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Abstract

The European strategy for growth has a twofold aim: to become an innovative union and to enhance labour flexibility. Yet, few have addressed the question of whether these two strategies are compatible or concurrent. Through a review of the literature, this article addresses this question by focusing on different types of labour flexibility (functional, contractual and financial), and two types of innovation outcomes: employee-driven innovation (EDI) and organizational innovativeness. Using insights from different research traditions, sound evidence is found for a positive relation between different forms of functional flexibility and both EDI and organizational innovation. This is nevertheless not so for contractual and financial flexibility. Indications are found that these types of labour flexibility are potentially negative for both EDI and organizational innovation. Yet, trends in the European labour market and EU backed policies do not focus on enhancing functional flexibility, but rather aim to increase contractual and financial flexibility.

Keywords

Employee-driven innovation, flexible labour, flexibility, innovation

Introduction

As Europe finds itself in crisis, policy makers at the EU level develop policy frameworks that should lead Europe out of the crisis and towards so-called ‘sustainable growth’. In the Europe 2020 strategy, the focus is on innovation and flexicurity. The first EU flagship initiative aims to create an ‘innovative union’ through enhanced research and development and the creation of multiple partnerships. The flexicurity agenda is framed in the ‘agenda for new skills and jobs’, which includes policy directions aiming to increase

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labour flexibility (Wilthagen and Tros, 2004). In the EU Commission's Green Paper *Modernizing Labour Law to Meet the Challenges of the 21st Century*, an insight is given into how the EU sees the interplay between innovation and labour flexibility:

European labour markets need to be both more inclusive and more responsive to innovation and change. ... Legal frameworks sustaining the standard employment relationship may not offer sufficient scope or incentive to those on [a] regular permanent contract to explore greater opportunities for greater flexibility at work. (European Commission, 2006: 9)

Both the policies promoting innovation and labour flexibility aim to increase the competitiveness of the European economies. Yet, whether these strategies are mutually reinforcing, compatible, independent or even counteracting is a question which is rarely posed. It is unclear whether labour flexibility and innovation are two sides of the same coin or two different and opposing strategies. This question is nevertheless crucial given the continued pressure from the EU on the member states to implement labour flexibility and at the same time stimulate innovation. As policy strategies should be internally coherent, clarity should exist on whether labour flexibility offsets or stimulates innovation efforts.

Various articles have already covered aspects of this question and studied the relation between innovation and labour flexibility practices. Yet, most articles treat only very specific parts of the labour flexibility–innovation relation and concentrate on only one concrete level of analysis. As such, labour economists frequently discuss the relation between employment regulation and innovation. Organizational sociologists cover the relation between the use of flexible labour practices and organizational innovation while organizational psychologists concentrate on the link between these practices and employee creativity. This article aims to bring these very different streams in the literature together, in order to get a more general view on the basic research question: 'How does labour flexibility affect innovation?'

For this purpose we discriminate between three different types of labour flexibility, namely functional, contractual and wage flexibility. The relation between these types of labour flexibility with 'employee-driven innovation' (EDI) on the one hand and organizational innovation on the other is discussed in detail based on a literature review. In the first part, we introduce the labour flexibility, EDI and organizational innovation concepts and illustrate briefly their importance for economic competitiveness. In the second part we review the literature on the relation between the types of labour flexibility and EDI. The third part treats the labour flexibility–organizational innovation relation. We end with a discussion on the policy implication of these review findings.

Review methodology

This article was based on an in-depth scientific literature review. The search for appropriate literature was performed using the EBSCOhost search engine, the web of science and Google Scholar. The search terms used were 'pay', 'wage', 'flexible wage', 'contingent employment', 'non-standard contract', 'innovation', 'IWB [innovative work behaviour]',

'employee driven innovation', 'organizational innovation', 'labour flexibility', 'functional flexibility', 'contractual flexibility', 'financial flexibility' and 'wage flexibility', 'skills', 'task variety' and others, in various combinations. Only peer-reviewed journal papers were taken into account, together with official reports from institutions such as the ILO, the OECD or the EU. No working papers or congress papers were selected for the literature review. Frequently, the topics under study in this research were not the topic of the articles. As the field of this literature review is broad and includes very different streams of socioeconomic research, special attention was paid to finding review articles and meta-analyses on the topics and the investigation of their reference lists (e.g. Hammond et al., 2011; Shalley and Gilson, 2004).

