

Job Satisfaction and Contingent Employment

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Abstract This paper analyses job satisfaction as an aggregate of satisfaction with several job aspects, with special focus on the influence of contingent-employment contracts. Fixed-effect analysis is applied on a longitudinal sample of Dutch employees in four work arrangements: regular, fixed-term, on-call and temporary agency work. Our results indicate that temporary agency work is the only contingent employment relation that is on average associated with lower job satisfaction compared to regular workers. Decomposition of this gap indicates that the major part is due to the low satisfaction experienced by agency workers regarding the content of their jobs. A lack of job security is also responsible for part of the gap. For fixed-term and on-call workers the negative satisfaction effect originating from the lack of job security and lower wages is compensated by other job aspects and a variant relationship between total job satisfaction and its components. However, male and high educated on-call workers do experience lower job satisfaction.

JEL Classification J28 · J40 · C23

Keywords Temporary employment · Job satisfaction

1 Introduction

The increased use of contingent employment contracts in most western societies has led to both a political and scientific debate about the potential detrimental effects on workers. Contingent employment refers to job situations in which an individual

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does not have an explicit or implicit contract for long-term employment or to jobs in which the minimum hours worked can vary in a non-systematic manner (Polivka and Nardone 1989). Concerns were raised about the lack of job security, lower wages, detrimental working conditions, higher numbers of work accidents, lack of training opportunities and higher job strain.¹ On the other hand it has been acknowledged that some contingent work arrangements enable workers to better combine their work and family life and also serves as a potential stepping-stone towards regular employment. All these factors together influence the utility workers derive from their jobs.

Traditionally, economists approximate the utility derived from work by the wage earned in a job. Over the last decade economists have started to acknowledge that job utility depends on more than just wages. Job satisfaction has been accepted as an appropriate indicator of job utility (Clark 2001). Job satisfaction in contingent employment has been analysed by e.g. Kaiser (2002), Booth et al. (2002), Bardasi and Francesconi (2004) and D'Addio et al. (2007). In general a negative association is observed between contingent work arrangements and job satisfaction. Bardasi and Francesconi (2004) and D'Addio et al. (2007) find that after allowing for individuals to have different baseline satisfaction levels the negative relation between fixed-term employment and job satisfaction disappears. According to Bardasi and Francesconi (2004) this does not hold for seasonal/casual jobs, implying that it is important to distinguish between several types of contingent employment relationships. This leaves us with the question what causes the lower job satisfaction of workers in the various contingent work arrangements. To which extent is the lower job satisfaction, if there is any, caused by personal and job characteristics, and to which extent is it due to lower satisfaction with certain aspects of the job and which are these? Additionally one might wonder whether there might be distinct job satisfaction structures in the various employment relationships, e.g. because some workers find certain aspects of their jobs more important—and some other less important—compared to another group of workers.

This paper analyses the relation between total job satisfaction and satisfaction with several aspects of the job, and the way these are associated with several work arrangements. We use data extracted from the Dutch Socio Economic Panel (SEP) for the years 1995–2002.² These data include a refined definition of employment contracts, allowing us to distinguish between regular, fixed-term, temporary agency and on-call work and a collection of satisfaction questions regarding various job domains. This allows us to determine not only whether workers in contingent jobs are less satisfied, but also which are the characteristics of the jobs that they are less (or more) satisfied with compared to regular workers. We present the characteristics of workers and jobs in several contingent types of contract as well as satisfaction of the workers in these

¹ For an overview of studies on these issues see Zijl (2006, chapter 2).

² 2002 is the last year these data were collected. Although this restriction is unfortunate, the period 1995–2002 covers the most relevant period for studying the contingent work phenomenon. It includes the major policy change that took place in 1999, which is described in Sect. 2 and affected the use of contingent work arrangements. Furthermore, the main influence on the use of contingent work comes from business cycle movements (see e.g. De Graaf-Zijl and Berkhout 2007). Our data period covers a full business cycle. Since 2002 no major changes in the regulation and number of contingent work arrangements took place.

contract types with various job domains. We decompose the overall difference in the level of job satisfaction in the various types of contract into the share due to personal characteristics, the share due to differences in the various domain satisfactions and the share due to differences in the weight of the various job domains in the overall job security. That means that we allow for differences between work arrangements in the importance of job aspects, such as job security, job content and wages for overall job satisfaction.

Theoretically there are many reasons why the weights of job aspects in overall satisfaction could differ between contingent and regular work arrangements. Psychologists Galagher and McLean Parks (2001) question the transferability of attitude research and theories from regular work to various forms of contingent employment contracts. They argue that temporary workers are motivated by different factors than regular employees, because of the absence of an ongoing employer-employee relationship and, in the case of agency workers, because of the triangular relationship between employee, employer and client firm. Torka and Schyns (2007) study satisfaction of temporary agency workers and find that temporary agency workers indeed attach different values to the same job aspects. Furthermore, one might argue that the bundle of characteristics associated with contingent workers' jobs may appeal to them sufficiently to overcome the satisfaction lost from their lack of job security. For instance it may be the case that workers view a fixed-term job as a stepping-stone to a regular job. In this case, they might consider issues such as a lower wage to be less of a problem. Similarly, women with a working spouse who occupy an on-call job in order to combine their work and family life might not find the lack of security an important downside.

Knowledge about the relationship between job satisfaction and contingent work arrangements is of great value for policy makers deciding on the social and political acceptability of these work arrangements. To date, attempts to determine the relationship between contingent work and job satisfaction have been unable to provide a clear-cut indication of the reason behind observed differences. The present paper attempts to fill this gap by determining which are the job aspects that have the highest weight in overall job satisfaction, and which of these aspects lead to inequalities in satisfaction between regular and contingent workers. Our results indicate that temporary agency work is the only contingent employment relationship that is associated with lower job satisfaction. Decomposition of this gap indicates that the major part is due to the low satisfaction experienced by agency workers regarding the content of their jobs. This can in turn be explained from the low function level generally occupied by these workers and the high incidence of over-education among agency workers. Nevertheless, the lack of job security is also responsible for part of the gap in job satisfaction between regular and agency workers. Unlike the case of fixed-term and on-call workers, the negative satisfaction effect originating from the lack of job security experienced by agency workers is not compensated by other job aspects or a distinct relation between total job satisfaction and its components.

The outline of the paper is as follows. Section 2 starts by providing a taxonomy of contingent work arrangements and presents the case of contingent employment in the Netherlands. Section 3 discusses the data used in this paper, the model and the estimation method. Section 4 presents estimation results. Here we decompose the observed

gap in total job satisfaction between contingent and regular work arrangements into those parts due to personal effects, those due to coefficients and those due to the structure of aspect satisfactions. Section 5 concludes.

