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# Changes in workplace situation and work values. Relations and dynamics within different employment regimes**

Workplace situation as well as work values have apparently changed in the last decades. However, up to now we do not know how these changes are related. This article considers both, workplace situation and work values, together and analyses theoretically and empirically how different developments can either lead to match or mismatch between workplace situation and work values. It refers to the employment regime approach to analyse the potential influence of different institutional frameworks. Findings have revealed various change patterns where developments regarding different dimensions of work life follow different logics: If employment becomes less secure, job security becomes more important. With respect to other dimensions (income, career opportunities, interesting job, and independence at work), an adaptation can be observed. The existing employment regime theory helps little in explaining the dynamics between workplace situation and work values.

Key words: **employment regimes, mismatch, organisational change, work value change**
(JEL: J50, J81, O15, P50)

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## Introduction

In recent years, there have been intense debates on changing work and employment conditions, on the one hand, and on the change in work values, on the other. As for workplace situation, particularly the development toward high performance work practices and the related improvements toward more independent work and more interesting jobs have been topics of these debates (see, e.g., Appelbaum et al., 2000; Kalleberg, 2001). At the same time, tendencies of erosion and decline, specifically with regard to job security or income, have been found (Kalleberg, 2001, 2009, 2011; Ashford et al., 2007; Osterman & Shulman, 2011). Another strain of literature discusses the changes in work values. Earlier studies assumed a growing emphasis on intrinsic work values (e.g., interesting job, independent work) (Ester et al., 1994; Harding & Hikspoors, 1995; Yankelovich et al., 1985), but more recent research indicates that the importance of extrinsic values (e.g., income) has also been increasing (Cozma, 2011; Ester et al., 2006).

Since up to now these two discussion strands have not been integrated systematically, we do not know how changes in workplace situation and in work values are related (but see Kalleberg, 2007, 2008; Reynolds & Aletraris, 2010). However, this issue is highly relevant because a match or mismatch between workplace situation and work values is crucial for job quality and job satisfaction of employees (Kalleberg, 2007). It further impacts on organisational commitment, job performance, and employee turnover (e.g., Hoffman & Woehr, 2006; Kristof-Brown et al., 2005; Verquer et al., 2003) and is thus relevant also from an economic and societal perspective.

The main objective of this article is, therefore, to analyse the interrelations between changes in workplace situation and work values. Of special significance is the question of match or mismatch between workplace situation and work values. Within this perspective, work values (resp. desirable job characteristics or job orientations) are understood as a point of reference to assess a workplace situation because they signify what people expect from work (e.g., Dose, 1997; Ros et al., 1999; Bu & Mckeen, 2001). "Work values are beliefs pertaining to desirable end-states (e.g., high pay) or behaviour (e.g., working with people) […]; they refer to what a person wants out of work in general, rather than to the narrowly defined outcomes of particular jobs" (Ros et al., 1999, p. 54). As values generally serve to assess the social world, work values are important for the evaluation of the workplace, the attitudes to specific workplace situations, and the respective behavioural response (Ros et al., 1999; Gahan & Abeysekera, 2009).

The research question will be addressed from a macro-level perspective. The potential influence of different employment regimes is analysed and discussed (Gallie, 2007, 2009; Korpi, 1978, 2006) because it can be assumed that the institutional framework influences the relations and dynamics between changes in workplace situation and work values. Theoretical assumptions are tested using cross-sectional data of the International Social Survey Program (ISSP) for three time periods (1989, 1997, and 2005), covering five countries (USA, Great Britain, West Germany, Norway, and Hungary).

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Findings reveal various change patterns which can be related to different theoretical assumptions. With regard to job security, an opposing dynamic of workplace situation and work values can be observed. Regarding other extrinsic (income, career opportunities) and intrinsic dimensions (interesting job, independence at work) of work life, results point to an adaptation of work values to the experienced workplace situation. In addition, there are also situations in which workplace situation is adapted or readapted to work values of employees. Assumptions made within the employment regime approach cannot be verified.

## Relations between workplace situation and work values over time

The question of match or mismatch between workplace situation and individual work values has been addressed especially in the extensive literature on person-organisation (P-O) fit (Cennamo & Gardner, 2008; Edwards, 2008; Kristof, 1996). However, these studies are more micro oriented and do not account for macro-level developments and the dynamics between organisational change and work value change. Up to now, there have been only a few studies dealing with historical developments and changes in match and mismatch between workplace situation and work values. Some research has been carried out on work hour mismatch (for an overview, see Golden, 2006). For example, Reynolds and Aletraris (2010) have recently analysed changes in the mismatches between actual and preferred work hours of paid work in the USA. Using a longitudinal design, they show that the gap between actual and preferred work hours grew in the early 1990s and that the population of employees affected by work hour mismatch was in flux.

More comprehensive insights can be drawn from the works of Kalleberg (2007, 2008) who investigated how the match between people's jobs and their needs, preferences, and abilities has changed in recent years in the USA. The author analysed mismatch developments along seven dimensions: skills and qualifications (over- and underqualification), geographical or spatial location, temporality and time preferences (overworking and underworking), inadequate earnings and conflicts between work and family life. He reports that in recent years, mismatches in most of these dimensions have become more common in the USA, especially with regard to overworking and work-family conflict.

Theoretically, there are a number of different ways how changes in workplace situation and work values in a given time frame can be related (see Reynolds & Aletraris, 2010). Basically, there are three types of change: (1) situational change only, (2) work value change only, and (3) change in both (1) and (2). In every one of these basic types, different hypothetical scenarios are conceivable, leading either to a match or mismatch between workplace situation and work values. Further, looking at different points in time, temporary developments and realignments are possible (see Figure 1).

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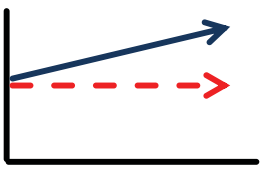
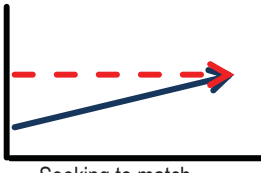
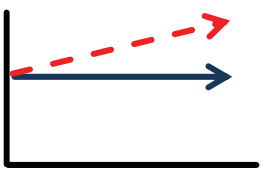
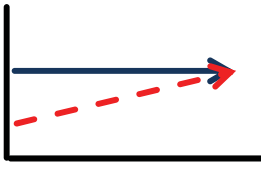
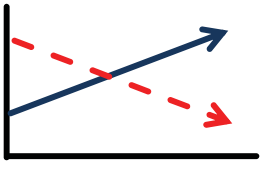
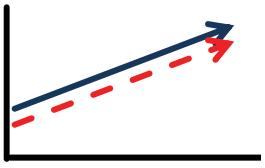
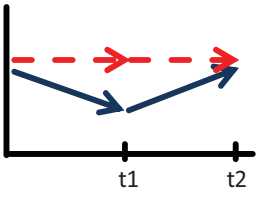
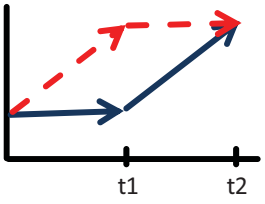
**Figure 1: Main analytical types of change**

| Type of change | Description | Example of scenario I | Example of scenario II |
|---|---|---|---|
| Situational change only | Workplace situation change leads to…<br>(I) an increasing mismatch<br>(II) decreasing mismatch |  Organisational ignorance scenario |  Seeking to match scenario |
| Work value change only | Work value change leads to…<br>(I) an increasing mismatch<br>(II) decreasing mismatch |  Modernisation scenario |  Adaptation scenario |
| Change in workplace situation and work values | Workplace situation and work values can change...<br>(I) in opposing directions<br>(II) aligned |  Amplification scenario |  Aligned change scenario |
| Temporary change | Temporary changes in time may lead to<br>(I) simple temporary mismatches<br>(II) temporary mismatches with realignment on a different level |   |   |

Legend: → : Workplace situation; - - → : Work values;
Source: Own depiction. See a similar approach by Reynolds and Aletraris (2010).