Labour flexibility, (employee-driven) innovation and competitiveness

Both innovation and labour flexibility are broad terms. Labour flexibility refers to the ease with which the disposition of labour power can be adjusted to ever changing demands. Authors have distinguished between a multitude of different kinds of flexibility, depending on the content, the viewpoint, the level of analysis or their aims (Furaker et al., 2007). Here we analyse labour flexibility with a concentration on the content (what is flexible) and thus do not examine the question for whom the flexibility scheme was installed. We distinguish between three different kinds of labour flexibility: functional, contractual and wage flexibility. Although these concepts were originally conceived as organizational level attributes, we here try to translate and apply them to individual, organizational and macro-level research.

First, *functional flexibility* refers to the degree in which companies can swiftly redeploy their staff in various functions to meet changing demands (Atkinson, 1994). According to Benders (1990) this can be achieved in principally two ways: first by multi-skilling employees or implementing forms of job rotation; and second by deskilling the job functions in order to increase the interchangeability of employees. In the context of this study we only focus on the first type of functional flexibility, as is done by most researchers in the field (Arvanitis, 2005; Cordery et al., 1993; Kalleberg, 2001; Martínez-Sánchez et al., 2009; Michie and Sheehan, 2003; Smith, 1997). With regard to the organizational level, focus here is on the organizational design and the implementation of HR practices that increase functional flexibility (e.g. job rotation, team work, participation). With regard to the individual job level, the concept of functional flexibility tends to be described as 'the capacity of an employee to work across traditionally distinct occupational boundaries' (Cordery et al., 1993: 705) or 'the ability to perform a variety of jobs and participate in decision-making' (Kalleberg, 2001: 479). This capacity, or ability, of the employees is partly dependent on, first, the organizational structures (such as job rotation), second the variety of skills of the employee and third on how the individual job is designed and shaped. This last aspect refers to the degree of autonomy which individual workers have in their work (Beugelsdijk, 2008). This autonomy enables the workforce to be redeployed swiftly and smoothly between activities and tasks. On the macro level, research has rarely included variables related to functional flexibility. Nevertheless, the studies that did aggregate variables of

Table 1. A summary of the three types of labour flexibility.

	Functional flexibility	Wage flexibility	Contractual flexibility
Organizational psychology	Autonomy, multi-skilling and job rotation	Flexible reward	Job insecurity, psychological contract
Organizational sociology	HPWS, team work, job rotation, participation	Individual and collective flexible reward practices	Contractual relation, use of non-standard employment relationships in companies
Labour economics	Aggregation of the organizational data	Aggregation of the organizational data	Labour regulation, industrial relations characteristics

functional flexibility to the macro level found very interesting results (Lorenz and Valeyre, 2005).

Second, wage flexibility covers the degree to which the salary of employees changes over time, depending on economic, company or individual performance. Organizational psychology literature covers this subject by referring to 'reward' and examining its relation to employee creativity. Organizational sociology has mostly studied flexible pay policies in the context of the high-performance work systems (HPWS), while labour economists have rarely covered this theme.

Third, contractual flexibility is more complex. Contractual flexibility addresses the degree of flexibility employers and employees face regarding the employment contracts. On the macro level this term covers the rigidity of the hiring and firing regulations, and the regulations on using temporary, part-time or agency employment contracts. On the organizational level this term refers to the relative use of these non-standard contractual relations in a given company and on the individual level contractual flexibility refers to the specific contract under which a employee is employed. Other kinds of labour market flexibility such as locational or working time flexibility are not covered in this study. A summary of the three types of labour flexibility and their relation to the various literature streams covered can be seen in Table 1.

Innovation is an equally complex concept. Traditionally authors refer to different kinds of innovation such as radical and incremental innovation, or process, product and organizational innovation. Other authors such as Jensen et al. (2007) distinguish between different modes of innovation: the STI (science, technology and innovation) mode and the DUI (doing, using and interacting) mode. In researching the relation between labour flexibility and innovation we focus *first* on the effect of labour flexibility practices on so-called 'employee-driven innovation' (EDI) which refers to innovations developed and implemented principally on employees' initiative and not necessarily with support or even knowledge of the management (see Høyrup, 2010; Kesting and Ulhøi, 2010). This concept thus encompasses all bottom-up innovative initiatives. The EDI concept therefore comes close to concepts from industrial and managerial psychology referring to 'workplace creativity' (Backer, 1992) or 'innovative work behaviour' (Janssen, 2000). Our *second focus* is on general organizational innovation, which includes both managerial and employee-driven innovation and encompasses product, process or organizational design (Damanpour, 1991).

