Employment relations innovation and economic performance: uncovering myth and reality. The case of the Netherlands.

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Abstract
Last decade there has been a lot of rhetoric about the need for countries to radically change their existing employment relations systems (ER-systems) in order to become more innovative and competitive. Especially among the so-called coordinated market economies (CME’s, Hall & Soskice, 2001) in Western Europe a fierce debate took place about the question whether a more market oriented approach should be followed, like it exists in the Anglo Saxon countries. Proponents of such a market approach pointed at positive innovation outcomes and other favorite economic performance indicators in liberal market economies (LME’s) and at the effects of globalization. Opponents on their turn pointed at the strengths of the existing system of ER – not only economically but also socially - and at the impossibility to change existing ER-systems. Yet, in an attempt to cope with the actual economic crisis, most countries or even economic communities have set direction to innovate their existing system of ER in order to reach the goal of higher economic performance. By using the Netherlands as an example, this paper tries to shed more light on the reality of the innovation of existing ER-systems and especially also on the connection with economic performance.

Key words: employment relations innovation, economic performance, economic crisis

1. Introduction
During last decade the connection between national employment relations systems (ER-systems) and economic performance has been a hot debated topic (Bamber & Lansbury, 2004). The central point in this debate is the idea that specific systems or forms of employment relations foster economic performance, in terms of productivity, growth, innovation, etc., more than others. Given the ongoing globalization and intensification of competition at world scale, countries or even economic communities have to adapt their ER-systems in such a way that they favor their economic position. A good example of this strand is the so-called Lisbon Agenda, agreed by the EU member states in 2000, to make Europe in 2010 ‘the most competitive and knowledge-based economy in the world, capable of sustained economic growth with more and better jobs and greater social cohesion’. But there are also many examples of ER-reforms by national states last decade with the aim to strengthen their economic position (Bosch et al, 2007; Rubery et al, 2008; Negrelli & Pulignano, 2008; Karamessi, 2008). This tendency has also been stimulated by the growing number of international ‘benchmarks’ by which the economic performance (productivity, growth, innovation, etc.) is measured and ‘ranked’ on a regular basis. And with the actual financial and economic crisis in fact all countries are seeking for possibilities to enlarge their economic performance through – among others – ‘innovating’ their ER-systems.
However, the connection between ER-innovation and economic performance is not yet very clear. Until now, the debate on this issue has a strong ideological bias and a weak scientific basis. Till the start of the actual financial and economic crisis the debate in Europe was mainly dominated by neo-liberals (economists and right-wing politicians) who stated that further economic liberalization is the only successful road to economic performance in all countries. In line with this reasoning they advocated that all countries should follow a more market oriented approach, like it exists in the Anglo Saxon countries. Opponents (sociologists and left-wing politicians) pointed at the strengths of the existing system of ER – not only economically but also socially - and at the impossibility and ineffectivity to change existing ER-systems. However, both parties express mainly believes without much evidence. What we lack until now are both coherent and encompassing theories and systematic empirical underpinning. The theories that are present now, like the ‘globalization thesis’, the ‘variety of capitalism (VoC) thesis’ and the ‘small states thesis’ are all partial and rather static theories. They describe and (try to) explain the position and behavior of specific ER-systems but they don’t give a more integral and especially also a more process oriented explanation or model for the connection between ER-innovation and economic performance. In this sense they stay close to the mentioned rhetoric. In this paper we take distance from that rhetoric and try to add to both the theory as the ‘facts’.

Our theory development is based on literature about innovation (management) and human resource management/employment relations. According to this model innovation and economic performance can be enhanced by enlarging and improving national intellectual capital, consisting of human capital, social capital, creative capital and organizational capital. ER-systems play a role the enlargement and improvement of national intellectual capital. When we know how this role goes, national capital can be improved by deliberate and systematic ER-system innovation. Until now, the link between both major social-economic domains received scan and infrequent attention: “Especially at the level of national and European ER a lot of prejudicial thinking exists between the two sides. From the innovation side, matters like industrial democracy, listening to trade union demands or collectively agreed regulations are very often seen as time-consuming obstacles, which slow down the development and diffusion of innovation. Within the field of industrial relations, innovations are frequently dealt with in only a reactive way, as solutions to the assumed negative social consequences of technological and organizational advances. Innovation is not seen as a main target” (Van Gyes & Heron, 2002). However, in our model we try to underpin the close connection between innovation and ER at national level, in line with our earlier work on innovation and HRM (De Leede & Looise, 2005).

In our way to theory development and fact-finding we use the Netherlands as a `case study’. Beside practical reasons, several arguments can be given to use the Netherlands as a case study. The Netherlands is part of the group of coordinated market economies (CME’s, Hall & Soskice, 2001) but it also has some specific characteristics. The Netherlands has a very open economy and traditionally a very overseas or transatlantic orientation. The Netherlands also has a proportionally large number of multinational companies, in some cases in combination with the UK (Shell, Unilever). In a figure by
Hall and Soskice (2001) where both CME’s and LME’s are rated according to employment protection and stock market capitalization, the Netherlands together with Japan comes closest to the group of LME’s. So, from the group of CME’s, the Netherlands seems to be one of the most susceptible for LME-influences or ‘winds from the west’ (Van der Heijden, 2004). On the other hand, the Netherlands still has all characteristics of a CME. Like in other countries, in the Netherlands a large number initiatives have been deployed last decades by government, social partners, special committees (like the Innovation Platform), (large) companies, etc., to change both the content of rules and regulations as well as the institutions of employment relations.

The data that we use in this paper come from different sources. The European Foundation in Dublin offers a lot of information on industrial relations characteristics of the EU Member States. Besides the European Industrial Relations Observatory (EIRO), that lists the various features of the EU Member States industrial relations on a regular basis, there are also the regular comparative overviews of different aspects of the industrial relations in the different countries (e.g. Weiler, 2004; Schulten, 2005; Van Gyes et al, 2007). Especially the last report offers a good starting point for the positioning of the Dutch employment relations. Van Gyes et al rank the industrial relations of the 25 EU Member States with the help of an industrial relations framework developed by Kauppinen (1994) and Harisson and Shirom (1999), in which 3 groups of indicators are distinguished:
- The input or position of the main actors: trade unions, employers associations
- The throughput or processes: collective bargaining, policy concertation, representation at the workplace and industrial action
- Outputs or results: collectively agreed and actual wages and working times

Appendixes 1 and 3 offer an overview of the position of the Netherlands on these points compared to the EU-average and a number of other relevant EU-countries like Germany, Belgium, Sweden, France and the UK.