2 Contingent Employment in the Netherlands

In this paper we distinguish four types of employment contracts: regular open-ended contracts, fixed-term contracts, on-call contracts and temporary agency work. A characterisation of those four work arrangements is given by [Kalleberg et al. \(2000\)](#). They differ in three aspects: whether the *de jure* employer is the same as the *de facto* employer, whether there is an assumption of continued employment by either of those and the flexibility of working hours. When employed on a regular contract, employees work at the employer's workplace and on the employer's premises, under his or her supervision. In contrast, in case of temporary agency workers the *de facto* employer differs from the *de jure* employer, resulting in a three-cornered relationship, which complicates human resource management. Second, a regular contract is characterized by continuity of employment, whereas the notion of ongoing employment is absent in the other employment arrangements. Third, working hours in regular employment relations are fixed, which is not the case in on-call or temporary work agency arrangements. Unlike many other countries, the atypical work arrangements in the Netherlands are associated with entitlements such as minimum wage, unemployment insurance, health insurance and protection against unfair dismissal during the contract period. Self-employment is not included in this paper. Since part-time employment is not regarded as a contingent form of employment in the Netherlands, we do not treat it as such in this paper.

The Netherlands is an interesting case for studying contingent employment relationship because the share of contingent employment in the overall employment rate has been relatively high, but not too far off the European average, for many years. Currently, the share of fixed-term employment is about 17–18 percent, temporary agency work about 2–3 percent and on-call work about 6–7 percent (see [Fig. 1](#)). This makes non-standard employment relationships rather common. Many people, especially the younger generations, encounter one of these work arrangements at least once during their life. Only Spain, Portugal and Poland have significantly higher shares of fixed-term employment. The European wide average fixed-term employment rate is 13 percent ([Berkhout and Van den Berg \(2010\)](#)). According to [Ciett \(2011\)](#) the UK is the only European country with a higher agency work penetration rate. In most countries the share of temporary agency work in total employment is round about 1 percent. If we look at the development over time, [Fig. 1](#) indicates that the share of fixed-term work has grown from about 8 percent in the beginning of the 1990s to a stable 17–18 percent over the last few years. The rate of agency work has been stable at the current 2–3 percent for a while as well. On-call work is currently less common than it was in the 1990s, which we will explain below. After 2002 the rates of the three contingent work arrangements have not changed dramatically, which is important to note here since the data used for the analysis in the rest of the paper are restricted to the years 1995–2002.

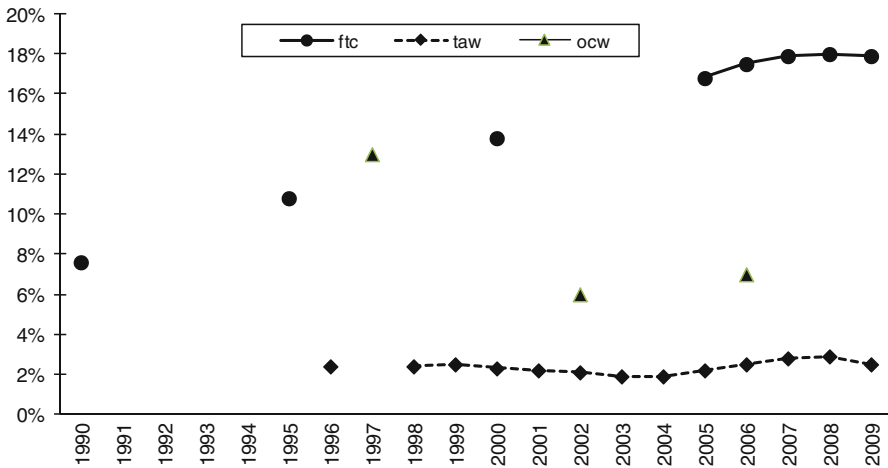


Fig. 1 Share of fixed-term work (ftc), temporary agency work (taw) and on-call work (ocw) in total employment in the Netherlands, 1990–2009. *Source* Berkhout and Van den Berg (2010) for ftc and taw; De Graaf-Zijl (2011) for ocw

The Netherlands is not only an interesting case study because of the share of contingent work arrangements, but also because the country is famous for its Flexibility and Security Act. In the year 2000 the Netherlands was invited by the European Commission to organise a peer review meeting on this issue within the framework of the European Employment Strategy. The Dutch initiative is generally regarded as a good example for other countries to promote a combination of flexibility for employers and security for workers (European Commission 2006). The Flexibility and Security Act, as a typical result of the Dutch Poldermodel, is based on an agreement between the social partners, and concerns a sort of “package deal” in which both the demands of the unions for the protection of the workers and the demands of the employers for more flexibility were integrated. Dutch flexicurity policies have been developed rather deliberately and aim at the normalisation of atypical work while preserving flexibility in the labour market. This approach, codified, among other things, in the Flexibility and Security Act and in collective labour agreements for the temporary work agency sector, served as an example at the European level in the early stages of the flexicurity policy-making process (Bovenberg and Wilthagen 2009). After 2002, the last year of the data used for the analysis in this paper, no significant new legislation has been introduced.

If we focus on temporary agency work, we can say that the Netherlands is a front-runner, with few restrictions on its use (Grubb and Wells 1993; OECD 1999; Ciett 2011; Eurociett 2007). In 1996 the last restrictions on the use of agency work in transportation and construction were removed. Only for seamen does a restriction remain in place. What is unique for the Dutch situation as well is that since 1971 the temporary agency sector has its own collective agreement. This collective agreement contains essential elements such as minimum salary, overtime payments, notice periods, holiday allowance, etcetera. In 1999 the Flexibility and Security Act demanded

the social partners to introduce a new system in the collective agreement. During the first 26 weeks agency workers are paid according to the temporary agency agreement, whereas their regular co-workers are paid according to their own collective labour agreement. After the first 26 weeks, temporary agency workers are paid according to the collective labour agreement of the hiring company. The collective agreement on temporary agency work arranges a system in which workers gradually grow from temporary to permanent contracts with the temporary work agency. During the first 78 weeks of working for a temporary employment agency, the temporary agency worker has a temporary contract, which can be ended with very short notice.³ Subsequently, during a period of two years the worker can be given a maximum of eight fixed-term contracts. After this period, the worker receives an open-ended contract. About 70 percent of temporary agency workers are in the first phase, 20 percent in the second and 10 percent in the final phase. Currently, as mentioned before, the share of agency work in overall employment is approximately 2–3 percent, and has been stable at this rate for the last decade. Since turnover rates in the temporary agency sector are rather high, the number of people working in a temporary agency job in a given year exceeds this 3 percent, making it a work arrangement that many Dutch workers occupy at least once during the year and even more so during their life. As in many other countries, agency workers are generally younger and lower educated than the workforce average and women are overrepresented in this type of work arrangement (Storrie 2002).