### *Situation-driven change I: Organisational ignorance scenario*

This scenario accounts for changes in workplace situation, whereas work values remain stable. Thereby an increasing mismatch between workplace situation and work values occurs because organisational practices diverge from work values. For example, it has often been stated that organisations have moved toward more flexible forms of employment (Burchell et al., 2002; Gallie et al., 1998; Kalleberg, 2009; Neumark, 2000), which have significantly eroded job security in several countries (see Olsen et

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al., 2010). If work values tied up with job security remain the same, this will lead to a higher mismatch level.

### *Situation-driven change II: Seeking to match scenario*

Changes in workplace situation can also reduce mismatch. Organisations may try to avoid a mismatch with work values because they do not want its negative consequences. The literature on P-O fit has highlighted that match or mismatch between workplace situation and work values is related to important work outcomes such as intent to turnover, job satisfaction, organisational commitment, and task performance (Verquer et al., 2003; Kristof-Brown et al., 2005; Hoffman & Woehr, 2006). Indeed, especially in the 1990s, new organisational practices likely to change the workplace situation for the better were widely introduced in several countries (Fröhlich & Pekruhl, 1996; EPOC Research Team, 1998; Nordhause-Janz & Pekruhl, 2000; Lorenz & Valeyre, 2005; Osterman, 2006). So-called high commitment and high performance work practices or systems were adopted, aiming at increased performance by shifting responsibilities to employees (see Appelbaum et al., 2000, 2002; Boxall & Macky, 2009; Giles et al., 2002; Kalleberg, 2001, 2003, 2011). While employees' discretion in the labour process was expected to increase, work was also expected to become more interesting for employees. This development could have reduced a former mismatch where the respective intrinsic work values were not fulfilled.

### *Value-driven change I: Modernisation scenario*

Value-driven changes describe situations where work values are shifting while the workplace situation remains unchanged. As a result, mismatch occurs if work values diverge from the actual workplace situation. This may occur if employees become more demanding toward their work. Ever since Inglehart (1971) claimed a "silent revolution in Europe", there has been an intensive debate about the change in values and the increasing post-materialistic demands of the younger generations (see also, e.g., Inglehart, 1990). Inglehart's studies are not directly related to work life. However, in the context of this debate, a change in values and attitudes regarding occupation and work has also been stated. Yankelovic (1985), for example, assumes a shift from materialism toward expressive work orientations. Beathge (1991) established his thesis of the "normative subjectification of labor", postulating that a general change in work values takes place so that individual claims and ideas of work become strengthened. Likewise, Ester et al. (Ester et al., 1994) assume that modernisation and individualisation can lead to a growing importance of work values stressing self-determination, self-development, and self-realisation.

### *Value-driven change II: Adaptation scenario*

It is also possible that work values are adapted to the actual workplace situation and thus reduce former mismatch. For example, Johnson et al. (2012) argue that work values change regarding experienced workplace conditions. They assume that individuals are motivated to protect and enhance their self-esteem. This would include an increase in work values related to the experienced workplace conditions and a reduction in of work values if they are not fulfilled (see also Mortimer & Lorence, 1979).

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### *Simultaneous changes I: Amplification scenario*

Simultaneous changes in workplace situation and work values can lead to an amplification effect when both change in opposing directions. In particular, this may be the case for extrinsic aspects of work life. Building on the work of Maslow (1954), it can be hypothesised that material and safety needs become strengthened if extrinsic workplace conditions are worsening. Accordingly, intrinsic work values become less important (Johnson et al., 2012).

### *Simultaneous changes II: Aligned change scenario*

In contrast, an aligned change trajectory of workplace situation and work values is also conceivable. Such a trajectory would either imply a response in terms of organisational practices to changing work values in order to prevent mismatch and the accompanying consequences (seeking to match) or an adjustment of work values to changing workplace situations (adaptation).

### *Temporary change I: Simple temporary mismatch*

Finally, when investigating different points in time, downstream developments and readjustments are thinkable. A simple temporary mismatch can be observed if one or both aspects (workplace situation and work values) change in one period and return to previous levels in the following. For example, job security largely depends on the business cycle. Thus in weak economic situations job security declines but improves once the business cycle picks up.

### *Temporary change II: Temporary mismatch with realignment on a different level*

A temporary mismatch can also be resolved through adaptation processes resulting in an equilibrium on a different level, which is either higher or lower than the starting level. For example, it is possible that modernisation and generational change lead to higher intrinsic values (Ester et al., 1994; Yankelovich et al., 1985), causing temporary mismatch. After some time, organisations may become aware of the conflict between workplace situation and work values and adapt their organisational practices. The resulting match would be on a higher level.

## The influence of the institutional context

In addition to the possible relations between changes in workplace situation and work values, there is the potential influence of the institutional context on match or mismatch between workplace situation and work values. The literature contains several indications that the institutional context is decisive for job quality in a country (Gallie, 2007, 2009; Holman, 2012; Olsen et al., 2010). Correspondingly, we assume that the relations and dynamics between workplace situation and work values are influenced by the institutional framework. In particular, we are referring to the employment regime approach which emphasises the institutionalised role of organised labour (Gallie, 2007, 2009; Korpi, 1978, 2006). The main assumption of this approach is that the interaction between employers and employees is determined by the distribution of power between both parties. This should also impact on the extent to which employees are able to assert their interests, wishes, and values.

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Depending on employment policies, industrial relations, and the relative influence of organised labour, social democratic (e.g., Scandinavian countries), continental (e.g., Germany, France), liberal (e.g., Great Britain), southern European (e.g., Spain, Greece), and transitional regimes (e.g., Hungary) can be distinguished (Gallie, 2007; Holman, 2012; Olsen et al., 2010). In social democratic (resp. inclusive) employment regimes, work and employment rights are strong and extend throughout the entire workforce. In continental (resp. dualistic) regimes, strong rights are also guaranteed but only for the core of skilled and long-term employees at the cost of outsiders. In liberal regimes, employment regulation is minimised as is the capacity of organised labour to influence workplace conditions. Moreover, southern European and transitional regimes are also characterised as having relatively little state intervention and a weak influence of organised labour.

Based on these distinctions, assumptions can be made on how relations and dynamics between workplace situation and work values differ in the various employment regimes (without considering the southern European regimes because they are not captured within the following empirical analysis). In social democratic regimes, employees have extensive rights, and the capacity of organised labour to secure good work and employment conditions is high. Thus changes in workplace situation should either adhere to work values or at least not be so dramatic that mismatch occurs between workplace situation and work values. The same should apply to continental regimes because they also have strong employee representatives. However, the focus on core employees leaves unprotected areas especially among employees in atypical forms of employment (e.g., temporary agency work, part-time and minor employment). In these areas, work and employment conditions may change regardless of work values because of the lacking influence of organised labour. This could affect the overall change patterns within continental regimes. As regards liberal and transitional regimes, it can be assumed that workplace situation changes independently of work values because of the low influence of organised labour. An adaptation of work values to the experienced workplace situation is thus more conceivable.