Another important source of information is the Nordic Innovation Monitor 2009 written by FORA for the Nordic Council of Ministers and presented at the Nordic Globalisation Forum in Iceland February 2009. This monitor gives an overview of the ranking of the Nordic countries (Sweden, Finland, Norway, Denmark and Iceland) on innovation indicators compared to the other OECD countries. As the basis of their comparison they use four so-called framework conditions that are believed to have the largest impact on innovation capacity:
- Human resources – because innovation is about promoting human talent and freeing-up resources for innovative thinking;
- Knowledge creation – because innovation is about developing new and relevant knowledge and applying knowledge in the proper forum;
- Information and communication technology (ICT) – because innovation is about utilizing the opportunities offered by technology;
- Entrepreneurship – because innovation is about commercializing entrepreneurial behavior

The Nordic Innovation Monitor measures the strength of the four framework conditions as well as their output. The framework conditions are measured using 135 statistical indicators across 42 policy areas and the output is measured via 30 indicators across 9
Appendix 2 gives an overview of main results for the Netherlands compared to the before mentioned EU-countries (including Denmark) and the United States.

A third source of information are two ‘case-studies’ regarding ER-innovation in the Netherlands. Since the 1980’s a number of (attempts to) ER-innovations have taken place in the Netherlands. We combine the most important of them in two clusters. The first took place during the 1980’s and 1990’s and has been documented by Visser & Hemerijck under the title “A Dutch Miracle. Job Growth, Welfare Reform and Corporatism in the Netherlands” (Visser & Hemerijck, 1997). Starting with the so-called ‘Wassenaar agreement’ (Central Accord between central union and employers federations) in 1982, three major policy reversals took place in Dutch ER, namely: return to wage moderation, adjustments in social security schemes and the introduction of activating labor policies. For the parties involved – especially the unions – this was not an easy process, but the effects have been substantial. From a country labeled by the term ‘Dutch disease’ (Esping Andersen, 1986), within ten years the Netherlands turned into ‘a Dutch miracle’ with scores on all economic indicators above the European average during the period 1991-1996 and unemployment fallen back to 6% (from over 10% in the 1980’s). A second cluster of ER-innovations (attempts) has taken place in the period 2000-2006. One element in this cluster was the ongoing decentralization and individualization of collective bargaining (De Leede et al, 2004; Looise & De Leede, 2006). Other elements were the (partly failed) attempts by the right-wing government Balkenende 2 (2003-2006) to change (pre-)pension arrangements, the dismissal law and the Law on works councils. As we still lack a systematic evaluation of this period, we will make use of secondary data to describe this ‘case’.

We start this paper with a critical review of the existing theories on ER-systems and economic performance (section 2). This will be followed by the presentation of our own integral model for the understanding of the connection between paper ER-innovation and economic performance (section 3). In section 4 we apply this model to the Netherlands. And in section 5 we formulate our conclusions. Before we start our exploration we want to make some remarks in advance. The economic performance of a country is the result of many factors and not only the ER-system (Bamber & Lansbury, 2004). This corresponds with the debate on ‘HRM and performance’: the contribution of specific HR-systems to organizational performance. Among many external and internal influences on country and organization performance ER- and HR-systems are just one. A second remark regards the complexity of clarification of the relationship. This already being the case with the contribution of HRM to organization performance; the more it is so with the contribution of national ER-systems to national performance. Related to this there is also the period of assessment. We think that a good evaluation of effects of interventions is only possible at longer term. This is especially the case with interventions at macro/national level. Last but not least we point at the difference between laws, policies and practices on the one hand and the factual implementation and application in practice on the other.
2. Reflection on existing theoretical approaches
Historically within industrial or employment relations studies two opposite theoretical approaches have been present, namely the convergence and the divergence approach. Although there are different definitions of convergence, the overall idea is that – due to ongoing economical, technological, societal, etc. influences – the ER-systems of different countries develop in the same direction and will end in a similar ER-system. Opposite to that the divergence approach states that – despite all developments and influences – the main characteristics of (national) economic and ER-systems will stay intact. Followers of these approaches see the national differences as a result of historic and cultural differences and think that those differences will remain, also when challenged by external influences. Last years the convergence and divergence approaches have been renamed and extended, but the content and conclusions have stayed the same. The convergence approach has been replaced by the globalization approach and the divergence approach by the Variety-of-Capitalism (VoC) thesis. In this section we will reflect on these theoretical approaches and their empirical support in ER-innovations up to now in the Netherlands and in other countries. In this context also a third ‘theory’ will be involved, namely the ‘small states thesis’ as it was developed by Katzenstein (1985).

2.1. The globalization thesis
Within the globalization approach a distinction can be made between the so-called ‘strong’ and ‘weak’ thesis. Representatives of the ‘strong’ globalization thesis state that the international economical, financial, technological, etc. influences are so overwhelming that hardly any room for national differences remains. This will lead to ‘simple’ convergence based on neoliberal and market orientation policies (Sassen, 1998). In fact this would mean that in the end all existing ER-systems will develop into LME’s. Representatives of the ‘weak’ globalization approach also believe in convergence of economic and IR-systems but on a longer term. They think that globalization will first lead to regionalization in economic blocks like the EU, NAFTA, etc. before it will lead to full convergence (Ruigrok & Van Tulder, 1999; Harman, 1996; Hay, 2000).

At first sight the globalization approach – whether strong or weak – seems not very appropriate for what is happening in most countries and especially also in CME’s, like the Netherlands. Until now most countries have kept the fundamentals of their specific ER-systems and there are no signs that this will change on short term. Since the 1970’s, the Anglo Saxon countries like the US, UK, Australia and New Zealand have developed in a more LME-direction, but this was no fundamental change in their existing ER-systems. Within most CME’s developments like deregulation, decentralization, individualization, etc. can be witnessed last decades, but again with leaving the main features of their ER-systems intact. Also from a performance perspective there seems not much evidence for globalization or convergence. Both LME’s and CME’s seem to be able to provide satisfactory levels of long-run economic performance (Hall & Soskice, 2001; see also next section). So for CME’s there is no direct need to change their ER-systems. Like the so-called best fit approach in organizational strategy and HRM, the globalization approach seems too deterministic: one size does not fit all.
On the other hand, when we look at the Netherlands, we can also find some evidence for the globalization thesis. In their actual sketch of the effects of globalization for the Dutch ER, Vos and Grundemann (2008) point at the growing internationalization of the Dutch economy (nearly 60% of large industrial companies in foreign hands, 80% of the stocks in the AEX-index in foreign hands), the recent changes in corporate governance (more influence for shareholders), more international market pressures. As a result they see weakened positions of the main actors (especially trade unions), less interest in co-determination (works councils), more labor flexibility (less labor protection), wage moderation and growing inequality. Though we agree with most of these observations, the question arises whether these are really fundamental changes in the Dutch ER-system. We agree with Mills et al (2008) that globalization produces ‘converging differences’ and does not simply result in full convergence. As we will see in the next section, the main features of this system still are intact and seem to be rather stable. This means that there is no evidence for the strong globalization thesis in the Netherlands and even not much for the weak globalization thesis (also seen the painful development of a European social system).