Regarding fixed-term employment, the Netherlands is not very strictly regulated (Grubb and Wells 1993; OECD 1999, 2004). Employers in the Netherlands have been allowed to use such contracts without many restrictions for many years. The main restriction concerns the number of subsequent fixed-term contracts allowed per employer-employee match. Until the Flexibility and Security Act was introduced in 1999 only one subsequent fixed-term contract was allowed; since 1999 three consecutive fixed-term contracts can be used per employer-employee match. Firms and sectors can deviate from these rules in their collective labour agreements. According to Houwing (2010) 23 percent of all collective labour agreements include deviations regarding the maximum number of fixed-term contracts, half of which restrict the maximum to less than three and half extend it to a higher maximum. As was shown above, the share of fixed-term employment in the overall employment rate is approximately 17–18 percent. In the beginning of the 1990s this was about 9 percent (Grubb and Wells 1993). De Graaf-Zijl (2011) shows that the share of contingent work arrangements in new jobs is much higher than it is in the stock of employment. In 2007 70 percent of the people that started during that year in a new job worked on a fixed-term basis. A special case is the fixed-term contract concluded with an explicit agreement to convert into an open-ended contract in case of good performance. This agreement can be legally enforced, irrespective of whether the intention is made on paper or verbally. More than half of all fixed-term contracts are concluded on this basis (Fouarge 2006). Individuals working in fixed-term work arrangements are covered by the same collective labour agreement as their co-workers with a regular contract.

³ The temporary employee can end this contract with only one day's notice; the company can end the contract with immediate effect (for contracts up to 12 weeks), 5 day's notice (12–26 weeks), 10 days' notice (26–52 weeks) or 14 days' notice (52–78 weeks).

On-call contracts in the Netherlands were used on a rather large scale in the period from the 1980s until the end of the 1990s. It was mostly done by women, who used this type of work to combine their family life with a small job at flexible hours. They were allowed to decide per call whether the moment they were needed suited their schedules, making it perfect to combine this type of job with the school hours of the children. In 1997, 13 percent of private sector employment was on an on-call basis, which by 2002 was reduced to 6 percent (see Fig. 1). This huge fall in on-call employment might be related to the implementation of the Flexibility and Security Act in 1999. Until 1999 there were no conditions on the maximum duration of zero-hour contracts and min-max contracts⁴, and the minimum number of hours paid per call. Since 1999, when the Flexibility and Security Act was enacted, there has been a minimum number of hours paid. Also, the maximum duration of the fully flexible contract is restricted to the first six months.

Finally we should note that Dutch workers are among the happiest in the world. [Kristensen and Johansson \(2008\)](#) find that Dutch workers have even higher job satisfaction than the Scandinavian workers that are persistently ranked in the very top with respect to well-being and job satisfaction. They conclude that if anything, the Dutch rather than the Danish or Finnish labour market should serve as a role model to enhance job satisfaction in other countries.

3 Data and Methodology

This paper uses a subset of the Dutch Socio-Economic Panel (SEP) for the years 1995–2002. This survey follows a representative sample of approximately 5,000 Dutch households through time. For this purpose, all household members aged 16 years and over are interviewed on a yearly basis about their socio-economic situation with questions on education, labour market participation, income, assets and debts, age, gender, date of birth, marital status, nationality and household situation. For the analysis in this paper we limit the sample to individuals for whom work is the main daily activity, because job satisfaction is only available for this group. This results in a total of 6,952 individuals aged 16–64 years, with 25,883 job observations. This means that on average individuals are observed in employment for nearly 4 years. Sixteen percent of the respondents change their type of employment contract at least once during the observation period. The fact that individuals shift between types of contract enables us to identify the effects of contingent work arrangements using panel data analysis.

The SEP-data include yearly information on the respondents' socio-economic situation—education, labour force participation, income, wealth and satisfaction. According to Statistics Netherlands, a certain degree of selectivity was caused by non-response (48%) at the start of the survey, and later by panel attrition. To correct for this selectivity, weights based on demographic statistics (size of municipality, age, sex and marital status) were used. We corrected all monetary variables in the dataset for inflation to ensure proper comparison over the years.

⁴ In this type of contract the minimum and sometimes maximum number of hours worked per week are put down in the contract.

The questions used to measure job satisfaction are as follows. Initially, individuals were asked to rate their satisfaction levels with seven specific facets of their job: wage, job security, job content, working hours, working times, working conditions and commuting distance. Each of these criteria was to be given a number from one to six, where a value of one corresponded to 'not satisfied at all' and a value of six corresponded to 'completely satisfied'. Finally, individuals were asked "How satisfied or dissatisfied are you with your daily work?" using the same 1–6 scale.

In this paper we model the relation between contingent employment contracts and job satisfaction by analyzing overall job satisfaction as an amalgam of satisfaction with the aforementioned job aspects. We use a model in which overall job satisfaction (JS) is a construct of job-aspect satisfactions (JAS):

$$JS_{it} = \alpha_i + \sum_{c=1}^3 \beta_c C_{it} + \sum_{j=1}^J \gamma_j JAS_{it} + \sum_{j=1}^J \sum_{c=1}^3 \delta_{jc} C_{it} JAS_{it} + \theta X_{it} + \varepsilon_{it} \quad (1)$$

In this equation i is an individual, t is time, α_i is the personal fixed effect, C is the type of work arrangement, X is a matrix of personal and job characteristics and ε is the error term. The α -term in Eq. (1) reflects a latent component of unobserved personality traits that influence general job satisfaction. There is substantial psychological evidence on the relationship between personality and satisfaction (e.g. Diener and Lucas 1999; Argyle 1999; Ilies and Judge 2003) and the heritability of satisfaction (e.g. Arvey et al. 1989). Recently this has led to applications of these phenomena in economics (e.g. Winkelmann 2005). Ferrer-i-Carbonell and Frijters (2004) show the importance of taking these personality traits, or more generally unobserved personal fixed effects, into account when analysing satisfaction. Unobserved personality traits account for a major portion of differences between individuals in reported satisfaction. In the present setup this might be of lesser importance, because we may assume that these personality traits influence both total job satisfaction and job aspect satisfaction in the same degree. Still, the *relationship* between aspect satisfaction and total satisfaction might be related to these unobserved factors. This happens when the correlation between overall job satisfaction and (e.g.) wage satisfaction is stronger for some persons than for others—for instance, because some are more motivated by extrinsic rewards, while others are more sensitive to intrinsic rewards, such as job content. Not taking into account these fixed unobserved factors would lead to biased results. Therefore we apply fixed effect ordered logit estimation. Until recently, the existing satisfaction literature utilising panel data applied a fixed effects binomial logit model with an arbitrary common fixed cut point to reduce the categorical satisfaction scale to a (0,1) scale. This permitted fixed effects estimation of a binomial logit model using Chamberlain's method. This binomial logit method comes at a cost, since only those individuals moving across the cut-off point can be used in the estimation. To avoid this drawback, we follow Ferrer-i-Carbonell and Frijters (2004).⁵ They have shown that simple reformulation allows Chamberlain's method to be used, removing

⁵ We would like to thank Ada Ferrer-i-Carbonell for making available the Stata commands that are necessary for this type of estimation.