## Empirical analysis

### *Data, measures, and method*

The following analysis is based on data contained in the Work Orientation Modules from the International Social Survey Program (ISSP) from 1989, 1997, and 2005. The ISSP represents an international cooperation project whose aim was to conduct attitude surveys on different topics. The international comparability of attitudes is both a vital benefit of this programme and a weak point at the same time because attitudes are always context dependent. Thus possible differences in values and attitudes could be the result of different meanings and connotations of a respective concept but not due to national differences (Hult, 2005; for problems related to cross-national research on values, see Halman & De Moor, 1994). To minimise potential biases and increase the validity of the questionnaires, careful procedures have been implemented such as independent translation and thorough discussion of the questionnaires (Scholz & Faaß, 2007).

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For our analysis we included only countries which took part in all three waves. These are the USA, Great Britain (GB), West Germany (W-GER), Norway (NO), and Hungary (HU).[1] The sample includes all dependent employees (full-time, part-time, less than part-time, and helping family members) aged between 18 and 75 years. These amount to a total N of 10,460 cases (1989: 3,842; 1997: 3,710; 2005: 2,908).

All three ISSP data sets contain five comparable items for work values as well as five items for the workplace situation. In particular, work values are measured by the following items: importance of job security, high income, good opportunities for advancement (extrinsic); an interesting job, and a job allowing for independent work (intrinsic) (Scholz & Faaß, 2007). These items closely resemble those used by Kraut and Ronen (Kraut & Ronen, 1975) and Hofstede (Hofstede, 1980) (see also Hattrup et al., 2007). To estimate the importance of these work values, respondents used a five-point Likert scale anchored from 1 for 'not important at all' to 5 for 'very important.'

The importance of these work values can be related to the workplace situation because employees were asked to evaluate the respective job dimensions in their everyday work. Interviewees were asked to indicate their agreement with statements such as 'My job is secure.' Response categories ranged from 1 'Strongly disagree' to 5 'Strongly agree.'

To account for the interaction of work values and workplace situation, several mismatch indices were computed as the difference between work values and workplace situation (for similar approaches, see Cennamo & Gardner, 2008; Kristof, 1996; also Hult, 2005). In order to provide a consistent interpretation, we limit our analysis to mismatch due to undersupply – e.g., the high importance of a work value is not met by low workplace situation standards. A match of workplace situation and work values as well as the relatively few oversupply cases (values -1 and below) were coded as zero. The final mismatch indicator thus ranges from "0" to "4" and accounts for the level of undersupply in a given dimension.

To show changes across time, pooled regressions for the workplace situation and work values variables as well as the matching indicators were computed. Considering the ordinal scale of all included variables, a series of Ordinal Logit regression models for each variable and country was conducted. In all analyses, several control variables were included to capture the socioeconomic and demographic effects in the observed time period. The respective variables were: work status (full-time, part-time, other work status), age, gender, and number of years of formal education. The coding of variables was harmonised between waves. Weighting factors were used where this procedure is advised for the ISSP dataset (see Scholz & Faaß, 2007). To analyse the transformation of workplace situation, work values, and mismatch over time, dummy variables for the years 1997 and 2005 were included in the regression analysis. Using 1989 as reference category, this reveals the relative differences over time.

[1] Israel also took part in all three waves. However, we excluded it from the analysis because it is not captured within the current employment regime theory framework.

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### *Trends of workplace situation, work values, and mismatch*

In a first step, the development of the workplace situation was investigated. The regression results are depicted in Table 1. The perceived job security decreased between 1989 and 1997, except in Norway. This trend continued until 2005 only in West Germany and Hungary. In Norway, job security decreased in 2005. In contrast, in Great Britain and the USA the situation improved again until 2005, even surpassing the 1989 level in Great Britain. For income significant and continuously negative changes can be found in West Germany and Norway. Career opportunities improved in Great Britain in 2005, and temporarily decreased in West Germany in 1997. Regarding the remaining two variables for workplace situation, a positive trend toward more interesting job can be found in the USA in 2005 that absorbed a negative development in 1997. In contrast, a steady decline can be seen in Great Britain and in Norway as well as a decline in 2005 in Hungary. A continuous improvement toward more independent work can be reported for West Germany, while again the results reveal a steady decline in Norway.

**Table 1: Workplace situation by country over time**

| | 1989 vs. | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|---|
| Job | 1997 | -0.27** | -0.36** | -0.64*** | | -0.97*** |
| security | 2005 | | 0.36** | -0.58*** | -0.62*** | -0.64*** |
| High | 1997 | | | -0.61*** | -0.31*** | |
| income | 2005 | | | -0.76*** | -0.30** | |
| Career | 1997 | | | -0.61*** | | |
| opportunities | 2005 | | 0.49*** | | | |
| Interesting | 1997 | -0.29** | -0.58*** | | -0.55*** | |
| job | 2005 | 0.37*** | -0.42** | | -0.76*** | -0.46*** |
| Independent | 1997 | | | 0.35** | -0.33*** | |
| work | 2005 | | | 0.52*** | -0.50*** | |

Note: Levels of significance** p<0.01; *** p<0.001. Depicted numbers are regression coefficients for the ISSP years 1997 and 2005 only if p-value levels at ** and ***. Reference category is the ISSP year 1989 – indicating relative change between years. Dependent variables are all five variables for work values, workplace situation, and mismatch. Control variables are included – respective coefficients are not displayed. Source: ISSP data set; own depiction

In a second step, the transformation of work values was considered (Table 2). Employees' expectations toward high job security temporarily increased in Great Britain in 1997. For the USA and West Germany, a lasting increase until 2005 was found. In Hungary, the importance of job security rose in 2005 while there was no significant change in Norway. Income became continuously less important in West Germany and temporarily more important in Hungary in 1997. The relevance of career opportunities steadily decreased in Norway. At the same time, we see a temporary decline in their importance in West Germany in 1997 as well as a temporary increase in Hungary. Both interesting job and independent work gained more importance in the USA

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until 2005. In contrast, Norwegian employees showed a steadily lowered level of expectations toward independent work and interesting job.

In a third step, the interaction of workplace situation and work values was analysed based on the mismatch indexes (Table 3). For job security mismatch, a temporary increase in mismatch was found in 1997 in the USA and Great Britain. The findings

**Table 2: Work values by country over time**

| | 1989 vs. | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|---|
| Job | 1997 | 0.36*** | 0.51*** | 0.45*** | | |
| security | 2005 | 0.43*** | | 0.42** | | 0.77*** |
| High | 1997 | | | -0.65*** | | 0.52*** |
| income | 2005 | | | -0.51*** | | |
| Career | 1997 | | | -0.43*** | -0.32*** | 0.45*** |
| opportunities | 2005 | | | | -0.44*** | |
| Interesting | 1997 | 0.30** | | | -0.52*** | |
| job | 2005 | 0.52*** | | | -0.63*** | |
| Independent | 1997 | | | | -0.26** | |
| work | 2005 | 0.31** | | | -0.51*** | |

Note: Levels of significance** p<0.01; *** p<0.001. Depicted numbers are regression coefficients for the ISSP years 1997 and 2005 only if p-value levels at ** and ***. Reference category is the ISSP year 1989 – indicating relative change between years. Dependent variables are all five variables for work values, workplace situation, and mismatch. Control variables are included – respective coefficients are not displayed. Source: ISSP data set; own depiction

**Table 3: Mismatch by country over time**

| | 1989 vs. | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|---|
| Job | 1997 | 0.41*** | 0.57*** | 0.91*** | | 0.94*** |
| security | 2005 | | | 0.84*** | 0.48*** | 0.86*** |
| High | 1997 | | | | | |
| income | 2005 | | | 0.39** | | |
| Career | 1997 | | | 0.31** | -0.36*** | |
| opportunities | 2005 | | -0.56*** | | -0.51*** | |
| Interesting | 1997 | 0.48*** | 0.43** | | | 0.33** |
| job | 2005 | | | | | |
| Independent | 1997 | | | | | |
| work | 2005 | 0.41*** | | -0.53*** | | |

