young adults are different and less outsourcable which may not be surprising as young people hold jobs that require few skills but physical presence or face to face contacts like cashiers, backroom jobs in supermarkets, etc.

<sup>15</sup> Here it is crucial to point out that despite the fact that the survey was carried out in mid-November 2008, the Danish economy had not yet entered a path towards a recession; in fact at the time unemployment was very low and there were few (if any) signs of significant change in the labour market situation.

offshored, and the risk of the job being overtaken by computers or some other new technology. As can be seen from the table, the majority of the respondents feel quite sure about their possibilities of keeping their jobs; only 16 per cent think there is relatively high risk that they might lose their current jobs. This appears as rather low numbers in view of the fairly high turnover in the Danish labour market (see Eriksson and Westergård-Nielsen, 2009), and can reflect the unusually good labour market conditions during the years up to the time of the survey. Of course, it could also be that the respondents underestimate the job loss risk, but this seems unlikely as this question has also been asked in a number of other questionnaires, and there is no evidence that employees systematically would be biased in their assessments of the job loss risk.

*Table 10. Respondents' perceptions of job loss risks*

What is your assessment of the risk that:			
	You would lose your current job?	Within the next five years the kind of tasks you are performing in your current job will be moved and will be carried out in another country with lower wage costs?	Within the next five years the kind of tasks you are performing in your current job will be carried out by computers or some other form of new technology?
High	3.7	1.7	0.9
Not high, but not low	12.4	4.5	5.0
Low	23.6	8.2	11.5
Very low	57.2	84.2	81.4
Do not know	3.1	1.5	1.2

What is even more striking, however, are the tiny proportions of the respondents that believe that their jobs will be either offshored or taken over by computers or some other technology:

6.2 and 5.9 per cent, respectively.<sup>16</sup> The survey also asked whether during the preceding three year period, the respondents themselves had experienced a job loss or had to find a new job because they felt there was a high risk of losing the job they had. 13.7 per cent answered affirmatively to this question. Of these 19 per cent answered positively to a follow-up question on whether the earlier job, or tasks associated with it, had been moved to another location, and a third answered that the job/tasks had been moved out of Denmark. In other words, of those who had experienced a job loss or a threat of the same, only five per cent answered the job had been offshored to another country.

The survey also asked whether the reason for the job loss was that it had been taken over machines, robots or computers. The proportion answering positively to this question was even lower: 1.5 per cent had moved to another job because the earlier one had been destroyed by introduction of new technology. All in all, the answers to these questions seem to indicate that offshoring and computerisation of jobs only account for a relatively small fraction of all job losses and job switches. This was also one of the key messages in the Danish Economic Council's (2004) report five years ago.

However, as noted in the introduction, this may be deceiving because we may only be witnessing the beginning. If so, are the employees who are currently in jobs with a higher potential for offshoring the same persons who in answering the questionnaire say that there is a risk that they will lose their current job or that their jobs may be offshored or performed by computers? At first glance the answer on the basis of the survey seems to be a clear no: 89 per cent of the respondents who are in offshorable jobs thought that the risk that their jobs would be moved to a low-wage country or be performed by computers or alike was high (or if not high, not very low, either). On the other hand, the proportions of those in non-offshorable jobs who thought it was likely that their jobs would be offshored or taken over by new technology was much lower: 5 and 4.5 per cent, respectively. Thus, only a small share of the employees having jobs some characteristics of which suggest they are potentially offshorable appear to recognise this as a real possibility at least in the short run.<sup>17</sup>

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<sup>16</sup> Plausibly there could be a significant overlap between jobs that are offshorable and replaceable by computers. Of the respondents that felt that the risk that their job could be moved elsewhere, 29 per cent also thought that there a risk that the job would be taken over by new technologies.

<sup>17</sup> One should be cautious in regarding these employees as ignorant. They may know of some idiosyncratic features of their jobs that make them less offshorable than implied by the admittedly crude measure used here.



## 5 Conclusions

In making predictions regarding offshoring of jobs in the future “looking back” may be not be very informative and could actually be quite misleading. In this short paper I have used a new approach relying on self-reported information about employees’ jobs, which gives a rough measure of the share of current jobs with the characteristic that they have a potential for being offshored. The results from the survey indicate that the portion of potentially offshorable jobs lies somewhere between 20 and 30 percent. Needless to say, as the method is used is new, there is a lot of uncertainty regarding its accuracy.<sup>18</sup>

Jobs with offshorability characteristics are found to be concentrated in the services sector and particular high rates are observed in the financial and business service industries. Notably, a large share of the offshorable jobs are held by employees belonging to the middle class and education does not protect the job holder from potential offshoring of her job. When asked to assess the risk of loosing their jobs to other countries (or computers and new technologies) only a small portion of the respondents expected high or even moderate risks during the next years. Of those in potentially offshorable jobs, twice as many thought there was a risk as compared to respondents in non-offshorable jobs.

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<sup>18</sup> It would be interesting to develop this approach further and also as Blinder and Krueger (2009) compare the results of the survey approach with other ways of arriving at measures of the offshorability of jobs, in particular using occupational or professional codes.

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