Table 1 Descriptive statistics by employment contract (years 1995–2002, pooled data)

	TAW	OCW	FTC	REG
Age	30.5	36.1	30.8	38.4
Female	0.49	0.72	0.46	0.35
Single	0.25	0.25	0.24	0.18
Number of children	1.00	0.96	0.79	0.98
Low educated	0.31	0.25	0.23	0.20
Medium educated	0.44	0.47	0.41	0.49
High educated	0.25	0.29	0.37	0.31
Unemployed before start of job	0.45	0.24	0.31	0.16
Tenure	0.80	3.10	1.31	10.42
Number of working hours	35.9	26.0	36.7	37.9
Function level low	0.53	0.53	0.39	0.32
Function level medium	0.37	0.42	0.44	0.56
Function level high	0.10	0.05	0.17	0.12
Overeducated	0.53	0.49	0.40	0.38
Administrative	0.33	0.25	0.33	0.33
Technical	0.21	0.03	0.18	0.22
Agricultural	0.02	0.04	0.03	0.02
Education	0.01	0.15	0.04	0.06
Medical	0.09	0.31	0.14	0.12
Transport	0.03	0.05	0.03	0.04
Legal	0.02	0.01	0.03	0.04
Social/cultural services	0.22	0.14	0.13	0.10
Executive function	0.07	0.08	0.14	0.32
Hourly wage	11.53	14.52	16.10	27.38
Firm provided training	0.26	0.29	0.54	0.63
Firm provided car	0.01	0.01	0.05	0.12
Firm provided pension scheme	0.12	0.49	0.51	0.83
Profit sharing	0.01	0.02	0.03	0.07
Shares/options	0.00	0.00	0.01	0.03
Number of observations	594	305	1,529	23,458

TAW temporary agency work, *OCW* on-call work, *FTC* fixed term contract, *REG* regular contract

both individual-specific effects and thresholds from the likelihood specification. Thus all changes in satisfaction are exploited, and not just those across some arbitrary cut point.

Table 1 provides descriptive statistics and indicates major differences between personal and job characteristics between the contract types. Age, gender, education level and having been unemployed before the start of the job are the personal characteristics that vary substantially between regular workers, agency workers, on-call workers and fixed-term workers. Regarding job characteristics, tenure, hourly wages

and firm provided training and pension schemes represent major differences between the employment contracts. Also the job level, executive functions and the level of fringe benefits differ between the work arrangements. These differences may be the source of diverging job satisfaction patterns observed in the respective employment arrangements.

Since the fixed effects estimation technique implies that the estimated effects are identified on the basis of contract switchers, it might prove problematic in the setting of this paper. As was mentioned before, 16 percent of all individuals in the sample switch contract at least once during the observation period. If those individuals are not a good representation of the full sample, because they have different characteristics and/or satisfaction levels than people who remain in the same type of contract, the results of a fixed effects estimation are biased. Table 2 presents the characteristics of contract switchers and stayers⁶ for all four contract types. In general, contract switchers were not less satisfied with their jobs before their switch than observations that remained in the same contract type. This is true for most domain satisfactions as well. Personal characteristics and job characteristics do not differ systematically between contract stayers and switcher either. The only exceptions are the switchers from regular to other contracts, especially temporary agency work. Those people work at lower function levels and (thus) earn lower wages than persons that work on a regular contract at both points in time.

4 Results

4.1 Effects for the Full Sample

Table 3 provides an overview of the job-satisfaction responses per contract type. Average job satisfaction is lower in contingent work arrangements compared to regular jobs, but only agency work is associated with statistically significant lower overall job satisfaction. As Table 3 makes clear, it is not only overall job satisfaction that differs between the contracts. The most pronounced difference concerns job security. All three contingent work arrangements are associated with statistically significant lower satisfaction with job security, indicating that indeed most workers prefer the higher job security provided by regular work arrangements. Recent evidence by [Origo and Pagani \(2009\)](#) indicates that what matters for a worker's well-being is mainly his/her perceived security, rather than the formal protection characterising his/her employment relationship. Table 3 provides evidence that contingent work arrangements in the Netherlands, even though covered by the flexicurity arrangements of the Flexibility and Security Act as discussed in Sect. 2, perceive little security in their jobs. Also, satisfaction with wages is lower for all contingent work arrangements, whereas satisfaction with working conditions is higher. In addition, agency workers are less

⁶ Stayers are the individuals that are employed in the same type of work arrangement at moments t and $t + 1$. They may have changed job, but the work arrangement is the same at both moments in time. Switchers are the individuals that work in a different work arrangement at moment $t + 1$ compared to moment t . They may work in the same job, but the type of contract changed, e.g. because a fixed-term contract was converted into an open-ended contract.

Table 2 Satisfaction, worker and job characteristics at moment *t* by contract type at moment *t* and *t* + 1

	TAW to					OCW to					FTC to					REG to				
	TAW	OCW	FTC	REG	TAW	OCW	FTC	REG	TAW	OCW	FTC	REG	TAW	OCW	FTC	REG	TAW	OCW	FTC	REG
Contract at moment <i>t</i>																				
Contract at moment <i>t</i> + 1																				
Job satisfaction	4.5	4.3	4.6	4.7	4.3	4.8	4.5	4.8	4.4*	4.6	4.8	4.8	4.6	4.6	4.7	4.8	4.6	4.6	4.7	4.8
Satisfaction—job content	4.2	4.8	4.3	4.5*	5.0	5.0	4.2*	4.9	4.5	4.7	4.8	4.9	4.6	4.8	4.7	4.8	4.6	4.8	4.7	4.9
Satisfaction—working conditions	4.4	5.3	4.4	4.5	4.6	4.6	4.4	4.5	4.4	4.3	4.5	4.6	3.9*	4.4	4.1*	4.3	3.9*	4.4	4.1*	4.3
Satisfaction—working hours	4.6	4.4	4.7	4.8	4.2	4.6	3.9	4.4	4.9	4.5	4.8	4.7	4.5	4.8	4.5	4.8	4.5	4.8	4.5	4.6
Satisfaction—wage	3.9	4.1	4.0	4.1	4.3	4.2	3.7	4.1	4.1	4.3	4.2	4.3	3.8*	4.3	4.1*	4.4	3.8*	4.3	4.1*	4.4
Satisfaction—working times	4.8	4.5	5.0	5.0	5.0	4.8	4.8	4.8	4.9	4.6	4.9	4.9	4.5	5.0	4.6	4.8	4.5	5.0	4.6	4.8
Satisfaction—job security	2.6	3.5	2.8	3.4*	2.9	3.6	3.3	3.6	3.4	3.2	3.3	3.8*	4.3*	4.8	4.6	4.8	4.3*	4.8	4.6	4.8
Satisfaction—commuting distance	4.7	5.0	5.0	4.8	4.9	4.9	4.1	4.9	4.9	5.0	4.8	4.6	4.8	4.9	4.7	4.8	4.8	4.9	4.7	4.8
Age	31.5	38.8	31.2	30.5	34.6	40.9	34.9	36.1	31.5	37.5*	30.8	31.0	34.4	36.9	35.4	39.1	34.4	36.9	35.4	39.1
Female	0.48	0.60	0.45	0.47	0.79	0.81	0.77	0.75	0.44	0.56	0.46	0.43	0.41*	0.42*	0.37	0.34	0.41*	0.42*	0.37	0.34
Single	0.19	0.10	0.26	0.25	0.36	0.21	0.24	0.20	0.18	0.28	0.22	0.24	0.16	0.20	0.21	0.17	0.16	0.20	0.21	0.17
Number of children	1.10	1.50	0.91	0.92	0.64	0.94	1.32	1.10	1.08	0.95	0.76	0.79	0.96	1.00	0.84	1.07	0.96	1.00	0.84	1.07
Low educated	0.31	0.50	0.27	0.28	0.29	0.25	0.23	0.28	0.29	0.19	0.25	0.21	0.25	0.25	0.21	0.20	0.25	0.25	0.21	0.20
Medium educated	0.48	0.38	0.47	0.42	0.49	0.49	0.42	0.44	0.38	0.44	0.37	0.43	0.48	0.42	0.47	0.49	0.48	0.42	0.47	0.49
High educated	0.20	0.13	0.25	0.29	0.22	0.26	0.35	0.28	0.33	0.37	0.38	0.36	0.27	0.33	0.32	0.31	0.36	0.27	0.33	0.31
Unemployed before start of job	0.49	0.33	0.41	0.47	0.29	0.24	0.23	0.34	0.32	0.38	0.33	0.27	0.23	0.18	0.19	0.15	0.32	0.18	0.19	0.15
Tenure	1.05	2.63	0.48	1.18	1.4	3.9	1.6	3.2	0.6	1.9	1.6	1.4	7.8*	9.2	8.4*	11.0	9.2	8.4*	11.0	11.0
Number of working hours	34.9	26.6*	36.6	36.1	30.8*	23.9	23.3	27.7*	36.5	30.0*	37.1	37.7	37.4	32.3*	38.5	38.2	37.4	32.3*	38.5	38.2
Function level low	0.56	0.58	0.54	0.48	0.64	0.62	0.45	0.42	0.38	0.40	0.41	0.38	0.38*	0.35	0.34	0.32	0.38	0.35	0.34	0.32
Function level medium	0.37	0.35	0.38	0.41	0.29	0.34	0.41	0.54	0.42	0.42	0.39	0.47	0.54	0.56	0.55	0.56	0.47	0.54	0.55	0.56
Function level high	0.07	0.07	0.08	0.11	0.07	0.04	0.14	0.04	0.20	0.18	0.20	0.16	0.08	0.09	0.11	0.12	0.16	0.08	0.09	0.12
Overeducated	0.52	0.38	0.60	0.49	0.43	0.47	0.64	0.46	0.40	0.47	0.39	0.40	0.41	0.42	0.41	0.38	0.40	0.41	0.42	0.38