Note: Levels of significance** p<0.01; *** p<0.001. Depicted numbers are regression coefficients for the ISSP years 1997 and 2005 only if p-value levels at ** and ***. Reference category is the ISSP year 1989 – indicating relative change between years. Dependent variables are all five variables for work values, workplace situation, and mismatch. Control variables are included – the respective coefficients are not displayed. Source: ISSP data set; own depiction

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also revealed a lasting increased mismatch level in West Germany and Hungary, and for Norway an increased mismatch in job security in 2005. For the mismatch in high income an increase in West Germany in 2005 can be observed. Concerning career mismatch, a temporary increase was found in West Germany. Findings also show a steady decline in Norway and a decreasing mismatch level for Great Britain. The interesting job mismatch temporarily increased in 1997 in the USA, in Great Britain, and in Hungary. As for independent work, the results reveal a decrease in mismatch in 2005 for West Germany. For the USA, the analysis shows an increased mismatch in 2005. Overall, a number of significant differences were found, yet in several countries a considerable number of mismatch dimensions did not change at all.

The observed changes in mismatch can be explained by the analytical types of change introduced above. An overview of our interpretation results is depicted in Table 4. We find situation-driven changes leading either to an increasing or a decreasing mismatch. Thus both hypothetical scenarios can be observed empirically. Job security declined in Norway, whereas the respective values did not change, causing higher mismatch. As for career opportunities in Great Britain and for independent work in Germany, a decrease in mismatch was discernible due to an improved workplace situation while work values did not change.

**Table 4: Underlying change patterns of the mismatch development**

| Mismatch | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|
| Job security | Amplification effect (+)(ST) | Amplification effect (+)(TH) | Amplification effect (+) | Situation driven (+) | Amplification effect (+) |
| High income | | | Partial aligned change ↓ (+) | | |
| Career opportunities | | Situation driven (-) | Partial aligned change → (+)(ST) | Value driven (-) | |
| Interesting job | Amplification effect (+)(TH) | Situation driven (+)(ST) | | Aligned change ↓ (n.e.) | Value driven (+)(ST) |
| Independent work | Value driven (+) | | Situation driven (-) | Aligned change ↓ (n.e.) | |

Note: Direction of mismatch change in brackets: (+) increase; (-) decrease; (n.e.) no mismatch effect, but significant effects for workplace situation and work values; (ST) simple temporary mismatch; (TH) temporary mismatch with higher level afterwards.
Source: ISSP data set; own depiction

As for *work-value-driven* changes both hypothetical scenarios are also reflected in the data. In the case of Norway, a decrease in career mismatch was found which was exclusively due to an adaptation of work values. For the USA it can be observed that increased expectations of independent work led to growing mismatch.

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*Simultaneous changes* can lead to an amplification effect or to an aligned change trajectory. An amplification effect, which is caused by the opposing dynamics of workplace situation and work values, is found especially for job security in most of the countries surveyed (West Germany, Hungary and temporarily in the USA and Great Britain) but also for interesting job in the USA. An aligned change trajectory is found in Norway where we note a decline regarding interesting job and independent work, but the potential effect on mismatch levels was absorbed by an equally lowered level of expectation. In the case of Germany, there is a partially aligned change trajectory regarding income and career mismatch.

Besides these basic types of change, also *temporary developments* can be observed, where a shift in one or both aspects (workplace situation or work values) changes the mismatch level in the first period. In the following period, this shift effect on mismatch level is neutralised. A simple temporary mismatch thereby implies a return to the previous level. This is the case for job security in the USA, career opportunities in Germany as well as interesting job in Hungary. Furthermore, temporary mismatch can be resolved on a higher or lower level. This can be observed for job security mismatch in Great Britain and interesting job mismatch in the USA.

Finally, looking at these findings from the perspective of the employment regime approach, the results are rather disappointing (Table 5). With regard to social democratic and continental regimes, it was assumed that workplace situation would either adhere to work values or at least not change so dramatically as to cause mismatch. Yet the opposite is true. In Norway and Germany, an increased mismatch regarding job security is found, in Germany also regarding income. Indeed, in Norway there is an improved match regarding career opportunities and a lasting match regarding interesting job and independent work. However, these developments have always been a result of adapted work values, that is, workers adapted their aspirations to lower standards. The only positive development is the improved match through an improved situation regarding independent work in Germany.

**Table 5: Positive and negative developments**

| Mismatch | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|
| Job security | | Match on a higher level | Increased mismatch (amplification) | Situation driven increase in mismatch | Increased mismatch (amplification) |
| High income | | | Increased mismatch on a lower level | | |
| Career opportunities | | Improved match through improved situation | | Improved match through adapted values | |
| Interesting job | Match on a higher level | | | Match, but on a lower level | |
| Independent work | Value driven increase in mismatch | | Improved match through improved situation | Match, but on a lower level | |

ISSP data set; own depiction

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On the contrary, in liberal regimes we see more positive developments. Regarding job security in Great Britain and independent work in the USA, a temporary mismatch can be observed which was reduced on a higher level. Further, there is an improved match regarding career opportunities in Great Britain, which is the result of an improved situation. The only increase in mismatch concerns independent work in the USA, but this is value instead of situation driven. All in all, we have to conclude that the assumptions made on the basis of the employment regime approach are not supported.

## Discussion and conclusion

Summarising the findings on the dynamics of workplace situation, work values, and mismatch, it can be stated that there is no universal or transnational development trajectory. Indeed, various patterns can be found which can be linked to several, even contradicting theoretical assumptions. One pattern that comes close to showing a general trend is the amplification effect regarding job security. Perceived job security declined in most of the observed countries, especially between 1989 and 1997. In the same period, the respective work values increased. Such a development can be explained through the assumptions made by Maslow (1954): If fundamental work values like job security are not fulfilled, they become strengthened. This result contradicts the assumption of an adaptation of work values to a given workplace context (Johnson et al., 2012; Mortimer & Lorence, 1979). However, there are other findings that support the adaptation hypothesis as stated by Johnson and colleagues (2012) as well as by Mortimer and Lorenz (1979). For example, perceived income and career opportunities declined in Germany, but at the same time the respective work values declined as well. Further, there is an aligned decline in workplace situation and work values regarding interesting job and independent work in Norway, which also supports the adaptation hypothesis. A possible explanation of these seemingly conflicting results is that job security is a more important work value than even income and career opportunities and thus follows a different logic. In other words, high income, good career opportunities, interesting job, or independent work have little value if the respective job is not secure.

Besides, these findings also question some of the assumptions made in work values literature. Based on Inglehard's work (1971, 1990) it is often assumed that work values shift from extrinsic (e.g., income, security) to intrinsic values (e.g., interesting job, independent work) (Ester et al., 1994; Harding & Hikspoors, 1995; Yankelovich et al., 1985). Our results indeed show that the importance of income and advancement opportunities is declining in some countries (Germany, Norway), whereas the importance of an interesting job and to work independently partially increases (USA). However, these tendencies are by no means general trends. There are also counter-movements especially regarding job security. These counter-movements derive from the above described amplification mechanisms. Our results therefore underline that work value change needs to be analysed in conjunction with changes in workplace situation.