2.2. The Varieties of Capitalism thesis
Recent and prominent representatives of the divergence thesis are Hall & Soskice with their so-called varieties of capitalism (VoC) approach. According to Hall and Soskice (2001) we can make a distinction between different ‘varieties of capitalism’ with each their own features of coordination of both the financial and industrial relations systems and also their own performance effects. As examples of different ‘capitalisms’ they mention liberal market economies (LME’s) and coordinated market economies (CME’s). LME’s primarily rely on markets as the central coordination mechanism, while CME’s also rely on institutions in both spheres that reflect higher levels of non-market coordination. They also state that both types of economies tend to distribute income and employment differently: ‘in liberal market economies, the adult population tends to be engaged more extensively in paid employment and levels of income inequality are high. In coordinated market economies, working hours tend to be shorter for more of the population and incomes more equal. With respect to the distribution of well-being, of course these differences are important’. According to Hall & Soskice, the northern European countries like Germany, Belgium, Netherlands, Sweden, Norway, Denmark, Finland and also Japan, belong to the CME’s, while the Anglo-Saxon countries – like the USA, Britain, Australia, Canada, New Zealand and Ireland – can be seen as LME’s.

Looking from a long-term perspective to employment relations there seems to be good evidence for the divergence or VoC-approach. Like we said before, most countries have kept the basic features of their ER-systems over time. However, there are also examples of more fundamental changes in ER-systems of countries during last decades. Most prominent examples are the changes in the ER-systems of the Anglo-Saxon countries (UK, US, Australia, New Zealand) after the 1980’s. Since then they appear in terms of Hall & Soskice (2001) as full LME’s featuring characteristics like: firms coordinating their activities primarily via hierarchies and competitive market arrangements, arm’s-length exchange of goods and services in a context of competition and formal contracting, a limited role of government, etc. On the other hand also the traditional
CME’s have changed. CME-characteristics like heavy dependence on non-market relationships, extensive relational or incomplete contracting, strategic interaction among firms and other actors (government), etc., cannot longer fully be found in most CME’s nowadays. In this sense they have also been touched by the same liberal-market development as the LME’s.

Looking at the Netherlands, the VoC-approach seems to fit with the sketch of the changes in the Dutch ER-system during last decades. The main features of the Dutch ER-system have stayed the same over time (see also section 4). However, in the section we will also see that important changes have taken place within the existing ER-system. However, Hall and Soskice also argue that, with respect to the future there might be a decisive difference in the capacities of both systems. That difference regards the effect on innovation. LME’s seem to be better in radical innovations and CME’s in incremental innovations. And also the reverse seems to be the case: the institutional features of LME’s tend to limit firms’ capacities for incremental innovation, while those of CME’s tend to do the same with firms’ capacities for radical innovation.

2.3. The small states thesis
A first conclusion is that neither the convergence nor the divergence approach alone seems to be fully appropriate to typify the development of ER-systems. However, the combination could be useful. To better understand this combination we can make an analogy with the ‘best practice’ or ‘best fit’ debate within strategic human resource management (see Boxall & Purcell, 2003). For both approaches to strategic HRM at company level there is empirical evidence: companies that follow new best HRM-practices as well as companies that better align their HRM to their external and internal environment perform better. Some HRM-authors (Becker & Gerhart, 1996; Purcell, 1999) have explained these seemingly contradictory results by making an analytical distinction between on the one hand a surface level of HR policies and practices in a firm, that have to be open to new developments, and on the other hand an underpinning level of generic processes and principles, that has to fit with the longer term contingencies. Applied on ER-systems this would mean that on a surface level these systems are open for new influences and developments but on deeper layers they are quite stable in conjunction with national institutional arrangements, national culture, etc.

This process of integration of new developments within existing ER-systems seems to be better visible in small countries than in larger ones. According to Katzenstein (1985) small (European) states use laissez-faire combined with internal intervention to cope with international economic interdependence. Because of the small size of their domestic markets, small states cannot rely on protectionist strategies like larger countries and have to rely on exports to ensure growth, which makes them vulnerable for international economic turbulences. To cope with these turbulences these states develop specific patterns of policymaking (termed as democratic corporatism) characterized by strong cooperation between the social partners and the state in the elaboration of social and economic policies on the one hand (policy concertation) and strongly institutionalized structures of interest intermediation on the other (related to wage bargaining mainly). According to Katzenstein policy concertation is essentially the result of functional
pressures induced by the international environment. The common situation of vulnerability shared by employers and unions alike leads these actors to avoid open conflicts and find compromises in order to stay competitive on world markets (section based on Alfonso & Papadopoulos, 2009)

Katzenstein’s ‘small states thesis’ fits quite well with the Netherlands. With its very open economy (60% of GDP based on export?) the Netherlands are very vulnerable to international economic turbulences and therefore developed strong institutional structures for cooperation between social partners and government and a strong tradition of policy concertation. Visser & Hemerijck (1997) provide a good example of the way ‘Dutch corporatism’ was able to turn a situation of ‘Dutch disease’ into ‘a Dutch miracle’ during the period 1980-1995. In the Netherlands the close cooperation between the employers organizations, unions and government in different institutions mainly at national level (Social Economic council, Foundation of Labor, the collective bargaining system) is mostly termed as ‘polder-model’. Some authors have tried to relate this model to old Dutch traditions and cultures based on the continuous struggle against the hostile sea (Bos et al, 2007). However, we think that the model is less unique than some may believe. We can see close forms of cooperation in other (small) countries too (be it in other forms). And we agree with the analysis by Katzenstein that the main driver for the model must be sought in the need to cope with international economic turbulence.

2.4. Conclusion regarding existing approaches
The existing theoretical approaches offer a lot of insight and understanding for the actual situation of ER-systems, especially also the Dutch system. However, they offer not much insight in the connections between ER-systems and economic performance and in change processes themselves. Both the globalization and varieties of capitalism theses are rather normative or deterministic and both look at ER-systems at a very abstract level. The small states thesis offers some more insight and understanding in change processes in especially small (European) countries. In particular the combination of coping with external developments while keeping or even strengthening the existing characteristics (Alfonso & Papadopoulos, 2009) is interesting. At first sight this can be seen as underpinning for the VoC-thesis, though on longer term it could also lead to a kind of reversed globalization, namely by a global trend to strengthen the internal cooperation and institutions is also in LME’s.