Table 2 continued

Contract at moment t	TAW to			OCW to			FTC to			REG to			
	TAW	OCW	FTC	TAW	OCW	FTC	TAW	OCW	FTC	TAW	OCW	FTC	REG
Contract at moment $t + 1$	TAW	OCW	FTC	TAW	OCW	FTC	TAW	OCW	FTC	TAW	OCW	FTC	REG
Administrative function	0.31	0.36	0.34	0.36	0.19	0.36	0.18	0.33	0.30	0.29	0.38	0.36	0.33
Technical function	0.25	0.26	0.16	0.23	0.01	0.04	0.00	0.24	0.18	0.17	0.21	0.25	0.22
Agricultural function	0.02	0.13	0.01	0.03	0.01	0.06	0.05	0.03	0.02	0.03	0.02	0.03	0.02
Education function	0.00	0.00	0.01	0.01	0.14	0.12	0.17	0.15	0.02	0.05	0.04	0.03	0.06
Medical function	0.09	0.13	0.13	0.09	0.29	0.32	0.24	0.35	0.11	0.12	0.15	0.09	0.12
Transport function	0.03	0.00	0.07	0.02	0.07	0.07	0.00	0.02	0.07	0.05	0.03	0.04	0.04
Legal function	0.02	0.00	0.04	0.01	0.02	0.01	0.01	0.00	0.01	0.02	0.03	0.01	0.04
Social/cultural services function	0.23	0.13	0.20	0.19	0.17	0.15	0.14	0.15	0.18	0.19	0.15	0.10	0.09
Executive function	0.07	0.00	0.03	0.07	0.07	0.03	0.03	0.07	0.02	0.05	0.12	0.08	0.07
Hourly wage	12.43	12.97	10.65	12.82	13.67	15.30	14.36	15.57	15.60	14.85	16.48	17.30	26.18*
Firm provided training	0.26	0.25	0.23	0.33	0.25	0.26	0.31	0.34	0.43	0.38	0.50	0.53	0.63
Firm provided car	0.01	0.00	0.02	0.03	0.00	0.00	0.02	0.00	0.02	0.00	0.04	0.08	0.12
Firm provided pension scheme	0.13	0.13	0.04	0.16	0.14*	0.53	0.41	0.55	0.44	0.67	0.48	0.54	0.84
Profit sharing	0.00	0.00	0.01	0.03	0.00	0.03	0.05	0.01	0.07	0.00	0.02	0.03	0.07
Shares/options	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.02
Number of observations	158	38	121	209	44	98	122	119	75	42	347	693	1,6751

Only those observations included for which we know the type of contract at moment t and $t + 1$
 TAW temporary agency work, OCW on-call work, FTC fixed term contract, REG regular contract
 * Statistically significant difference to the observations that stay in the same type of contract from t to $t + 1$

Table 3 Average overall job satisfaction and satisfaction with job aspects by employment contract (six-point Likert scale)

	TAW	OCW	FTC	REG
Job satisfaction	4.54*	4.68	4.75	4.76
Satisfaction—job content	4.33*	4.78	4.81	4.85
Satisfaction—working conditions	4.44*	4.47*	4.53*	4.33
Satisfaction—working hours	4.75*	4.48	4.71*	4.60
Satisfaction—wage	4.02*	4.13*	4.25*	4.41
Satisfaction—working times	4.88	4.79	4.87	4.83
Satisfaction—job security	3.16*	3.57*	3.77*	4.85
Satisfaction—commuting distance	4.73	4.83	4.72*	4.85

TAW temporary agency work, OCW on-call work, FTC fixed term contract, REG regular contract

* Statistically significant difference with regular work at the 5% level

satisfied with the job content, but on the other hand satisfaction with working hours is higher for agency workers.

These observations raise the question of how important the differences in the aspect satisfactions are for the overall job satisfaction in the contingent and regular work arrangements. What makes contingent workers, and especially agency workers, less satisfied? To answer this question, we estimated equation 1 using fixed effect ordered logit estimation. Table 4 presents the results.⁷ In Model 1 no distinction is made between employment contracts. Clearly, general job satisfaction is determined mainly by happiness with job content. The coefficient of this aspect is more than twice as large as that of working conditions, working hours, wage and working times. In turn, the coefficients of job security and commuting distance are again half as large as the coefficients of these four items. The weights found here differ somewhat from the few earlier observations in the literature. Clark (1997) e.g. analysed the relative importance of domain job satisfaction by directly asking respondents which, in their view, is the most important job aspect. He found job insecurity to be as important as the job content. This difference might of course be related to the institutional differences between the UK and the Netherlands, with the Netherlands providing higher employment protection and income protection in general.