Furthermore, our findings also show that workplace situation can be adapted or readapted to work values of employees. For example, for the USA and Great Britain

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only a temporary amplification effect regarding job security could be found, where an increasing mismatch in the first period was resolved in the second period through an improvement of workplace situation. This may be an effect of the business cycle, but there are other findings which indicate an actual improvement of workplace situation: In the USA, a prior amplification effect regarding interesting work was resolved through an improvement in workplace situation. Further, in Germany work became more independent, which significantly reduced the related mismatch between workplace situation and work values. Thus employees do not always have to adapt their work values to changed work and employment conditions; workplace situation can also be adapted to work values. This may be either because employers wanted to avoid mismatch and the possible negative consequences as suggested in the literature on person-organisation fit (Cennamo & Gardner, 2008; Edwards, 2008; Kristof, 1996) or because employees could push through their interests. The latter concerns the assumptions made based on the employment regime approach.

The employment regime approach was introduced in order to analyse the potential influence of different institutional frameworks. Within the employment regime framework, it was assumed that employees in social democratic and continental regimes have more possibilities to influence workplace situation. Thus the development of the workplace situation should adhere to work values. On the contrary, in liberal and transitional regimes the influence of organised labour is less strong and changes in organisational practices tend to be the employers' choice. Even if these are plausible assumptions, there is no strong empirical evidence to support them.

In Norway and Germany, which represent social democratic and continental regimes respectively, aligned change trajectories can be observed (interesting job and independent work in Norway; income and career opportunities in Germany). However, the underlying developments generally show a decline. This indicates that work values adapted to a worsening workplace situation rather than vice versa. Moreover, an amplification effect regarding job security can be found in both countries. This also indicates that theoretically expected stronger employment regimes cannot protect employees from increasing flexibilisation and liberalisation of labour markets. Accordingly, our findings provide further evidence for the assumption of a "move to the market" trend and a substantial impact of the liberalisation of institutional contexts (Hall & Thelen, 2009) whereby especially for the "German Model" some convergence tendencies with the liberal model have been assumed (Streeck, 2010). There is only one instance in our findings that strong employee rights and powerful employee representatives can contribute to improved work and employment conditions. This instance is the decreasing mismatch regarding independent work in Germany. Apparently, the increasing mismatch regarding extrinsic aspects like security and income were compensated through more independence and influence at work. From an employment regime perspective it is not very surprising that this can be found in a continental regime like Germany. Gallie (2007) has characterised continental regimes also as dualistic regimes because organised labour within these regimes is normally concerned to guarantee strong rights for core employees at the expense of worse work and employment conditions for the periphery.

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As for liberal regimes, we do not find an independent shift of workplace situation leading to an increased mismatch. On the contrary, in the USA and Great Britain situational changes often reduce a prior mismatch. There are some indications that liberal regimes are more likely to enable a match between workplace situation and work values. However, as here the influence of organized labour is rather weak, these situational improvements are largely attributable to management initiatives. Initiatives for workplace reorganisation, especially the introduction of high performance work practices (Appelbaum et al., 2000; Kalleberg, 2001), have been particular discussed in the UK and the USA. In the light of our results it seems as if employees in these regimes benefit from workplace reorganisation and that work and employment conditions better match their work values.

Regarding transitional regimes, in Hungary we found an increased mismatch for job security due to an amplification effect. This generally supports our assumption. However, the mismatch developments of the remaining job characteristics are stable, thus the overall evidence is rather weak.

Altogether, it has to be concluded that the existing employment regime approach helps little in explaining the dynamics of workplace situation and work values. Moreover, this brings into question the distinctions made within the employment regime approach. It is plausible that liberalisation processes put pressure especially on social democratic and continental regimes. These regimes may have lost their ability to match workplace situation to the work values of employees. But up to now, such a dynamic perspective has not been considered within the approach.

Besides the research implications our findings also point to several management implications: Our results show that work values and workplace situation can develop in different directions causing an increased mismatch. This can have major effects on work related outcomes like commitment, job performance, and employee turnover (e.g., Hoffman & Woehr, 2006; Kristof-Brown et al., 2005; Verquer et al., 2003). Therefore management should try to counteract such developments. The results also show that work values of employees are not necessarily enduring manifestations of individual preferences. Accordingly there is a chance of a proactive influence and moderating of employees' expectations and behaviour. Thus, if firms, for example, are not able to fulfil the job security expectations of their employees, they should communicate this and compensate it, e.g., assistance in securing employability. Furthermore, organisational change should be developed and implemented together with the employees considering the expectations of employees and the perspectives of organisations. Thereby, organisations can prevent possible negative effects of a mismatch between work values and work situation. A precondition to such activities is an awareness about employees' expectations and their perceived workplace situation. Thus a continuous monitoring to prevent a potential mismatch between work values and workplace situation is crucial.

The ISSP data allows a comprehensive analysis with representative data from many countries, but there are limitations. The data consists of self-reported measures so that the results may suffer from common method bias. The analysis is further based on cross-sectional data which does not account for changes in workplace situation and work values across the life course. Thus a causal analysis of the possible ad-

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aptation of an individual's expectations to changed work and employment conditions cannot be conducted. However, insights into the underlying changes in the development and resolution of mismatches may also be gained by the cross-sectional design (Reynolds & Aletraris, 2010). Furthermore, the included working conditions represent perceived working conditions of the surveyed employees. There might be a difference between the seemingly objective conditions and the subjective perception of these conditions (e.g., objective vs. subjective job insecurity). However, it is the subjective experience that is decisive for an individual evaluation of job quality and related aspects like job satisfaction or commitment. Finally, it should be mentioned that only a narrow set of work aspects has been surveyed within the ISSP Work Orientation Module. It remains an open question whether other workplace situations and work values are changing as well, including the importance of both qualification opportunities and balancing work and life (Kalleberg, 2007, 2008).

In this article, the relations between changes in workplace situation and work values were analysed. Special emphasis was put on the question why and how match or mismatch between workplace situation and work values may change because this is highly relevant for job quality and job satisfaction as well as the performance of organisations. The analysis provides valuable insights into the relations between changes in workplace situation and work values and contributes to the literature on mismatch between workplace situation and work values. However, many unanswered questions remain. Future research needs to concentrate on longitudinal analyses in order to better understand shifts in the development and resolution of mismatches. By the same token, it is important to better understand which people are more affected by mismatches, how people deal with mismatches, and what the possible consequences are for organisational performance.

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# Appendix

## A1: Distribution of cases by year and country

| | USA | GB | W-GER | NO | HU | Total |
|---|---|---|---|---|---|---|
| Year: 1989 | 785 | 632 | 598 | 1238 | 589 | 3842 |
| Year: 1997 | 727 | 463 | 646 | 1282 | 592 | 3710 |
| Year: 2005 | 839 | 413 | 477 | 770 | 409 | 2908 |
| Total | 2351 | 1508 | 1721 | 3290 | 1590 | 10460 |