Labour flexibility and employee-driven innovation

Research into the drivers of employee innovativeness generally focuses on the importance of variables such as leadership, personality, corporate culture, etc. (Shalley and Gilson, 2004; Zhou and Shalley, 2003). Yet, this industrial psychology and managerial literature also uncovered important relations between functional, contractual and wage flexibility and EDI.

Functional flexibility as a concept is only rarely used in the industrial psychology literature. As discussed above, we here approach individual job level functional flexibility with a focus on (1) the presence or absence of job rotation schemes, (2) the skill variety of employees and (3) the capacity of employees to swiftly redeploy their labour between activities and tasks (autonomy).

In job rotation schemes, employees are frequently allocated different jobs in the organization in an attempt to increase their knowledge of the production process, keep them motivated and increase their capabilities. We couldn't find a single study which made a direct link between job rotation schemes and employee creativity or innovativeness. On the company level, Beugelsdijk (2008) studied the relation between job rotation and innovation using a stratified sample of 988 firms of which the director or HR manager were subjected to a face-to-face interview. He couldn't find a significant relation between job rotation and innovation. He explained this as his data being unable to distinguish between job rotation according to the functional area of the employee and job rotation between otherwise disconnected people. Where the first will increase the employee's relevant knowledge and skills needed for workplace innovation, the second increases the skills of the employee, but not necessarily the 'relevant skills'.

Second, more studies are found that make the link between the multi-skilling of employees and their creativity or innovativeness. As innovation is essentially the finding of 'new combinations', having a broad spectrum of skills would enhance the ability of finding such new combinations (Amabile et al., 1996; Shalley et al., 2004; Zhou and Shalley, 2003). More recent empirical work by Dorenbosch et al. (2005) based on a sample of 132 employees from a local government organization and a study by Chen et al. (2011) based on a single company sample of 245 employees, confirmed this positive relation between skill variety (or multifunctionality) and creativity (or innovative work behaviour).

Third, regarding job autonomy, both managerial and psychological research has studied the relation between such job characteristics and employee creativeness thoroughly and finds almost consistently positive relations. Three recent review articles conclude generally the same: employee innovativeness is highly dependent on the character of the job (Hammond et al., 2011; Shalley and Gilson, 2004; Shalley et al., 2004). Moreover, the meta-analysis of Hammond et al. (2011) identified job-related variables such as job complexity, autonomy and role expectations as the most strongly related to employee innovation. As most studies are based on cross-sectional designs, the direction of the causal relation is unknown, but clearly, functional flexibility and EDI are two sides of the same coin.

The relation between contractual flexibility and EDI is less popular in research. Indeed, the three aforementioned review articles on employee innovativeness do not

even mention the relation with job security or contractual relation (Hammond et al., 2011; Shalley and Gilson, 2004; Shalley et al., 2004). Research on the relation between contract types and organizational citizenship behaviours (OCBs) using different methodologies and samples has consistently found that permanent workers tend to show more OCBs. While Van Dyne and Ang (1998) based their results on a small sample of 155 employees from two companies, Coyle-Shapiro and Kessler (2002) used a large dataset of 6953 employees, and Gilder (2003) confirmed their findings using data from a small sample, yet with information from multiple sources. Other research indicates that major differences exist in the category of 'temporary staff', namely between directly hired temporary workers and agency workers (Chambel and Castanheira, 2005). This research, based on multi-source survey data from two samples of respectively 339 and 191 employees, only found negative relations with intra- and extra-role behaviour for agency workers and not for directly hired temporary staff. These findings suggest that it is not the objective contract type that matters for EDI, but the more subjective relation between employer and employee and the degree of job security the employee perceives in his or her job. And indeed, research on the relation between perceived job security and employee outcomes is less ambiguous. A meta-analysis by Sverke et al. (2002) finds that job insecurity is moderately negatively related to commitment and strongly negatively related to organizational trust. Further, Probst et al. (2007) combined experimental and survey material to address the relation between job insecurity and creativity and found clear negative relations. We can therefore conclude that contractual flexibility is not expected to increase employee innovativeness; on the contrary, results suggest that focusing on contractual flexibility has a negative effect on EDI, running principally through depressed levels of subjective job security.