Model 2 is an extended version of model 1 with interaction terms by employment contract, as in Eq. (1). Models 3 and 4 add corrections for observed personal and job characteristics, which hardly influences the coefficients of interest. Likelihood ratio tests show that all models 2–4 statistically dominate the exact same models estimated without interaction effects at the 90 percent and some at the 95 percent confidence level. Regarding fixed-term contracts, we find no

⁷ Robustness checks have shown that results are not sensitive to selection of the sample (such as limiting the sample to job switchers or to private-sector employees). Also, results are not sensitive to controlling for background characteristics such as having children, having a partner, working part-time, tenure, firm size and sector. Some of these variables show a statistically significant relation with overall job satisfaction but hardly influence the coefficients on the domain job satisfactions.

Table 4 Fixed effect ordered logit estimates overall job satisfaction—full sample

	Model 1	Model 2	Model 3	Model 4
Satisfaction—job content	0.568 (0.025)*	0.568 (0.026)*	0.567 (0.026)*	0.568 (0.026)*
TAW * sat. job content		0.166 (0.141)	0.160 (0.141)	0.158 (0.141)
OCW * sat. job content		−0.043 (0.209)	−0.045 (0.209)	−0.031 (0.208)
FTC * sat. job content		−0.008 (0.085)	−0.011 (0.085)	−0.009 (0.086)
Satisfaction—working conditions	0.233 (0.020)*	0.235 (0.021)*	0.236 (0.021)*	0.232 (0.021)*
TAW * sat. working conditions		−0.155 (0.119)	−0.142 (0.119)	−0.147 (0.119)
OCW * sat. working conditions		−0.054 (0.191)	−0.051 (0.191)	−0.082 (0.191)
FTC * sat. working conditions		−0.058 (0.076)	−0.062 (0.076)	−0.074 (0.076)
Satisfaction—working hours	0.248 (0.022)*	0.258 (0.023)*	0.258 (0.023)*	0.252 (0.024)*
TAW * sat. working hours		−0.129 (0.133)	−0.130 (0.133)	−0.115 (0.133)
OCW * sat. working hours		0.018 (0.167)	0.023 (0.167)	0.037 (0.169)
FTC * sat. working hours		−0.044 (0.083)	−0.043 (0.083)	−0.038 (0.083)
Satisfaction—wage	0.211 (0.023)*	0.230 (0.025)*	0.228 (0.025)*	0.232 (0.025)*
TAW * sat. wage		−0.270 (0.122)*	−0.269 (0.123)*	−0.267 (0.123)*
OCW * sat. wage		−0.430 (0.187)*	−0.418 (0.187)*	−0.410 (0.188)*
FTC * sat. wage		−0.050 (0.073)	−0.044 (0.073)	−0.049 (0.073)
Satisfaction—working times	0.198 (0.024)*	0.198 (0.025)*	0.199 (0.025)*	0.197 (0.025)*
TAW * sat. working times		−0.153 (0.152)	−0.156 (0.152)	−0.173 (0.151)
OCW * sat. working times		−0.122 (0.203)	−0.136 (0.204)	−0.163 (0.205)
FTC * sat. working times		0.014 (0.091)	0.010 (0.091)	0.012 (0.091)
Satisfaction—job security	0.107 (0.018)*	0.117 (0.020)*	0.117 (0.020)*	0.114 (0.020)*
TAW * sat. job security		−0.069 (0.089)	−0.072 (0.089)	−0.075 (0.089)
OCW * sat. job security		0.130 (0.126)	0.131 (0.126)	0.126 (0.127)
FTC * sat. job security		0.022 (0.057)	0.024 (0.057)	0.028 (0.057)
Satisfaction—commuting distance	0.129 (0.020)*	0.125 (0.021)*	0.125 (0.021)*	0.129 (0.022)*
TAW * sat. commuting distance		0.082 (0.115)	0.071 (0.115)	0.083 (0.114)
OCW * sat. commuting distance		−0.050 (0.165)	−0.045 (0.166)	−0.060 (0.166)
FTC * sat. commuting distance		0.036 (0.062)	0.033 (0.062)	0.038 (0.061)
TAW (temp agency work)		2.276 (0.898)*	2.332 (0.900)*	2.263 (0.904)*
OCW (on-call work)		3.190 (1.353)*	3.165 (1.355)*	3.302 (1.358)*
FTC (fixed term contract)		0.597 (0.565)	0.631 (0.565)	0.572 (0.566)
Personal characteristics	No	No	Yes	Yes
Job characteristics	No	No	No	Yes
Year fixed effects	Yes	Yes	Yes	Yes
Likelihood—model with interactions		−7033.1	−7024.1	−7003.3
Likelihood—model without interactions		−7064.3	−7054.7	−7036.1

The regressions include year dummies that are not reported in the table. Number of observations = 20,449
TAW temporary agency work, OCW on-call work, FTC fixed term contract

* Statistically significant at the 5% level

different weights of the job aspects in overall satisfaction compared to regular contracts. However, temporary agency work and on-call work show signs of distinct job satisfaction structures. The job aspect that shows statistically significant interactions with contract dummies is the wage. For temporary agency workers and on-call workers, wage satisfaction receives a lower weight in overall job satisfaction than it does among regular workers. Interestingly, the contract dummies themselves are statistically significant, indicating that there must be unobserved job aspects that are more important for agency workers and on-call workers than for regular workers. Earlier research in other disciplines (e.g. [Kalleberg 1977](#)) reveals six dimensions of work that together explain a major part of the variance in satisfaction: intrinsic (job content), convenience (working hours, working times, working conditions, commuting distance), financial (wage), relationships with co-workers, career opportunities and resource adequacy. The first three items are present in the current analysis; the last three are absent in our data. This indicates that these last three items may be responsible for the positive contract dummies. Also, a recent contribution by [Mohr and Zoghi \(2008\)](#) shows that high-involvement work design, such as participation in quality circles, self-directed workgroups and being informed about workplace changes lead to higher job satisfaction. As was shown by [Felstead and Gallie \(2004\)](#) temporary workers have a lot to gain in this respect.

As we have shown, overall job satisfaction is lower in contingent work arrangements compared to regular contracts. Table 5 shows the decomposition of the total difference in overall job satisfaction between contingent work arrangements and regular jobs. The first line shows the gross difference in job satisfaction experienced by workers in contingent work arrangements, compared to those in regular jobs, as was already shown in Table 3. The second line indicates which part of this gap is due to different coefficients, i.e. the different weights of the domain satisfactions in overall job satisfactions. This was obtained by using the coefficients of regular workers and applying them to contingent workers, while keeping their characteristics and domain

Table 5 Decomposition of the gap in overall job satisfaction between regular and contingent employment contracts according to Model 4

	TAW	OCW	FTC
Difference with regular workers	-0.215*	-0.084	-0.012
Due to personal characteristics and fixed effects	-0.046	-0.114	-0.007
Due to coefficients	0.014	0.112	0.005
Due to satisfaction with job content	-0.134	-0.010	-0.001
Due to satisfaction with working conditions	0.007	0.002	0.002
Due to satisfaction with working hours	0.005	-0.007	0.001
Due to satisfaction with wages	-0.002	0.010	-0.002
Due to satisfaction with working times	0.003	0.000	0.000
Due to satisfaction with job security	-0.057	-0.076	-0.010
Due to satisfaction with commuting distance	-0.005	0.000	-0.001

TAW temporary agency work, OCW on-call work, FTC fixed term contract

* Statistically significant difference with regular work at the 5% level (first row only)

satisfactions constant. The third line indicates which part of the gap in overall job satisfaction between contingent and regular workers is due to their personal effects. This was calculated by giving contingent workers the (average) characteristics of regular workers and then calculating their overall job satisfaction given their own coefficients and domain satisfactions. The subsequent lines show which part of the satisfaction gaps can be attributed to differences in the levels of domain satisfactions. This was calculated by giving contingent workers the (average) domain satisfactions of regular workers and then calculating their overall job satisfaction given their own coefficients and personal characteristics.