Note: ISSP data set; own depiction

## A2: Description of variables

| Variables | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Situation: Job security | 9827 | 3.74 | 1.05 | 1 | 5 |
| Situation: High income | 9888 | 2.60 | 1.01 | 1 | 5 |
| Situation: Career opportunities | 9780 | 2.60 | 1.03 | 1 | 5 |
| Situation: Interesting job | 9931 | 3.85 | 0.91 | 1 | 5 |
| Situation: Independent job | 9918 | 3.93 | 0.89 | 1 | 5 |
| Value: Job security | 10356 | 4.55 | 0.62 | 1 | 5 |
| Value: High income | 10296 | 3.98 | 0.75 | 1 | 5 |
| Value: Career opportunities | 10240 | 3.83 | 0.89 | 1 | 5 |
| Value: Interesting job | 10329 | 4.41 | 0.64 | 1 | 5 |
| Value: Independent job | 10306 | 4.06 | 0.80 | 1 | 5 |
| Mismatch: Job security | 9757 | 0.91 | 1.05 | 0 | 4 |
| Mismatch: High income | 9781 | 1.44 | 1.12 | 0 | 4 |
| Mismatch: Career opportunities | 9640 | 1.30 | 1.08 | 0 | 4 |
| Mismatch: Interesting job | 9842 | 0.64 | 0.85 | 0 | 4 |
| Mismatch: Independent job | 9819 | 0.39 | 0.72 | 0 | 4 |
| Year: 1989 | 10460 | 0.37 | 0.48 | 0 | 1 |
| Year: 1997 | 10460 | 0.35 | 0.48 | 0 | 1 |
| Year: 2005 | 10460 | 0.28 | 0.45 | 0 | 1 |
| Age | 10460 | 39.86 | 11.76 | 19 | 75 |
| Sex: male | 10459 | 0.51 | 0.50 | 0 | 1 |
| Work status: full-time | 10460 | 0.82 | 0.38 | 0 | 1 |
| Work status: part-time | 10460 | 0.15 | 0.35 | 0 | 1 |
| Work status: other | 10460 | 0.03 | 0.17 | 0 | 1 |
| Years of Education | 10094 | 12.29 | 2.92 | 1 | 22 |

Note: ISSP data set; own depiction

## A3: Measures for work value and workplace situation

| | Values | Situation |
|---|---|---|
| **Question** | "For each of the following, please tick one box to show how important you personally think it is in a job. How important is …" | "For each of these statements about your (main) job, please tell me how much you agree or disagree with it as it applies to your job." |
| **Dimension** | | |
| Job security | … job security | … My job is secure |
| High income | … high income | … My income is high |
| Career opportunities | … good opportunities for advancement | … My opportunities for advancement are high |
| Interesting job | … an interesting job | … My job is interesting |
| Independent work | … a job that allows someone to work independently | … I can work independently |
| **Scale** | 1 Very important; 2 Important; 3 Neither important nor unimportant; 4 Not important, or; 5 Not at all important | 1 Strongly agree; 2 Agree; 3 Neither agree nor disagree; 4 Disagree, or; 5 Strongly disagree |

Source: ISSP questionnaire, own depiction

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**A4: Situation by country over time (full models)**

| **Job security** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
|---|---|---|---|---|---|
| Year: 1997 (Ref. 1989) | 0.41*** | 0.57*** | 0.91*** | 0.03 | 0.94*** |
| Year: 2005 (Ref. 1989) | 0.23* | -0.31* | 0.84*** | 0.48*** | 0.86*** |
| Age | 0.01*** | 0.01* | -0.02*** | 0.00 | 0.01 |
| Sex: male | 0.01 | 0.23 | -0.05 | 0.03 | -0.10 |
| Work status: full-time | -0.07 | -0.17 | -0.47 | -0.62* | 0.17 |
| Work status: part-time | -0.12 | -0.40 | -0.60 | -0.62* | 0.92 |
| Years of Education | -0.12*** | -0.04 | -0.13*** | -0.14*** | -0.05** |
| Constant cut 1 | -1.08** | -0.57 | -1.93*** | -2.45*** | -0.38 |
| Constant cut 2 | 0.47 | 0.90 | -0.38 | -1.01** | 1.11 |
| Constant cut 3 | 1.35*** | 1.80*** | 0.50 | 0.00 | 2.39 |
| Constant cut 4 | 2.94*** | 3.50*** | 1.96*** | 1.69*** | 3.82** |
| N | 2210 | 1420 | 1557 | 2821 | 1446 |
| F | 10.05 | 8.50 | 15.67 | 16.07 | 12.95 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **High income** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | -0.05 | 0.23 | 0.15 | 0.09 | 0.21 |
| Year: 2005 (Ref. 1989) | 0.10 | 0.09 | 0.39** | 0.14 | 0.01 |
| Age | 0.00 | -0.01* | -0.02*** | -0.01*** | 0.00 |
| Sex: male | -0.35*** | -0.15 | -0.24* | -0.64*** | -0.23* |
| Work status: full-time | -0.19 | 0.22 | -0.76** | 0.48 | -0.98 |
| Work status: part-time | 0.07 | 0.23 | -0.41 | 0.52 | -0.24 |
| Years of Education | -0.13*** | -0.12*** | -0.18*** | -0.08*** | -0.13*** |
| Constant cut 1 | -3.10*** | -2.82*** | -4.36*** | -2.33*** | -5.04*** |
| Constant cut 2 | -1.89*** | -1.56** | -2.97*** | -1.01** | -3.66*** |
| Constant cut 3 | -0.51 | 0.06 | -1.39*** | 0.56 | -2.20** |
| Constant cut 4 | 1.37*** | 2.05*** | 0.33 | 2.70*** | -0.33 |
| N | 2208 | 1413 | 1563 | 2847 | 1442 |
| F | 13.66 | 4.35 | 23.31 | 22.06 | 9.89 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Career opportunities** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | -0.02 | 0.01 | 0.31** | -0.36*** | 0.27* |
| Year: 2005 (Ref. 1989) | -0.12 | -0.56*** | -0.02 | -0.51*** | 0.01 |
| Age | 0.02*** | 0.02*** | 0.01*** | 0.01 | 0.00 |
| Sex: male | -0.20* | -0.10 | -0.27* | -0.42*** | -0.18 |
| Work status: full-time | 0.08 | -0.27 | -0.32 | 0.05 | -1.78 |
| Work status: part-time | 0.30 | -0.25 | -0.11 | -0.01 | -1.54 |
| Years of Education | -0.09*** | 0.00 | -0.04** | -0.05*** | -0.09*** |
| Constant cut 1 | -1.44*** | -0.80 | -1.15*** | -1.60*** | -4.05 |
| Constant cut 2 | -0.17 | 0.53 | 0.37 | -0.10 | -2.77 |
| Constant cut 3 | 1.12** | 2.12*** | 1.77*** | 1.50*** | -1.30 |
| Constant cut 4 | 2.84*** | 4.11*** | 3.66*** | 3.42*** | 0.43 |
| N | 2210 | 1395 | 1542 | 2766 | 1436 |
| F | 10.61 | 5.29 | 5.63 | 13.43 | 5.32 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Interesting job** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | 0.48*** | 0.43** | -0.01 | 0.13 | 0.33** |
| Year: 2005 (Ref. 1989) | 0.08 | 0.32* | -0.26* | 0.18 | 0.32* |
| Age | -0.01** | -0.02*** | -0.01 | -0.01*** | 0.00 |
| Sex: male | 0.05 | 0.21 | -0.03 | -0.04 | 0.18 |
| Work status: full-time | -0.12 | -0.20 | -0.29 | -0.26 | -1.65 |
| Work status: part-time | 0.22 | 0.06 | -0.38 | -0.16 | -0.76 |
| Years of Education | -0.07*** | -0.06* | -0.06*** | -0.05** | -0.03 |
| Constant cut 1 | -1.15** | -1.16* | -0.99** | -1.18** | -1.75 |
| Constant cut 2 | 0.47 | 0.53 | 0.86* | 0.80* | -0.18 |
| Constant cut 3 | 1.43*** | 1.69*** | 2.09*** | 2.12*** | 1.43 |
| Constant cut 4 | 2.57*** | 3.47*** | 3.39*** | 3.56*** | 2.76 |
| N | 2214 | 1425 | 1587 | 2865 | 1444 |
| F | 7.64 | 3.42 | 3.44 | 4.21 | 3.00 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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| Table continued<br>Independent job | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|
| Year: 1997 (Ref. 1989) | 0.14 | 0.09 | -0.25* | 0.07 | 0.29* |
| Year: 2005 (Ref. 1989) | 0.41*** | 0.06 | -0.53*** | -0.08 | 0.12 |
| Age | 0.00 | 0.00 | -0.01 | -0.01* | 0.00 |
| Sex: male | -0.06 | -0.50*** | -0.08 | -0.36*** | 0.22* |
| Work status: full-time | -0.38 | 0.10 | 0.02 | 0.48 | 0.07 |
| Work status: part-time | -0.18 | -0.10 | -0.08 | 0.51 | 0.47 |
| Years of Education | -0.05** | 0.01 | -0.02 | -0.03 | -0.02 |
| Constant cut 1 | -0.28 | 1.09 | -0.04 | 0.86 | 0.70 |
| Constant cut 2 | 1.00* | 2.59*** | 1.68*** | 2.74*** | 2.19 |
| Constant cut 3 | 2.02*** | 4.12*** | 3.00*** | 4.35*** | 3.78* |
| Constant cut 4 | 3.53*** | 5.42*** | 3.94*** | 6.89*** | 5.62** |
| N | 2209 | 1410 | 1586 | 2862 | 1445 |
| F | 2.71 | 1.88 | 2.99 | 3.86 | 1.53 |
| p | 0.01 | 0.07 | 0.00 | 0.00 | 0.15 |