3. An innovation approach to ER-systems and performance
In this section we present an alternative approach to understand the connection between ER-innovation and performance. This approach is based on earlier work on ER-innovation in the Netherlands (De Leede, Looise & Van Riemsdijk, 2005; Looise & De Leede, 2006) and especially also earlier work on the connection between Human Resource Management (HRM) and innovation (Looise & Van Riemsdijk, 2004; De Leede & Looise, 2005). In the second part of the section we apply the approach to the Netherlands. The section closes with a conclusion about the approach and its applicability.
3.1. Innovation and performance
Innovation seems to be a ‘buzz-word’. It is so frequently used nowadays and in so many different contexts that there is hardly any meaning left or only a very general meaning – like change. However, innovation has a more specific meaning than ‘change’: it regards specific forms of change aimed at specific goals. In line with other authors (West & Farr, 1990; Looise, 1996; De Leede 1998; De Leede & Looise, 2005), we define an innovation as ‘a deliberate and radical change in existing products, processes and organizational entities in order to achieve a competitive advantage over competitors’. Crucial aspects of innovation are seen as:
- the introduction of something new, at least for the existing entity, in terms of new products or services, new technology or new forms of organizing or governance;
- having a process aspect, this means that there are activities/stages such as goal formulation, design and organization, implementation and monitoring;
- a development with somewhat radical leaps (discontinuities), although many authors also speak of incremental innovation (or continuous innovation);
- the intention to gain advantages for the entity.
Though innovation is mostly used in connection to organizations it can also be applied at more macro levels: technological innovation, economical innovation, social innovation (Looise, 1996). ER-system innovation can be seen as a part or form of social innovation (NCSI, 2006)

In innovation literature innovation is both used as an intervention or input-variable but also as a performance or output-variable (see also table 3 in section 2). This can lead to confusion or give the idea of circle-reasoning: innovation leads to innovation. However, what is meant in these cases is that for instance technological innovation leads to product or process innovation which on their turn lead to an increase of the innovation capacity of the company which on its turn leads to a higher economic performance of the company. The same can be the case with ER-innovation: ER-innovation can lead to a better use of intellectual capital in a society and in line with that to an increase of the innovation capacity of that society and to a higher economic performance in the end. In this context we also use innovation both as an intervention or input-variable and as an output or performance variable: we look at innovations in existing ER-systems as well as innovation outcomes or indicators. With respect to the last ones we assume that higher innovation outcomes also lead to higher economic performance in terms of productivity, economic growth, etc. Overall there seems to be a high correlation between high scores of countries on innovation indicators and on economic performance indicators. Within innovation we can make a distinction between radical and incremental innovation and between explorative and exploitative innovation. Explorative innovation stands for the development of new products or services and exploitative for the improvement of processes.

3.2. National intellectual capital
We do not think that ER-system innovation will directly or automatically lead to enlargement of the innovation capacity and economic performance of a society (as is the case with HRM-innovation and the innovation capacity and economic performance of a company). First we have to understand how ER-system innovation works. To understand
the effects of ER-system innovation we need an in-between variable, namely national intellectual capital. Intellectual capital (IC) at company level is a decisive factor for innovation performance at company level (Youndt et al, 2004; Subramaniam & Youndt, 2005) and we assume that the same goes for national IC for innovation performance at national level. Within IC we distinguish four (sub) capitals, namely human capital (HC), social capital (SC), creative capital (CC) and organizational capital (OC). HC is mostly defined as the skills, knowledge and expertise of the employees. Sometimes also attitudes are involved SKA: skills, knowledge, abilities). At national level we speak of SKA of a whole population and especially the working part of the population.

SC can be defined by internal and external networks and relationships, but also with characteristics of that relationship, like associability and trust (Leana & Van Buren, 1999). At national level the focus will be more on national networks and relationships, though also external (international) networks and relations have to be taken into account. CC is not very common until now within the IC-literature, but we think that it can add to IC especially at national level. The concept of creative capital was introduced by R. Florida (2002), Florida et al (2008) and was especially aimed at cities and regions, so it can also easily be applied at countries. Important aspects are attention to different forms and combinations of creativity, entrepreneurial attitude and tolerance. Last but not least OC applies especially to organizational level, though we think it can also be useful at national level. Important aspects within OC are the way skills, knowledge, experience etc. are institutionalized and codified in structures, systems and processes.

3.3 ER-system and ER-innovation

In most literature about ER-systems very general characteristics are used for the categorization of ER-systems. And mostly they are also presented in the form of dualities, like LME’s versus CME’s (Hall & Soskice, 2001), corporatist versus voluntarist systems ( ), centralist versus decentral systems ( ). Though we agree that these generalizations can offer insight in main traits of ER-systems, we also think that these are not precise enough to come to better insight on the relation between ER-innovation and economic performance. Therefore we want operationalize ER-systems a bit deeper. ER-systems can be distinguished in two mutually strong related parts, namely content and form. Content regards the content of policies and practices, rules and regulations regarding the employment relationship and the application of these policies, practices, rules and regulations in practice. Main themes in this context are the types of contracts (fixed, flexible, etc.), dismissal arrangements, working time, reward, working conditions, worker participation, etc. Forms consist of the position of the main actors (employers organizations, unions, government), their mutual relations (co-operation, conflict, negotiation) and the levels on which they operate (national, industry, region, company). In this context it is important not only to look at characteristics of ER-systems as fixed conditions but also to possible changes that are taken place and which can be depicted as ER innovations.

Regarding (innovation of) specific ER-forms and content that can influence innovation, not much literature is available. If there is literature on ER-innovation available, it regards description of changes (innovations) in existing ER-systems without connection
them with economic performance (Jenkins, 2000). Only Van Gyes and Heron (2002) try to link ER-innovation with as a performance outcome. As important parts of the ER-content that should be innovated they mention vocational training, labor mobility/employment protection legislation, macro-consultation on innovation policy, regional innovation initiatives of social partners, wage bargaining and competitiveness, regulating intellectual property rights of workers and industrial relations and research policy. With respect to ER-forms they only mention a special role for employers organizations and trade unions in raising awareness and political support and policies to boost high involvement industrial relations and no changes in positions, relations and levels. One such change in ER-form could be ‘organized’ decentralization of collective bargaining or collective bargaining innovation (Looise & De Leede, 2006). Decentralized collective bargaining offers the opportunity to develop more individualized and/or tailor made contracts that can be influenced by the employees themselves and therefore will be better aligned with individual preferences and situations of employees. This may lead to improved ‘psychological contracts’ and a higher employee output (Huiskamp et al, 2002; Kwakkelstein, 2004; De Leede et al, 2004). However, to prevent undermining of central coordination of collective bargaining – as one of the main characteristics of CME’s - decentralization must take place in a coordinated and ‘organized’ (Traxler, 1995) way.

3.4. Conceptual model and connections
When we try to visualize ER-systems innovation we come up with the following model, consisting of four main blocks.

Figure 1. Conceptual model ER-innovation and economic performance

<table>
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<th>Economic performance</th>
<th>National intellectual capital</th>
<th>ER-system and ER-innovation</th>
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<tbody>
<tr>
<td>Innovation:</td>
<td>Human capital</td>
<td>Content:</td>
</tr>
<tr>
<td>- radical/incremental</td>
<td>Social capital</td>
<td>- policies/practices</td>
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<tr>
<td>- exploration/</td>
<td>Creative capital</td>
<td>- rules/regulations</td>
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<tr>
<td>exploitation</td>
<td>Organizational capital</td>
<td>- implementation</td>
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<td>Productivity</td>
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<tr>
<td>Growth</td>
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<td>- positions actors</td>
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According to this model innovation and economic performance can be enhanced by enlarging and improving national intellectual capital, consisting of human capital, social capital, creative capital and organizational capital. ER-systems play a role the enlargement and improvement of national intellectual capital. When we know how this role goes, national capital can be improved by deliberate and systematic ER-system innovation. The scheme gives an overview of the main relevant variables. Next step is to understand how the boxes are connected: what kind of ER-innovations lead to what forms of national IC enlargement and improvement and subsequently to which forms of innovation? Regarding these connections only very general indications can be found in existing literature. Hall & Soskice (2001) found some evidence for their proposition that
CME’s should be better at supporting incremental innovation and LME’s in supporting radical innovation. They think that a possible explanation for this difference lays in the accent on relational arrangements and structures (secure employment, autonomy from close monitoring, opportunities to influence decisions of the firm) within CME’s which encourage product-differentiation more than intense product-competition, while the flexible and fluid market arrangements (high labor mobility, extensive equity markets, power concentration with top management) with LME’s leads to the opposite.