As was already found by [Bardasi and Francesconi \(2004\)](#) and [D'Addio et al. \(2007\)](#), fixed-term contracts show no different relation with job satisfaction compared to regular contracts, especially after taking account of the personal fixed effect. Temporary agency work is associated with lower overall job satisfaction. Even though the personal fixed effect does absorb part of the negative differential, the gap remains after the personal fixed effect is taken into account. This is mainly due to the lower satisfaction with job content. Also the low satisfaction with job security is responsible for a substantial part of the gap in overall job satisfaction between agency workers and regular workers. The low satisfaction of agency workers with respect to job content might be the result of the lower function level and higher incidence of over-education among temporary agency workers (see [Table 2](#)). As was already shown by [Allen and Van der Velden \(2001\)](#), over-education, and especially skill mismatch, has a negative influence on the job occupant's satisfaction. [Zijl \(2006, chapter 5\)](#) has shown that low function levels lead to lower satisfaction with job content, even after controlling for individual fixed effects.

With respect to on-call work, the gap in overall job satisfaction with regular workers is fully absorbed by the personal fixed effect. Nevertheless the lower satisfaction with job security is responsible for a substantial negative influence on overall job satisfaction. This is in turn compensated by the distinct weights applied by workers in on-call jobs, which can largely be explained from the fact that satisfaction with the wage, a job domain that on-call workers are relatively unhappy with, has relatively little weight in their overall job satisfaction. For this group, we clearly see that a lower satisfaction with some aspects of the job can be compensated by other factors and the importance of these job aspects for overall job satisfaction. We must note that robustness checks show that the results for on-call work arrangements are sensitive to the construction of the control group. When the sample is restricted to workers with tenure shorter than one year, we find a gap in job satisfaction compared to regular workers which equals that of temporary agency workers, which is largely due to the lower satisfaction with job security that is not compensated by different preferences. Since on-call work, in contrast to fixed-term work and in practise also temporary agency work⁸, is not restricted in duration, this may indicate that on-call workers in their first year differ from on-call workers who work on this type of work arrangement for a longer period.

⁸ Because the collective agreement of temporary agency workers states that workers that exceed 42 months of tenure with a temporary work agency have to be offered an open-ended contract with this agency, agencies make sure that workers do not exceed this limit. In our data 87 percent of temporary agency workers have tenure shorter than one year. For on-call workers this is 48 percent.

The latter may have chosen the arrangement voluntarily, while for the first it is more involuntary.

4.2 Effects for Men and Women

An entire stream of literature, started by [Clark \(1997\)](#), is devoted to explaining the gender gap in job satisfaction. Women appear to be happier with their jobs than men ([Kaiser 2007](#); [Sousa-Poza and Sousa-Poza 2003](#)). The original explanation was that women have lower expectations about labour market outcomes. [Clark \(1997\)](#) suggested that the gender satisfaction gap might be related to the different values which men and women have with respect to work. He found that men rank promotion prospects, pay and job security higher than women do, whereas women are significantly more likely to mention good relations with managers, the actual work itself and the hours of work. Further on this, recent evidence suggests that the gender differences are eliminated after taking flexibility in combining work and home obligations into account ([Bender et al. 2005](#)). This is, of course, highly related to contingent work arrangements. The ability to combine work and family life is better for temporary agency work and on-call work than for regular or fixed-term contracts, hence it is a major reason why some women choose to work in these arrangements ([Ciett 2000](#)). Therefore we may expect that men and women value job-amenities attached to the specific work arrangements differently. For instance, it may be the case that women who occupy an on-call job in order to combine their work and family life might not find the lack of security an important downside. To test for these possibilities, [Table 6](#) provides the satisfaction decompositions separately for men and women. We indeed find evidence of differences between men and women.⁹ A first difference concerns the importance of job security. For men this element is a more important explanation for the lower satisfaction of contingent workers, especially on-call workers, than for women. Secondly, [Table 6](#) shows that women in on-call work arrangements do not experience lower job satisfaction compared to regular female workers, but their male counterparts do. As we saw in the analysis on the complete sample, the size of the coefficients compensates for the negative aspects, but for men this does not compensate for the full gap. The personal characteristics explain part of this, but also job content and job security inflict such a negative effect that different preferences do not compensate. The number of observations in each group shows that on-call work is less common among males than among females.

4.3 Results by Education Groups

Contingent work is highly related to skill level. Temporary agency work is mainly used in the lower segment of the labour market. Contingent work arrangements in the upper part of the labour market might well be chosen on a voluntary basis ([Krausz et al. 1995](#)) and might be expected to result in different outcomes than on the lower

⁹ The presented conclusions are not sensitive to including all women, only married women or only women with children in the analysis.

Table 6 Decomposition of the gap in overall job satisfaction between regular and contingent employment contracts according to Model 4, estimated separately for men and women

	Men			Women		
	TAW	OCW	FTC	TAW	OCW	FTC
Difference with regular workers	-0.225*	-0.170 [#]	0.015	-0.195*	-0.036	-0.035
Due to coefficients	0.020	0.210	0.068	-0.008	0.082	-0.009
Due to personal characteristics and fixed effects	-0.044	-0.183	-0.037	-0.023	-0.066	-0.005
Due to satisfaction with job content	-0.137	-0.118	0.003	-0.141	0.002	-0.004
Due to satisfaction with working conditions	0.002	0.004	0.015	0.018	0.007	0.002
Due to satisfaction with working hours	0.001	0.001	0.006	0.001	-0.012	0.001
Due to satisfaction with wages	0.008	0.041	-0.004	-0.007	0.005	-0.002
Due to satisfaction with working times	0.000	-0.009	0.001	-0.003	0.002	0.000
Due to satisfaction with job security	-0.062	-0.121	-0.037	-0.030	-0.054	-0.016
Due to satisfaction with commuting distance	-0.014	0.006	-0.001	-0.002	-0.001	-0.002
Number of observations	301	73	816	293	232	713

TAW temporary agency work, OCW on-call work, FTC fixed term contract

* Statistically significant difference with regular work at the 5% level (first row only)

[#] Statistically significant difference with regular work at the 10% level (first row only)

level, where contingent work is mostly involuntary (Ellingson et al. 1998). Table 7 shows the differences in satisfaction levels between the work arrangements on the different education levels, and the decomposition of the gaps. Regarding temporary agency work we indeed find a smaller satisfaction gap on the highest education level, which is fully ascribed to the satisfaction with the job content and job security. On the lower education levels the gap is larger, and to a lesser extent the result of lower satisfaction with the job content. Apparently, job content is not so much a problem for low educated agency workers—since their outside opportunities may not be more interesting—while it is problematic for the higher educated agency workers. On the lowest level, job security is a main driver of the satisfaction gap. Also, personal characteristics are important for this group. On the intermediate level, the satisfaction gap for agency workers cannot be ascribed to one or two issues, but rather to a bundle of all aspects.