Note: Levels of significance * p<0.05; ** p<0.01; *** p<0.001; ISSP data set; own depiction

## A5: Values by country over time (full models)

| Job security | USA | GB | W-GER | NO | HU |
|---|---|---|---|---|---|
| Year: 1997 (Ref. 1989) | 0.36*** | 0.51*** | 0.45*** | -0.02 | 0.20 |
| Year: 2005 (Ref. 1989) | 0.43*** | 0.04 | 0.42** | 0.02 | 0.77*** |
| Age | 0.01* | -0.01 | 0.00 | 0.01** | 0.00 |
| Sex: male | -0.28** | -0.01 | -0.14 | -0.46*** | -0.19 |
| Work status: full-time | -0.37 | -0.21 | 0.61** | 0.41 | -0.23 |
| Work status: part-time | -0.91** | -0.58 | 0.31 | 0.23 | 1.19 |
| Years of Education | -0.16*** | -0.10*** | -0.08*** | -0.20*** | -0.05* |
| Constant cut 1 | -8.58*** | -9.53*** | -6.90*** | -8.29*** | -5.38*** |
| Constant cut 2 | -6.39*** | -6.88*** | -5.19*** | -6.21*** | -4.12*** |
| Constant cut 3 | -5.23*** | -4.90*** | -3.90*** | -5.07*** | -1.22** |
| Constant cut 4 | -2.62*** | -1.90*** | -0.73* | -2.27*** | |
| N | 2303 | 1479 | 1634 | 2995 | 1583 |
| F | 19.22 | 4.64 | 5.93 | 29.34 | 5.30 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **High income** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | -0.05 | -0.06 | -0.65*** | -0.21* | 0.52*** |
| Year: 2005 (Ref. 1989) | 0.05 | 0.05 | -0.51*** | -0.09 | 0.21 |
| Age | 0.00 | -0.04*** | -0.01* | 0.00 | -0.01** |
| Sex: male | 0.06 | 0.19 | 0.24* | 0.10 | 0.16 |
| Work status: full-time | -0.33 | 0.05 | 0.18 | 0.68* | 0.04 |
| Work status: part-time | -0.72** | -0.23 | -0.06 | 0.26 | 0.10 |
| Years of Education | -0.12*** | -0.10*** | -0.07*** | -0.02 | -0.10*** |
| Constant cut 1 | -7.88*** | -8.12*** | -7.26*** | -5.90*** | -8.81*** |
| Constant cut 2 | -5.28*** | -5.63*** | -4.52*** | -2.74*** | -6.05*** |
| Constant cut 3 | -3.64*** | -3.86*** | -3.02*** | -0.82* | -4.21*** |
| Constant cut 4 | -1.03** | -0.84 | 0.12 | 2.40*** | -1.36*** |
| N | 2298 | 1463 | 1626 | 2969 | 1582 |
| F | 9.70 | 9.52 | 11.18 | 5.00 | 8.84 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Career opportunities** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | -0.12 | -0.21 | -0.43*** | -0.32*** | 0.45*** |
| Year: 2005 (Ref. 1989) | -0.03 | -0.22 | -0.27* | -0.44*** | 0.20 |
| Age | -0.02*** | -0.02*** | -0.02*** | -0.01*** | -0.01** |
| Sex: male | -0.09 | 0.03 | 0.13 | -0.03 | -0.07 |
| Work status: full-time | -0.46 | 0.19 | -0.08 | 0.23 | 0.12 |
| Work status: part-time | -0.86** | -0.09 | -0.36 | -0.20 | -0.31 |
| Years of Education | -0.09*** | 0.04 | -0.02 | 0.02 | -0.02 |
| Constant cut 1 | -8.21*** | -5.65*** | -5.84*** | -4.84*** | -4.65*** |
| Constant cut 2 | -6.02*** | -3.27*** | -3.43*** | -2.15*** | -2.60*** |
| Constant cut 3 | -4.71*** | -1.70*** | -2.16*** | -0.64 | -1.28** |
| Constant cut 4 | -2.07*** | 0.88 | 0.41 | 1.93*** | 0.84* |
| N | 2295 | 1458 | 1614 | 2945 | 1580 |
| F | 9.14 | 5.23 | 5.13 | 8.56 | 3.43 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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| Table continued | | | | | |
|---|---|---|---|---|---|
| **Interesting job** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | 0.30** | -0.09 | -0.15 | -0.52*** | 0.30* |
| Year: 2005 (Ref. 1989) | 0.52*** | -0.16 | -0.21 | -0.63*** | -0.15 |
| Age | 0.00 | 0.00 | -0.01* | -0.01* | 0.00 |
| Sex: male | -0.16 | -0.13 | -0.15 | -0.35*** | 0.20 |
| Work status: full-time | 0.12 | 0.04 | 0.18 | -0.38 | 0.03 |
| Work status: part-time | 0.24 | -0.09 | -0.11 | -0.51 | 0.95 |
| Years of Education | 0.08*** | 0.14*** | 0.11*** | 0.14*** | 0.16*** |
| Constant cut 1 | -4.45*** | -3.87*** | -4.48*** | -7.54*** | -3.56*** |
| Constant cut 2 | -2.96*** | -1.74*** | -2.41*** | -5.24*** | -1.09* |
| Constant cut 3 | -1.64*** | 1.53** | 0.77* | -3.37*** | 0.29 |
| Constant cut 4 | 1.34*** | | | 0.54 | 2.91*** |
| N | 2294 | 1472 | 1632 | 2990 | 1582 |
| F | 7.14 | 4.71 | 7.69 | 16.09 | 11.86 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Independent job** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | 0.16 | 0.02 | -0.05 | -0.26** | 0.22 |
| Year: 2005 (Ref. 1989) | 0.31** | 0.09 | -0.15 | -0.51*** | 0.03 |
| Age | 0.01 | 0.02*** | -0.01 | 0.01** | 0.02*** |
| Sex: male | -0.12 | -0.12 | 0.01 | -0.15 | 0.10 |
| Work status: full-time | -0.26 | -0.46 | 0.32 | 0.70 | 0.20 |
| Work status: part-time | -0.39 | -0.49 | 0.10 | 0.31 | 0.23 |
| Years of Education | 0.05*** | 0.06* | 0.07*** | 0.04** | 0.13*** |
| Constant cut 1 | -4.95*** | -4.75*** | -6.00*** | -4.41*** | -2.26*** |
| Constant cut 2 | -2.34*** | -1.85*** | -2.83*** | -2.06*** | 0.13 |
| Constant cut 3 | -0.50 | 0.00 | -1.62*** | -0.48 | 1.38*** |
| Constant cut 4 | 1.66*** | 2.30*** | 1.07*** | 2.26*** | 3.56*** |
| N | 2297 | 1459 | 1630 | 2981 | 1581 |
| F | 3.99 | 3.04 | 3.86 | 5.86 | 11.40 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Note: Levels of significance * p<0.05; ** p<0.01; *** p<0.001; ISSP data set; own depiction