Contrary to contractual flexibility, the relation between flexible reward and employee innovativeness has been subject to serious debates and polemic. The critics of flexible reward point to the lack of any significant relation between financial rewards and employee outcomes and the various negative side-effects such systems can cause. They refer to 'intrinsic motivation' as the main driver of creativity and that an emphasis on extrinsic rewards would outcrowd the intrinsic motivation of employees (Amabile, 1988; Deci and Ryan, 2000). Advocates of financial reward, on the other hand, argue that well-designed reward systems do stimulate and incite employees to share their ideas and actively invest in innovations. According to them, extrinsic and intrinsic motivation are cumulative and rewards will thus function as an extra incentive to innovate (Eisenberger and Aselage, 2009; Eisenberger and Shanock, 2003; Eisenberger et al., 1999). Although empirical research focuses on both collective and individual flexible reward systems, in the context of this article we only focus on individual flexible rewards. Empirical findings are nevertheless ambiguous. A meta-analysis suggests that such systems are positively related to performance quantity, yet not to performance quality (Jenkins et al., 1998). Using survey data from 204 blue-collar employees, Ramamoorthy et al. (2005) found positive, yet indirect relations between incentive rewards and innovative work behaviour, running through increased levels of perceived obligations to innovate of employees. Other studies on the relation between the perception of being rewarded and employee creativity (or related concepts) identified multiple interaction effects. For example, in a study by Baer et al. (2003) based on data from 171 employees from two

organizations, the effect of reward qualitatively differed based on whether the employee had an 'adaptive' style or an 'innovative' style, with innovators being less affected by incentive rewards. The study furthermore found that work complexity, in combination with personality, neutralizes the effect of reward. Deckop et al. (1999) found performance-related pay to be negatively related to OCBs when the employee has a low level of 'value alignment', while this was not the case for employees with high levels of value alignment. Finally, based on multi-source data of 157 employees, Deckop et al. (2004) found that 'control by pay' was positive in terms of OCBs for employees with low risk aversion, while the relation was completely inverse for employees with high risk aversion. Using data from 170 employees from a single company, Janssen (2000) further showed that the perception of fairness intervened in the relation between reward and innovative work behaviour. From all these findings we can see that there is no direct and straightforward positive relation between incentive reward and EDI. The relation depends on multiple interaction effects related to the employees' personality, job design and the design of the reward system.

We conclude that sound evidence is available for a positive relation between functional flexibility and EDI. Sufficient indications were furthermore found that this is not so for contractual flexibility, which is presumably negatively related to EDI. Third, wage flexibility can have both positive and negative effects depending on multiple intervening variables. Consequently, there is no straightforward positive relation between labour flexibility and EDI; moreover, specific forms of labour flexibility can seriously undermine EDI.

Organizational innovation and labour flexibility

Innovations in organizations are often the result of managerial decision-making, resource availability and the cost associated with investing in innovations. In this process, labour flexibility can play an important role as, for example, the costs associated with hiring and firing personnel might influence the managerial decision to invest in labour saving machinery. Therefore, we cannot merely extrapolate the findings on the relation between labour flexibility and EDI to organizational innovation. Organizational innovations are partly the result of employee innovations, but also stem from managerial decisions. Hence, we review the literature between the three types of labour flexibility and overall organizational innovativeness.

As innovation is seen as crucial for organizational survival and prosperity (Robinson and Schroeder, 2004), companies often search for ways to stimulate and enable innovation on the organizational level. Providing functional flexibility to the employees is a crucial element of the literature on high-performance work systems (HPWS), social innovation and socio-technical organization of the firm (Van Hootegem, 2000). Through the introduction of these HR and organizational concepts, employees would be provided with challenging jobs which enable them to use their innovative potential and reduce their resistance to workplace innovations. Yet, as the HPWS framework is developed in the first place to boost the productivity of organizations and employees, authors generally distinguish between HPWS practices which increase the involvement of employees versus practices that contribute to the intensification of the work (Harley, 2002).