With respect to on-call work the story is completely opposite. Here we find the largest satisfaction gap at the highest education level. The personal effects are important in this respect, indicating that it is a specific sub sample of the high educated that work in on-call work arrangements. Also, the lack of job security is important for this group. On the lowest education level, these issues do not contribute to the satisfaction gap of on-call workers, which is relatively small for this group. The difference that we find can fully be attributed to the lower satisfaction with working conditions.

Regarding fixed-term contracts, education level matters as well. We did not find a satisfaction gap between fixed-term and regular workers when all education levels were considered jointly. But separate analysis for the different education levels shows

Table 7 Decomposition of the gap in overall job satisfaction between regular and contingent employment contracts according to Model 4, estimated separately for each level of education

Low educated	Low educated			Medium educated			High educated		
	TAW	OCW	FTC	TAW	OCW	FTC	TAW	OCW	FTC
Difference with regular workers	-0.283*	-0.078	-0.079 [#]	-0.225*	-0.010	-0.016	-0.147*	-0.237*	0.034
Due to coefficients	-0.050	-0.027	-0.019	-0.039	-0.003	0.001	-0.033	0.051	-0.011
Due to personal characteristics and fixed effects	-0.087	0.090	-0.048	-0.002	0.001	-0.004	0.044	-0.105	0.017
Due to satisfaction with job content	-0.056	0.028	-0.004	0.019	-0.001	-0.002	-0.096	-0.036	0.001
Due to satisfaction with working conditions	0.001	-0.247	0.022	-0.041	-0.001	0.000	0.007	-0.004	-0.006
Due to satisfaction with working hours	0.008	0.038	-0.001	-0.044	-0.001	0.000	0.007	-0.020	-0.006
Due to satisfaction with wages	0.011	-0.020	-0.002	-0.040	-0.001	-0.003	-0.001	0.003	0.006
Due to satisfaction with working times	0.006	0.008	-0.001	-0.040	-0.001	-0.001	-0.006	-0.009	0.000
Due to satisfaction with job security	-0.095	0.029	-0.023	0.000	-0.001	-0.005	-0.073	-0.123	0.030
Due to satisfaction with commuting distance	-0.021	0.022	-0.002	-0.037	-0.001	-0.001	0.005	0.006	0.002
Number of observations	183	83	362	269	140	642	142	82	525

TAW temporary agency work, OCW on-call work, FTC fixed term contract

* Statistically significant difference with regular work at the 5% level (first row only)

[#] Statistically significant difference with regular work at the 10% level (first row only)

that low educated workers are less satisfied when working on a fixed-term contract. This is mostly the result of their personal characteristics.

5 Summary and Conclusions

In this paper we have explored the relationship between contingent work arrangements and job satisfaction. Earlier research has established a negative relationship between contingent work arrangements and job satisfaction, which for some arrangements persists after controlling for a range of personal and job characteristics, and even after allowing for unobserved heterogeneity. In order to better understand the relationship between contingent work arrangements and job satisfaction, we have analysed satisfaction with a number of job aspects in four employment arrangements: regular, fixed-term, on-call and temporary agency work. We have determined the job aspects with which contingent workers are less satisfied and allowed for differences between work arrangements in the importance of these job aspects for overall job satisfaction. In doing so we allowed for the possibility that the bundle of characteristics associated

with contingent workers' jobs appeals to them sufficiently to overcome the satisfaction lost from their lack of job security. Data were used from the Dutch Socio-Economic Panel for the years 1995–2002.

Based on simple cross tabulations we find that workers employed on contingent work arrangements experience less job satisfaction compared to regular workers. This holds especially for temporary agency workers. All three contingent work arrangements are associated with lower satisfaction with job security and wages. Agency work is also associated with lower satisfaction with job content.

Our fixed effects ordered logit results indicate that overall job satisfaction is mainly determined by happiness with job content. The way total job satisfaction is built up from the various job aspects differs somewhat between work arrangements, but not spectacularly so. The decomposition of the gap in total job satisfaction between regular workers and contingent workers indicates that fixed-term contracts show no different relationship with job satisfaction compared to regular contracts, especially after taking account of the personal fixed effect. The gap in total job satisfaction between regular workers and temporary agency work remains after the personal fixed effect is taken into account and is mainly due to the lower satisfaction experienced by agency workers with the content of their jobs. Also the low satisfaction with job security is responsible for a substantial part of the gap in overall job satisfaction between agency workers and regular workers. In contrast, for on-call workers the negative satisfaction effect originating from the lack of job security is compensated by other job aspects or by different interests, resulting in a distinct relationship between total job satisfaction and its components. The latter conclusion does not hold for all sub groups. Men and high educated workers employed in on-call work arrangements do experience lower satisfaction, which is not due to preferences differing from men who work in regular jobs. Personal characteristics do play an important role here, indicating that it is a specific sample of men and higher educated that work in on-call work arrangements. The lack of job security is an important downside of this work arrangement for these groups of workers.

Our findings in this paper have important implications for the political debate with respect to the acceptability of contingent work arrangements as a regular part of the labour market. The results suggest that policy concern over temporary agency work and on-call work is at least partially justified, since temporary agency work is associated with lower overall job security. For fixed-term workers and most on-call workers, the negative satisfaction effect originating from the lack of job security and lower wages is compensated by other job aspects or a variant relationship between total job satisfaction and its components, but not for temporary agency workers. These workers experience a strong negative influence originating from a lack of interesting job content, which might be related to the high incidence of over-education among agency workers. In itself, this is not a major concern, as long as temporary agency work is not a dead-end position on the labour market and does not create a segmented labour market where some groups have little or no alternative to working as temporary agency workers. Fortunately, for many people temporary agency work is a temporary phase, an intermediate position between unemployment and regular work. In many countries a substantial number of workers currently occupied in temporary work arrangements find regular employment within the next year. According to [Ciett \(2000\)](#) these number

amount to 30–40 percent in countries such as Germany, France, Italy, the UK and the Netherlands. As Ichino et al. (2008) have shown, temporary agency work can even be an effective stepping-stone to permanent employment, increasing future employment probabilities compared to a situation without temporary agency work. Against this background the lower job satisfaction of temporary agency workers due to lack of job security and relatively uninteresting work below their level may be regarded as an investment in future labour market opportunities. However, Ichino et al. (2008) also show that the stepping-stone does not function in all cases, or even in all regions. So the fear of a dual labour market with less attractive positions, i.e. associated with lower job satisfaction, for a sub set of workers justifies policy concerns.

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