## A6: Mismatch by country over time (full models)

| **Job security** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
|---|---|---|---|---|---|
| Year: 1997 (Ref. 1989) | 0.41*** | 0.57*** | 0.91*** | 0.03 | 0.94*** |
| Year: 2005 (Ref. 1989) | 0.23* | -0.31* | 0.84*** | 0.48*** | 0.86*** |
| Age | 0.01*** | 0.01* | -0.02*** | 0.00 | 0.01 |
| Sex: male | 0.01 | 0.23 | -0.05 | 0.03 | -0.10 |
| Work status: full-time | -0.07 | -0.17 | -0.47 | -0.62* | 0.17 |
| Work status: part-time | -0.12 | -0.40 | -0.60 | -0.62* | 0.92 |
| Years of Education | -0.12*** | -0.04 | -0.13*** | -0.14*** | -0.05** |
| Constant cut 1 | -1.08** | -0.57 | -1.93*** | -2.45*** | -0.38 |
| Constant cut 2 | 0.47 | 0.90 | -0.38 | -1.01** | 1.11 |
| Constant cut 3 | 1.35*** | 1.80*** | 0.50 | 0.00 | 2.39 |
| Constant cut 4 | 2.94*** | 3.50*** | 1.96*** | 1.69*** | 3.82** |
| N | 2210 | 1420 | 1557 | 2821 | 1446 |
| F | 10.05 | 8.50 | 15.67 | 16.07 | 12.95 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **High income** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | -0.05 | 0.23 | 0.15 | 0.09 | 0.21 |
| Year: 2005 (Ref. 1989) | 0.10 | 0.09 | 0.39** | 0.14 | 0.01 |
| Age | 0.00 | -0.01* | -0.02*** | -0.01*** | 0.00 |
| Sex: male | -0.35*** | -0.15 | -0.24* | -0.64*** | -0.23* |
| Work status: full-time | -0.19 | 0.22 | -0.76** | 0.48 | -0.98 |
| Work status: part-time | 0.07 | 0.23 | -0.41 | 0.52 | -0.24 |
| Years of Education | -0.13*** | -0.12*** | -0.18*** | -0.08*** | -0.13*** |
| Constant cut 1 | -3.10*** | -2.82*** | -4.36*** | -2.33*** | -5.04*** |
| Constant cut 2 | -1.89*** | -1.56** | -2.97*** | -1.01** | -3.66*** |
| Constant cut 3 | -0.51 | 0.06 | -1.39*** | 0.56 | -2.20** |
| Constant cut 4 | 1.37*** | 2.05*** | 0.33 | 2.70*** | -0.33 |
| N | 2208 | 1413 | 1563 | 2847 | 1442 |
| F | 13.66 | 4.35 | 23.31 | 22.06 | 9.89 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

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**Table continued**

| **Career opportunities** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
|---|---|---|---|---|---|
| Year: 1997 (Ref. 1989) | -0.02 | 0.01 | 0.31** | -0.36*** | 0.27* |
| Year: 2005 (Ref. 1989) | -0.12 | -0.56*** | -0.02 | -0.51*** | 0.01 |
| Age | 0.02*** | 0.02*** | 0.01*** | 0.01 | 0.00 |
| Sex: male | -0.20* | -0.10 | -0.27* | -0.42*** | -0.18 |
| Work status: full-time | 0.08 | -0.27 | -0.32 | 0.05 | -1.78 |
| Work status: part-time | 0.30 | -0.25 | -0.11 | -0.01 | -1.54 |
| Years of Education | -0.09*** | 0.00 | -0.04** | -0.05*** | -0.09*** |
| Constant cut 1 | -1.44*** | -0.80 | -1.15*** | -1.60*** | -4.05 |
| Constant cut 2 | -0.17 | 0.53 | 0.37 | -0.10 | -2.77 |
| Constant cut 3 | 1.12** | 2.12*** | 1.77*** | 1.50*** | -1.30 |
| Constant cut 4 | 2.84*** | 4.11*** | 3.66*** | 3.42*** | 0.43 |
| N | 2210 | 1395 | 1542 | 2766 | 1436 |
| F | 10.61 | 5.29 | 5.63 | 13.43 | 5.32 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Interesting job** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | 0.48*** | 0.43** | -0.01 | 0.13 | 0.33** |
| Year: 2005 (Ref. 1989) | 0.08 | 0.32* | -0.26* | 0.18 | 0.32* |
| Age | -0.01** | -0.02*** | -0.01 | -0.01*** | 0.00 |
| Sex: male | 0.05 | 0.21 | -0.03 | -0.04 | 0.18 |
| Work status: full-time | -0.12 | -0.20 | -0.29 | -0.26 | -1.65 |
| Work status: part-time | 0.22 | 0.06 | -0.38 | -0.16 | -0.76 |
| Years of Education | -0.07*** | -0.06* | -0.06*** | -0.05** | -0.03 |
| Constant cut 1 | -1.15** | -1.16* | -0.99** | -1.18** | -1.75 |
| Constant cut 2 | 0.47 | 0.53 | 0.86* | 0.80* | -0.18 |
| Constant cut 3 | 1.43*** | 1.69*** | 2.09*** | 2.12*** | 1.43 |
| Constant cut 4 | 2.57*** | 3.47*** | 3.39*** | 3.56*** | 2.76 |
| N | 2214 | 1425 | 1587 | 2865 | 1444 |
| F | 7.64 | 3.42 | 3.44 | 4.21 | 3.00 |
| p | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Independent job** | **USA** | **GB** | **W-GER** | **NO** | **HU** |
| Year: 1997 (Ref. 1989) | 0.14 | 0.09 | -0.25* | 0.07 | 0.29* |
| Year: 2005 (Ref. 1989) | 0.41*** | 0.06 | -0.53*** | -0.08 | 0.12 |
| Age | 0.00 | 0.00 | -0.01 | -0.01* | 0.00 |
| Sex: male | -0.06 | -0.50*** | -0.08 | -0.36*** | 0.22* |
| Work status: full-time | -0.38 | 0.10 | 0.02 | 0.48 | 0.07 |
| Work status: part-time | -0.18 | -0.10 | -0.08 | 0.51 | 0.47 |
| Years of Education | -0.05** | 0.01 | -0.02 | -0.03 | -0.02 |
| Constant cut 1 | -0.28 | 1.09 | -0.04 | 0.86 | 0.70 |
| Constant cut 2 | 1.00* | 2.59*** | 1.68*** | 2.74*** | 2.19 |
| Constant cut 3 | 2.02*** | 4.12*** | 3.00*** | 4.35*** | 3.78* |
| Constant cut 4 | 3.53*** | 5.42*** | 3.94*** | 6.89*** | 5.62** |
| N | 2209 | 1410 | 1586 | 2862 | 1445 |
| F | 2.71 | 1.88 | 2.99 | 3.86 | 1.53 |
| p | 0.01 | 0.07 | 0.00 | 0.00 | 0.15 |

Note: Levels of significance * p<0.05; ** p<0.01;

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