A disadvantage of this way of reasoning is that it generalizes too much on the combination of one type of ER-system and one form of innovation. Also in CME’s radical and explorative innovations take place and have to take place as is the case with incremental and exploitative innovation in LME’s. From recent literature on innovation and HRM (Leana & Van Buren, 1999; Kang, Morris & Snel, 2007; Kang & Snel, 2009) we can learn that both strategies need their own HRM (ER) approach. Based on this literature it can be concluded that radical and explorative innovation presupposes more generalist than specialist Human Capital and more entrepreneurial than cooperative Social and Creative Capital while incremental and exploitative innovation does the opposite. In the US, the need for more incremental and exploitative innovation via ‘high-involvement employee relations’ has already been recognized in the 1990’s (Appelbaum & Batt, 1994; Appelbaum et al, 2000). However, in Europe and the Netherlands, the accent is still on improving their – already existing - high-involvement ER (Van Gyes & Heron, 2002; NCSI, 2007), meanwhile neglecting the relation between their ER and more radical and explorative innovation.

4. Application to the Netherlands
In this we present our conceptual model to the Netherlands. Besides statistical information from the EIRO-survey and the Nordic Innovation Monitor (see appendixes) we make use of the two ‘case-studies of Dutch ER-system innovation that have been mentioned in the Introduction section. In this section we will follow the same line as in the previous section and the model. First we discuss the different ‘blocks’ for the Netherlands and then go into the possible connections.

4.1. Economic performance and innovation
Appendix 1 gives an overview of a number of economic output indicators for the Netherlands, compared to the average of the EU and the some other countries. All figures are from the period 2000-2004. This is a rather short period to have a good overview of performance outcomes of ER-systems. However, given this limitation, the outcomes for the Netherlands seem comparable with the outcomes for the other countries, especially the other CME’s. The average GDP growth is comparable with Germany and a bit lower than Belgium and Sweden. The average productivity growth is quite low, compared to the others. On the other hand, the average unemployment is lower than in all the countries, as is the average number of weekly hours worked by full-time workers. The biggest difference exists with the UK. The UK also scored low on unemployment but (considerably) higher on productivity growth, growth of GDP and number of weekly hours worked by full-time workers. When we look over a longer period most of the differences are equalized. Hall and Soskice (2001) also present figures regarding growth
rate of GDP, GDP per capita and unemployment rate over a period of nearly 40 years, which show that the Netherlands is on the CME-average (which is a bit higher than the LME-average) during this period. However, we also see differences during the various sub-periods. The Netherlands did relatively good during the periods 1961-1973 and 1985-1998 and worse during the period 1974-1984. The period 1998-2008 is not included, but as a reaction on the good years in the previous period, the scores in this period can be a bit lower.

With respect to this last period the Nordic Innovation Monitor offers an overview of growth in economic wealth of different economic regions. From this overview we can learn that especially the Nordic region did quite well, followed by Korea and Japan, the US, UK and Canada and Australia and New Zealand. The group Continental European countries scored the lowest (see table 1). According to the Monitor these differences in scores can be largely explained by differences in the innovation capacity that has been build by the various countries and regions: ‘the gap between the Nordic region and continental Europe in terms of average annual growth in economic wealth can be explained in differences in innovation capacity, emphasizing the importance of innovation in securing future prosperity and wealth’ (p.17).

Table 1. OECD Regions’ Growth in Economic Wealth 1997-2007 – GDP Per Capita

<table>
<thead>
<tr>
<th>Region</th>
<th>Increase in economic wealth 1997-2007 GDP per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nordic Region</td>
<td>2.6</td>
</tr>
<tr>
<td>US, UK, Canada</td>
<td>2.2</td>
</tr>
<tr>
<td>Continental Europe</td>
<td>1.8</td>
</tr>
<tr>
<td>Australia, New Zealand</td>
<td>2.2</td>
</tr>
<tr>
<td>Japan, Korea</td>
<td>2.4</td>
</tr>
</tbody>
</table>

Source: Nordic Innovation Monitor 2009

The individual ranking for the Netherlands in the Innovation Monitor for 2008 is 10th for both innovation performance as framework conditions. In 2007 these rankings were 10th and 12th respectively. Better scoring countries on innovation are the US and Canada and the Nordic countries (Denmark, Sweden, Finland) and the also UK. Lower scoring countries are the other continental European countries (Germany, Belgium and France) but also Austria, New Zealand and Norway. So from the continental European countries the Netherlands is doing relatively well. This is in line with a report of the Dutch Innovation Platform (KIA 2009) that characterizes the Netherlands as an innovation follower: the Dutch score is above the EU-average but below the group of forerunners. The monitor gives no information about the type of innovations per country. According to Hall & Soskice (2001), LME’s like the US, tend to be better in radical product or service innovation, while CME’s like Germany and the Netherlands tend to be better in incremental and process innovation. This is in line with a recent report of the Dutch
innovation Platform (2009) that concludes that the Netherlands is weaker in product and service innovations. Comparison of changes in rankings over a period of 5 years does not show much change for the Netherlands. However, remarkable positive leaps can be seen for Denmark and to a lesser extent for Canada and Germany, - in contrast to that - remarkable negative leaps for Australia and New Zealand. This shows that position in the ranking are not fixed over the time, but that – as a result of external condition or internal policies – considerable changes are possible.

Table 2. OECD Countries’ Individual Ranking in the Nordic innovation Monitor (selection)

<table>
<thead>
<tr>
<th>Country</th>
<th>Innovation: Performance</th>
<th>Innovation: Framework conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Canada</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>Finland</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Sweden</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>UK</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Australia</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Germany</td>
<td>11</td>
<td>16</td>
</tr>
<tr>
<td>Norway</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>New Zealand</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Belgium</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>France</td>
<td>20</td>
<td>19</td>
</tr>
</tbody>
</table>

4.2. National intellectual capital
As we are lacking complete overviews of national intellectual capital we have to look for other indicators. However, the indicators in the Nordic Innovation Monitor come close to an overview of national IC. Appendix 2 offers a picture of the position of the Netherlands on these indicators in 2008 compared to other European countries (now also including
Denmark) and the US. The indicators cover most of the factors mentioned in our model under national intellectual capital. Especially the factors Human Capital, Creative Capital and Organization Capital can be recognized. Only indicators for Social capital are less visible in this list.