Empirical results show that HPWS practices related to functional flexibility of employees (autonomy, team-working, quality circles, suggestion schemes, etc.) are positively related to organizational innovativeness. This finding was confirmed using both large-scale stratified samples of companies (Arvanitis, 2005) and smaller samples of companies from a selection of sectors (Martínez-Sánchez et al., 2007; Michie and Sheehan, 2003) and analysis of large-scale, longitudinal data (Zhou et al., 2011). Yet, the research also shows that isolated practices have only small effects on innovation. Nevertheless, when these practices are bundled in systems, the effect of HPWS on innovation is significantly positive (Laursen and Foss, 2003).

Again, attention to contractual flexibility in relation to innovation on the organizational level is rather rare. Combining survey data from 2700 companies with case study material, Storey et al. (2002) nevertheless found that flexible contracts were rarely introduced as part of a plan to promote innovation; furthermore the employees that were directly involved in innovative activities were extremely unlikely to have flexible employment contracts. Similarly, based on EU-wide data of more than 17,000 employees, Lorenz and Valeyre (2005) found that the most innovation prone organization type, the 'learning organization', used fewer temporary contracts than the other organizational types found in their research. Furthermore, Michie and Sheehan (2003) found a negative relation between the use of fixed-term, temporary contracts and organizational innovation while research by Arvanitis (2005) found positive relations, yet explained this by the fact that those temporary staff were specialized and engaged in temporary contracts to implement a certain innovation. Likewise, Martínez-Sánchez et al. (2007) found an interesting moderator effect in the relation between temporary work and innovations. This negative relation turned positive after adding a variable of interorganizational cooperation. The authors explain this moderator effect as companies with high levels of interorganizational cooperation tend to engage highly qualified employees with temporary contracts and therefore use temporary contracts just as a tool to increase their innovation potential. Serrano and Altuzarra (2010) also found positive effects of fixed-term contracts until a certain threshold after which the effects turned negative. Finally, a recent study by Zhou et al. (2011) showed that companies using a high proportion of fixed-term contracts score well in terms of imitative innovations, yet far worse when it comes to 'first-to-market' innovations. In conclusion, contractual flexibility seems generally negatively related to the innovativeness of organizations, yet this relation is not straightforward. The direction and strength of the relation depends on the degree to which it is used (Serrano and Altuzarra, 2010), the reason why the firm uses temporary contracts (Arvanitis, 2003; Nesheim et al., 2007) and the internal firm characteristics (Martínez-Sánchez et al., 2007).

Other studies also focused on the macro-level labour regulation of the employment contract and innovation. These studies use the OECD's Employment Protection Legislation (EPL) index, which summarizes the regulations on hiring and firing in a given country (Nicoletti et al., 2000) and relates this index to innovation performance on the national level. Doing so, most studies find a slight negative, yet insignificant relation between EPL and innovation (Bassanini and Ernst, 2002; Scarpetta and Tressel, 2002). Bassanini and Ernst (2002) therefore suggested that the relation between EPL and innovation depends on the degree of coordination in the national industrial relations system. Highly coordinated labour relations offset and might even reverse the negative impact of

EPL on innovation. Other researchers like Kleinknecht, Naastepad and Storm (Kleinknecht, 1998; Kleinknecht and Naastepad, 2005; Storm and Naastepad, 2007) challenge this and show results which suggest that rigid labour market regulation in general stimulates innovation. Contractual innovation is therefore clearly no high-way to increased innovation. Company level research found both positive and negative relations. Macro-level research on the effect of employment regulation is inconclusive and finds both positive and negative relations.

Regarding wage flexibility, we have already reviewed the literature on its relation to EDI and concluded that incentive rewards can be both positive and negative for EDI, depending on multiple interacting variables. The relation between reward and organizational innovation is equally complex. Focusing only on individual incentive reward, the literature on HPWS is ambiguous as to whether to include incentive rewards as an involvement-enhancing HR practice or not. Most research finds insignificant relations (Michie and Sheehan, 1999; Shipton et al., 2005, 2006; Zoghi et al., 2010) while some find positive or mixed effects (Walsworth and Verma, 2007). Again, the effect tends to increase when incentive rewards are included in an HR system, yet various authors indicate that incentive rewards are actually part of HR systems that aim at work intensification, rather than work involvement and innovation. Accordingly, Lorenz and Valeyre (2005) found that the innovation prone 'learning type organization' seldom uses individual incentive reward systems.

From the literature we thus conclude that functional flexibility is positively related to organizational innovation. Yet, regarding both contractual and wage flexibility articles indicate very different results. It is nevertheless clear that boosting these last kinds of labour flexibility by no means guarantees a positive innovation outcome.