We can learn from appendix 2 that, relatively seen, the Netherlands does rather well on Human Capital. Regarding Human Resource performance the Netherlands has a high score on indicators as share of professionals, delegation of authority in organizations, adaptability to market changes, international experience of management, ethical practices and worker motivation (though shrinking compared to 2003). On Human Resource framework conditions the scores are a bit lower. This is mainly caused by relatively low scores on education expenditure (especially on higher education which is also lower than 2003), entry rates to higher education lifelong learning and on flexibility in hiring and firing. Interesting to note, that in contrast to the last score, the score on adaptability of the labor force when faced with new challenges is relatively high (higher than the other continental European countries and even higher than the UK). Some of the (mainly positive) scores on Knowledge Creation can also be related to Human Capital. For instance, the number and quality of scientific publications are quite high in the Netherlands, as is the share of professionals, the share of government R&D financed by industry and the local availability of specialized research and training facilities. During the period 2003-2008 the knowledge transfer between companies and universities has been considerably improved. However, regarding R&D expenditure in general, percentage public researchers, the availability of scientists and engineers and the percentage of foreign high-skilled people the Netherlands are still on average. These findings are in line with other rankings. The earlier mentioned report of the Dutch Innovation Platform (2009) concludes that the Netherlands is relatively strong in mass and focus of scientific research and in its educational infrastructure, though investments are lacking behind. In a report by the Lisbon council (Ederer, 2006), the Netherlands were ranked 4th on the European Human Capital Index, after Sweden, Denmark and the UK, but before Austria, Finland, Ireland, France, Belgium and Germany. Especially on Human Capital Utilization (the representation of national human capital in the active workforce) the Netherlands seems to do quite well since the 1990’s (1st place in Europe), however on Human Capital Productivity the score is much lower (10th place in Europe).

As entrepreneurship is an important indicator for Creative Capital, it is interesting to see how the scores on this indicator in NIM are. Appendix 2 shows that the overall scores of the Netherlands are rather low (resp. 12th and 10th for performance and framework conditions) and that the performance position also has deteriorated since 2003. When we look a bit deeper in the indicators we can see that the Netherlands scores relatively low on cultural factors like desirability of becoming self-employed, self-employment preference, risk for business failure and entrepreneurship among managers. On the other hand, we can witness a considerable growth in new companies and – to a lesser extent in framework conditions like university-industry collaboration, the availability of private credit, access to loans and venture capital). These findings are in line with the report of the Dutch innovation Platform (2009) that concludes that the Netherlands is weaker in entrepreneurship and that especially the attitude towards entrepreneurship is quite low.
Appendix 2 also shows that the scores for the Netherlands on ICT – both performance and framework conditions – are relatively good. This can be seen as an indicator for national organizational capital. The access to and use of internet is quite high, although e-learning and e-working are lacking behind compared with other countries.

4.3. ER-system and ER-innovations

When we compare the indicators of the Dutch ER-system with those of Germany, Belgium, Sweden, the UK, France and the EU as a whole (see appendix 3), we can learn that there are most common features with the systems of Germany, Belgium and Sweden and least with France and the UK. The last finding underlines the distinction between CME’s on the one hand – of which the Netherlands is also part – and the LME’s to which the UK belongs. Especially on a ‘process-indicator’ like collective bargaining coverage there is a sharp contrast between the UK on the one hand and the other CME’s (Netherlands, Germany, Belgium and Sweden) on the other. Also with France there are important distinctions, both in the position of the main actors (especially the trade unions) as in the wage bargaining process (wage bargaining centralization, the role of the state and strike level). This is in line with the remark by Hall & Soskice (2001) that France, together with Italy, Spain, Greece and Turkey, may constitute another type of capitalism, sometimes described as ‘Mediterranean’. When we make a more in depth comparison of the ER-characteristics with those of the other CME’s, we can learn that the Netherlands on average is in the middle of the group, even a bit more close to the stronger coordinated countries like Sweden and Belgium than to a weaker coordinated country like Germany. The main difference with Belgium and Sweden is trade union density. Trade union membership has declined in the Netherlands from about 40% in the 1960’s till 22 % now, while it staid stable or has even grown in Belgium and Sweden. However the decline in union density did hardly effect the influence position of the trade unions at national and industry level. They are still the official representatives of the employees in national bodies like the Social Economic Council and the Foundation for Labor and also still the only ones that are allowed to execute collective bargaining that covers 88% of the employees. Besides union density the other indicators for the Netherlands have been rather stable over the years. Since the 1960’s there has been a gradual decline in wage bargaining centralization (from 70% to 58 now) and the percentage of employees that are covered by company agreements since the 1980’s has grown compared to those covered by industry agreement (from 48% to 58 now).

The relative stable position of the Dutch ER-system over time shows that there is no need for drastic changes in the system to keep up economic developments. The same system was there during economic high and low tides as have been mentioned before. So the form of the system (positions, connections, levels) stayed largely intact. The expected decentralization of collective bargaining during the period 2000-2006 (Tros, 2000, 2002; De Leede et al, 2004) has lead to only minor changes up to now (Looise & De leede, 2006). However, when we look at the content (policies/practices, rules/regulations, implementation) we can see considerable changes over time and also related to economic performance. A first example of these ER-content innovations has been described by Visser & Hemerijck (1997). Due to three drastic policy reversals, namely wage moderation, adjustments in the social security system and the introduction of ‘activating
labor market policies”, during the period 1982-1995 the Netherlands were able to turn the ‘Dutch disease’ into a ‘Dutch miracle’. Important factor in this change was the close cooperation between social partners and government, starting from the ‘Wassenaar agreement’, in fact an early example of Katzensteins’ small states thesis. A second (attempt) to ER-innovation can be witnessed during the start of the right-wing government Balkenende 2 (2003-2006). The new government, supported by the employers’ organizations, proposed a number of changes, mainly in ER-content (pension arrangements, dismissal law) but also a change in ER-form, namely the Law on works councils. Due to fierce resistance from unions and left wing political parties most of these proposals have been withdrawn (weakening position of works councils, dismissal law) or weakened (pension arrangements). With hindsight we could say that contrary to the earlier successful innovations these proposals lacked both direction (unclear connection with economic performance) and cooperation with/support by all parties (especially the unions). This gave the impression that they were initiated for political (myths and rhetoric about more market orientation) rather than logical (aimed at specific economic improvements) reasons.

4.4. Connections
The first lesson from the two cases on ER-innovation in the Netherlands can be that ER innovation is possible within the existing ER-system. Or with other words, the content of ER-policies/practices, rules/regulations, etcetera, can change while keeping the main features of the form intact. The second lesson is that for a successful change of the ER-content, the goals of these changes must be clear to and accepted by all relevant parties. Overall, the position of the Netherlands seems reasonable, though improvement stays necessary. Especially the performance in the field of radical and explorative innovation should be improved. According to the theory this need strengthening of generalist Human Capital and entrepreneurial Social and Creative Capital. Generalist HC means more attention to general education, lifelong learning. Entrepreneurial social and Creative Capital means strengthening of the entrepreneurial attitude, more weak and non-redundant networks, resilient dyadic trust and perhaps also more flexibility in hiring and firing. However, this last change should not interfere too much with the high scores on work attitude with Dutch workers and the adaptability of the work force. In this context much reference has been made in the Netherlands to the Danish system of ‘flexicurity’, that offers a combination of high mobility on the labor market and high work security (Van Velzen, ). In fact – during the actual economic crisis – some elements of this system are already applied in the Netherlands in practice.

A key role in these innovations in the Dutch ER-system lies with the Dutch trade unions. They are the ones that represent and connect workers and are in that sense an important part of National social Capital. They are also the ones that should be able to convince and guide the workers in the mentioned transitions. However, we already pointed at their weakened position in terms of membership. Like in other countries, this raises questions about their legitimization and recognition as representatives of all workers, be it aged and young, man and woman, old and new Dutchmen, etcetera. The answer to this question partly depends on the choices unions make in their policies and practices, but partly also on their way of organizing. In the past the Dutch unions were able not only to represent
all workers but also to mutually connect them. This seems no longer the case. In practice, most unions still have only limited contacts with their members and hardly any contact with workers in general. By mainly operating in the existing institutions at national and industrial level, they have isolated themselves from the work floor. This situation is accentuated by the dual employee representation system (unions at national and industry level and works councils at company level) as it exits in the Netherlands – as well as that in Germany –, while e.g. in Belgium and Sweden the unions are also present at company level. So we agree with Korver (2009) that there is a strong need for Dutch unions to innovate themselves, both in terms of organization (back to the shop floor) as in policies and practices (acting as representatives of the whole worker population, especially also young workers).

5. Discussion and conclusion

During last decade the connection between national employment relations systems (ER-systems) and especially the innovation of these systems and economic performance has been a hot debated topic. The central point in this debate is the idea that specific systems or forms of employment relations foster economic performance, in terms of productivity, growth, innovation, etc., more than others and that therefore existing ER-systems should innovate. However, the connection between ER-innovation and economic performance is not yet very clear. Until now, the debate on this issue has a strong ideological bias and a weak scientific basis. This is caused by the fact that the existing theories, like the globalization thesis, the varieties of capitalism thesis and the small states thesis are rather static and abstract theories. In this paper we have tried to add to both the theory as the ‘facts’ on the connection between ER-innovation by developing an alternative model and applying it on the Netherlands as ‘case study’.

Our model regarding ER-innovation and economic performance is based on literature about innovation (management) and human resource management/employment relations. According to this model innovation and economic performance can be enhanced by enlarging and improving national intellectual capital, consisting of human capital, social capital, creative capital and organizational capital. ER-systems play a role the enlargement and improvement of national intellectual capital. When we know how this role goes, national capital can be improved by deliberate and systematic ER-system innovation. Interesting and new element in our model is that it not only identifies the ‘building blocks’ in the chain between ER-system and innovation, but especially also that it offers the opportunity to make ‘horizontal connections’ between specific forms of innovation (radical/explorative vs. incremental/exploitative), required national intellectual capital and specific ER-characteristics or innovations.

The application of the model on our case-study works quite well, though in a very general and rather superficial way. This is on the hand caused by a lack of sufficient adequate data, but on the other hand also by the limited space for an extensive case study in this context. However we did not have the intention to come up with a full analysis of the connection between ER-innovations and economic performance in the Netherlands. We only wanted to show that the model – under condition of further operationalization and testing – can be applied on concrete ER-systems. Despite the limited application, some
insights can be distracted from our case-study. One of these is that, to strengthen its performance in the area of radical and explorative innovation, the Netherlands should strengthen generalist Human Capital and entrepreneurial Social and Creative Capital. Generalist HC means more attention to general education, lifelong learning. Entrepreneurial social and Creative Capital means strengthening of the entrepreneurial attitude, more weak and non-redundant networks, resilient dyadic trust and perhaps also more flexibility in hiring and firing as exists in the Danish system of ‘flexicurity’. Last but not least the Dutch trade unions should innovate themselves both in organization as in policies and practices (closer to the workfloor, more attention to ‘new groups’ of workers)

References


Bos, Dennis; Maurits Ebben & Henk te Velde (2007), Harmonie in Holland. Het poldermodel van 1500 tot nu (Harmony in Holland. The polder model from 1500 till now), Bert Bakker, Amsterdam


Florida, R. (2002), *The rise of the Creative Class. And how it is transforming work, leisure, community and everyday life*. Perseus book Group, New York,


Gyes, Guy van & Liz Heron (2002), *Bridges to the future. Industrial relations as a key to strengthening innovation in Europe*, HIVA, Leuven


Karamessini, Maria (2008), Still a distinctive southern European employment model? *Industrial Relations Journal*, 39(6), 510-531


Korver, Ton (2009), Half vol of half leeg, arbeidsverhoudingen anno 2008 (Half full or half empty, employment relations anno 2008), *Tijdschrift voor HRM*, 2009(1), 11-34


Looise, J.C. (1996), *Social innovation is needed, but how? (in Dutch)*, inaugural speech University of Twente.


Negrelli, Serafino and Valeris Pulignano (2008), Change in contemporary Italy’s social concertation, *Industrial Relations Journal* 39:1, 63-77

Netherlands Centre for Social Innovation, NCSI (2006), *Flexibel werken, dynamisch managen, slimmer werken* (Flexible working, dynamic management, more clever working), Den Haag


Rubery, Jill; Gerhard Bosch and Steffen Lehndorff (2008), Surviving the EU? The future for national employment models in Europe, *Industrial Relations Journal* 39:6, 488-509


Schulten, T. (2005), *Changes in national collective bargaining systems since 2005. Comparative study*, European Industrial Relations Observatory, European Foundation Dublin

Subramaniam, Mohan and Mark A. Youndt (2005), The Influence of Intellectual Capital on the Types of Innovative Capabilities, Academy of Management Jurnal, 48(3), 450-463


Velzen, Martijn van (


Vos, C. and R. Grundeman (2008), Globalisering en arbeidsverhoudingen (Globalisation and labour relations), *Tijdschrift voor Arbeidsvraagstukken* 24(3), 309-325


Appendix 1: Outcome indicators Dutch ER-system compared to Germany, Belgium, Sweden, the UK, France and the average of the 25 EU member states