Limitations

Before making general conclusions based on the research articles discussed here, the limitations of this literature review and of the literature examined need to be mentioned. In this article we used analyses from very different research streams with diverse methodologies to get an insight into the relation between labour flexibility and innovation. We relied heavily on literature from industrial psychology and organizational sociology, yet both have their advantages and disadvantages. As such, the studies in the industrial psychology field are generally based on small samples of employees from a (small) selection of companies. This makes the generalizability of the studies to the wider population of 'employees in Europe' relatively difficult. At the same time, these studies have very elaborate ways of measuring employee creativity and this rich kind of data enables the in-depth study of the relations. Organizational sociology research typically compares companies or employees in companies. It consequently works with larger samples, yet here the generalizability of the findings can be discussed as small companies are typically left out of consideration. Further, the data are typically less detailed which makes fine grained analysis of, for example, the different effects of individual and collective PRP difficult. Macro-level research suffers from the same limitations as its data rarely stem from surveys that were designed for studying the relations between labour flexibility and innovation. Further, this type of research tends to work with general indexes or

proxies which make detailed interpretation of the results a hard task. Readers should consequently show a fair degree of reticence in the interpretation of the results and in making policy conclusions.

Conclusion and discussion

As both innovation and labour flexibility are core policy areas of the EU, the question on whether they are mutually reinforcing or rather counteracting is pertinent. Our review of the literature distinguished between three types of labour flexibility: functional flexibility, contractual flexibility and wage flexibility and studied their relation with, first, employee-driven innovation and second, organizational innovation. In doing so, research findings from various scientific fields, ranging from industrial psychology over organizational sociology to labour economics were used. We concluded that sound evidence is present to state that functional flexibility on the job level is positive for EDI, just as organizational level functional flexibility is positively related to organizational innovation. Functional flexibility and stimulating innovation can therefore be conceived as being complementary strategies.

Nevertheless, the same cannot be said for contractual and wage flexibility. Regarding contractual flexibility, the rare research on the topic found contractual flexibility and job insecurity to be negatively related to EDI. Regarding organizational innovation, the relation is ambiguous. At best, greater contractual flexibility does not affect either EDI or general innovation; at worst, it has a negative impact.

For wage flexibility, equally ambiguous results were found in the literature. Regarding its relation to EDI, most authors stress the complexity of the issue and the numerous pitfalls associated with the installation of incentive reward systems. Depending on the population, the type of reward and the type of job, the relation between reward and EDI shifts from positive, through insignificant to negative. Comparable results were found in the relation between flexible reward schemes and overall innovation on the organizational level. These observations thus confirm the caution taken in the managerial literature on the use of reward systems (Robinson and Schroeder, 2004). Whether wage flexibility and innovation are compatible policy directions is therefore unclear. Research shows that a form of wage flexibility can enhance both EDI and general innovation, yet in numerous environments it doesn't, or even has negative effects on innovation.

These observations are at odds with general trends in the European labour market. Based on the European Working Conditions Survey (EWCS), a general increase in the use of contractual flexibility through temporary contracts is observed (Eurofound, 2010b; Sandor, 2011). Also wage flexibility is frequently introduced in European companies (Eurofound, 2010a). Nevertheless, no clear trends towards increased functional flexibility are observed (Parent-Thirion et al., 2012). If Europe is to become an 'innovative union', trends need to move in a different direction as the scientific literature sufficiently indicates that an innovation agenda is best served by functional labour flexibility.

The EU labour flexibility agenda is nevertheless focused on the concept of flexicurity. This policy line directs policy makers towards so-called 'smart regulation' on employment regulations and decreasing 'wage restraints' (Goetschy, 1999). In essence this means working towards greater contractual and wage flexibility which has potentially

negative effects on both EDI and on organizational innovation. It seems that the EU is trying to combine both high-road (focusing on differentiation, innovation and quality) and low-road strategies (focusing on cost-cutting and price competition), without recognizing that these policies are potentially offsetting each other.

EU policies for increasing innovation should focus on enhancing the functional flexibility of workers. While the EU and the member states have developed sophisticated schemes for the activation of the unemployed, the activation of the employed through functional flexibility is largely ignored by European and national policy makers. Activating the employed in this way could nevertheless result in a serious competitive advantage for the European economies.

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