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Netherlands</th>
<th>Germany</th>
<th>Belgium</th>
<th>Sweden</th>
<th>UK</th>
<th>France</th>
<th>Average EU25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average GDP per capita</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average gross hourly earnings in manufacturing and services (2002)</td>
<td>14.22</td>
<td>15.4</td>
<td>13.75</td>
<td>15</td>
<td>17.64</td>
<td>14.41</td>
<td>12.56</td>
</tr>
<tr>
<td>Wage equality (ratio top decile to bottom decile)</td>
<td>2.75</td>
<td>3.15</td>
<td>2.62</td>
<td>2.03</td>
<td>3.16</td>
<td>3.36</td>
<td>3.25</td>
</tr>
<tr>
<td>Average number of weekly hours worked by full-time workers (2004)</td>
<td>38.9</td>
<td>39.9</td>
<td>39</td>
<td>39.9</td>
<td>43.2</td>
<td>38.9</td>
<td>40.5</td>
</tr>
<tr>
<td>Average real GDP growth rate (2000-2004)</td>
<td>1.3</td>
<td>1.2</td>
<td>2.0</td>
<td>2.6</td>
<td>2.8</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Average productivity growth (2000-2004)</td>
<td>0.6</td>
<td>1.5</td>
<td>1.4</td>
<td>3.0</td>
<td>2.3</td>
<td>2.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Average inflation rate (2000-2004)</td>
<td>3%</td>
<td>1.5%</td>
<td>2%</td>
<td>1%</td>
<td>1.2%</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Average unemployment rate (2000-2004)</td>
<td>3%</td>
<td>8%</td>
<td>7%</td>
<td>6%</td>
<td>5%</td>
<td>9%</td>
<td></td>
</tr>
</tbody>
</table>

## Appendix 2: Innovation indicators Dutch ER-system compared to other OECD-countries in 2008 and change in rank compared to 2003

<table>
<thead>
<tr>
<th>Area</th>
<th>Netherlands</th>
<th>Germany</th>
<th>Belgium</th>
<th>Sweden</th>
<th>Denmark</th>
<th>UK</th>
<th>France</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human Resources: Performance</strong></td>
<td>8 (-2)</td>
<td>13 (0)</td>
<td>7 (-3)</td>
<td>1 (2)</td>
<td>4 (4)</td>
<td>17 (0)</td>
<td>18 (0)</td>
<td>3 (-1)</td>
</tr>
<tr>
<td><strong>Human Resources: Framework conditions</strong></td>
<td>13 (1)</td>
<td>15 (2)</td>
<td>12 (-3)</td>
<td>7 (-1)</td>
<td>3 (5)</td>
<td>8 (2)</td>
<td>20 (-1)</td>
<td>2 (-1)</td>
</tr>
<tr>
<td><strong>Knowledge creation: Performance</strong></td>
<td>6 (3)</td>
<td>4 (2)</td>
<td>13 (-2)</td>
<td>3 (2)</td>
<td>8 (2)</td>
<td>16 (-4)</td>
<td>11 (-3)</td>
<td>7 (-3)</td>
</tr>
<tr>
<td><strong>Knowledge creation: Framework conditions</strong></td>
<td>8 (-4)</td>
<td>13 (-3)</td>
<td>9 (5)</td>
<td>4 (1)</td>
<td>7 (5)</td>
<td>15 (-6)</td>
<td>14 (-6)</td>
<td>3 (-1)</td>
</tr>
<tr>
<td><strong>ICT: Performance</strong></td>
<td>8 (2)</td>
<td>11 (2)</td>
<td>16 (0)</td>
<td>5 (3)</td>
<td>4 (5)</td>
<td>12 (-1)</td>
<td>14 (1)</td>
<td>10 (-7)</td>
</tr>
<tr>
<td><strong>ICT:Framework conditions</strong></td>
<td>7 (2)</td>
<td>13 (1)</td>
<td>18 (-2)</td>
<td>3 (-1)</td>
<td>1 (2)</td>
<td>9 (1)</td>
<td>15 (2)</td>
<td>10 (-5)</td>
</tr>
<tr>
<td><strong>Entrepreneurship: Performance</strong></td>
<td>12 (-4)</td>
<td>13 (4)</td>
<td>16 (-1)</td>
<td>15 (-3)</td>
<td>7 (3)</td>
<td>2 (1)</td>
<td>19 (1)</td>
<td>4 (1)</td>
</tr>
<tr>
<td><strong>Entrepreneurship: Framework conditions</strong></td>
<td>10 (0)</td>
<td>18 (0)</td>
<td>14 (-3)</td>
<td>17 (-4)</td>
<td>11 (3)</td>
<td>2 (0)</td>
<td>19 (0)</td>
<td>1 (0)</td>
</tr>
</tbody>
</table>

Source: Nordic Innovation Monitor 2009

As has been mentioned in section 1 the main areas of the NIM are: Human Resources, Knowledge Creation, ICT and Entrepreneurship. Within each area a distinction is made between Performance and Framework conditions. Each of these subareas represents a number of underlying indicators, like:

- **Human Resources**: share of professionals, delegation of authority in organizations, adaptability to market changes, international experience of management, worker motivation, ethical practices, education expenditure, lifelong learning, management skills, adaptability of the labor force and flexibility in hiring and firing
- **Knowledge Creation**: size, quality and relevance of public research, knowledge transfer, co-operation in R&D, competencies of workers, skills among customers and suppliers, competition, access to technology, tax incentives and subsidies
- **ICT**: digitalization of public and educational institutions, data security, infrastructure, telecom prizes, ICT competencies among employees, digital consumers
- **Entrepreneurship**: entry barriers, venture capital, loans, exit markets, restart possibilities, entrepreneurship culture, entrepreneurship education, labor market regulation, administrative burden, technology transfer regulations
## Appendix 3: Institutional indicators Dutch ER-system compared to Germany, Belgium, Sweden, the UK, France and the average of the 25 EU member states

<table>
<thead>
<tr>
<th></th>
<th>Netherlands</th>
<th>Germany</th>
<th>Belgium</th>
<th>Sweden</th>
<th>UK</th>
<th>France</th>
<th>Average EU25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net trade union density</td>
<td>22%</td>
<td>18% ?</td>
<td>56%</td>
<td>77%</td>
<td>29%</td>
<td>8%</td>
<td>25%</td>
</tr>
<tr>
<td>Density employers organizations</td>
<td>79%</td>
<td>63%</td>
<td>72%</td>
<td>55%</td>
<td>40%</td>
<td>78%</td>
<td>58%</td>
</tr>
<tr>
<td>Presence of employee representatives at the workplace</td>
<td>64%</td>
<td>53%</td>
<td>66%</td>
<td>86%</td>
<td>47%</td>
<td>65%</td>
<td>53%</td>
</tr>
<tr>
<td>Collective bargaining coverage</td>
<td>88%</td>
<td>65%</td>
<td>96%</td>
<td>92%</td>
<td>35%</td>
<td>90%</td>
<td>66%</td>
</tr>
<tr>
<td>Wage bargaining centralization (scale 0-100)</td>
<td>58</td>
<td>47</td>
<td>61</td>
<td>56</td>
<td>13</td>
<td>17</td>
<td>58</td>
</tr>
<tr>
<td>Government intervention in wage bargaining (scale 1-5)</td>
<td>2.6</td>
<td>1.7</td>
<td>4</td>
<td>2.0</td>
<td>1.5</td>
<td>3.2</td>
<td>2.6</td>
</tr>
<tr>
<td>Lost days for strike per 1000 employees per year</td>
<td>11</td>
<td>4</td>
<td>22</td>
<td>34</td>
<td>31</td>
<td>92</td>
<td>41</td>
</tr>
</tbody>
</table>