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Industrial Relations Systems, Innovation, and Economic Performance: Uncovering Myth and Reality from a Dutch Point of View

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In the last two decades there has been a considerable amount of rhetoric about an alleged need to subvert established industrial relations systems for the sake of economic performance. Western Europe’s Coordinated Market Economies (CMEs) have been the main target of debates centred on the question of whether a more liberal market economy is needed to increase wealth. Using the Netherlands as a case study, this paper tries to shed light on the need for change in the industrial relations systems of CMEs, and connects this discussion to the fundamental issue of innovation, a precondition for economic performance. We find that the Dutch industrial relations system does not hamper innovation and economic performance. However, while centralized and coordinated labour organizations (i.e., unions) cooperate with employers’ associations and the government to respond to economic changes, their role in proactive, future-directed innovation calls for improvement.

1 INTRODUCTION

Industrial relations systems are an institutional domain of society and the economy. They consist of three key actors – representatives of employers, labour, and the government – who interact and negotiate with each other. They do so under the influence of external forces (economic, legal, political, social, and technological) impacting on the regulation of employment, while ensuring adaptability in response to changes in the environment influencing this system.¹ In general, the main objective of industrial relations systems is to balance workers’ rights and economic interests. Clearly, workers’ rights can restrict the freedom of employers as the labour factor is a crucial element. It is not

surprising then that the influence of industrial relations systems on company performance is a hotly debated topic.²

In this debate, two opposing approaches can be distinguished: the liberal market and the institutionalist. Supporters of the market-oriented approach assume that the liberalization of market forces is the best way to achieve sustainable economic growth. The comprehensive, standardized and statutory regulation of the employment relationship, by means of the law, collective bargaining and co-determination, are perceived as an obstacle to a smooth adaptation to market requirements and economic performance.³ Using the varieties of capitalism terminology,⁴ advocates of this line of thought suggest that coordinated market economies (CMEs) like Germany should move towards the model of Liberal Market Economies (LMEs) such as the USA and the United Kingdom (UK). They would presumably thereby bid farewell to their collective and centralized industrial relations systems as sources of rigidity and economic inefficiency.⁵

Many scholars put forward a critique of neo-liberalism and its dominant role in the world market. A brief survey illustrates the common view: Streeck stresses the potential of institutional regulations as beneficial constraints that support social and economic performance;⁶ Kaufman claims that the free market approach is based on the supposedly unrealistic assumption that competition is perfectly free and efficient;⁷ Jessop, referring to the origins of the post-war and current global crisis, argues that ‘neo-liberalism causes more problems for other economic regimes than they can cause for it’;⁸ and Soskice recommends

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⁴ Hall & Soskice, An Introduction to the Varieties of Capitalism.
reregulating the financial sector in LMEs since its deregulation was a significant factor leading to the current financial crisis.9

While the impact of industrial relations systems on economic performance is the topic of much empirical research, centred on key macroeconomic indicators such as growth, employment and inflation,10 the resulting commentary is at best equivocal. Despite the apparent lack of conclusive empirical evidence, many nation states have responded to the liberal market rhetoric and to the widespread use of international performance benchmarks by introducing supposedly advantageous reforms of certain features of their industrial relations systems.11

This paper seeks to take the debate to another level by examining at the macro level the link between industrial relations systems and innovation (excluding financial innovation: see Soskice). In this connection, Amable contends that ‘it is necessary to get away from a conception in which innovation is viewed as a simple process of individual decision-making that is enacted independently from the institutional environment’.12 In addition to the fact that human institutions13 can be subject to innovation, these rules incorporated into distinct but interacting institutions (e.g., the financial system, education and training, industrial relations) can have an impact on innovation and economic performance.14 Nevertheless, innovation has so far been given insufficient attention as an outcome of industrial relations systems and a potential mediator of these systems and economic prosperity. This seems to be especially true for union influence. We will later zoom-in on all these issues empirically by focusing on one particular economy and its industrial relations system, the Netherlands.

The paper is structured as follows. Section 2 outlines theoretical approaches that seek to explain the connection between institutions and economic performance, as well as continuity and change in industrial relations systems under economic pressure. These theories will be used to explore core elements of the Dutch industrial relations system. Section 3 presents a general approach

towards the relation between industrial relations systems and innovation, and then applies this specifically to the case of the Netherlands. Section 4, the final section, summarizes the findings and discuss the implications of what we have learned about the relationship between industrial relations systems, innovation and economic performance in the Netherlands.

2 CONTINUITY AND CHANGE OF INDUSTRIAL RELATIONS SYSTEMS: THE NETHERLANDS REVISITED

There is an extensive literature on continuity and change in contemporary capitalism.\textsuperscript{15} With regard to the comparative development of national industrial relations systems, the literature is dominated by convergence and divergence approaches. ‘The convergence thesis predicts the erosion of the institutional differences among different national economies because of intensified (international) competition, with all converging on an essentially similar institutional configuration.’\textsuperscript{16} Currently, neo-liberalism (in all varieties of capitalism) has the strongest impact on the world market dynamic, i.e., it is ‘ecologically dominant’.\textsuperscript{17} Observing this state of affairs, some scholars claim the domestic institutions of other varieties of capitalism are subject to liberalization and consequently to erosion.\textsuperscript{18}

Many authors, arguing against the convergence thesis, refer to the related globalization\textsuperscript{19} and market- or money-driven needs view as a single factor of institutional change.\textsuperscript{20} The divergence approach supported by empirical studies offers a contrasting perspective. Its advocates presume that, despite all external


\textsuperscript{17} R. Jessop, Rethinking the Diversity and Variability of Capitalism: on Variegated Capitalism in the World Market (C. Lane & G. Wood eds., Routledge 2011).


\textsuperscript{20} G. Bosch, Re-Forming Capitalism – Institutional Change in the German Political Economy – By Wolfgang Streeck, 48 BJIR (2010).
pressures and because of their ‘proven’ stabilizing power and economic value, national institutional characteristics including industrial relations systems will remain intact and continue to exist. They acknowledge that ‘changes within’ might well occur.

At this stage it may be useful to look at two important theories that represent the divergence thesis: the Varieties of Capitalism (VoC) theory and, given that our case concerns a small country and Jessop explicitly refers to such states in his critique on the VoC approach, the Small States Thesis.

2.1 Varieties of Capitalism

Although a focus on ‘ideal types’ masks diversity within, it helps our understanding of the differences in firm behaviour and national economic strength. The Varieties of Capitalism (VoC) theory views companies’ interests as the target of analysis, drawing attention to the institutions that contribute to the two paths that developed economies can follow: the LMEs path (e.g., UK, USA) or the coordinated, also known as institutional or social, market economies path (e.g., Germany, the Netherlands, the Nordic countries, and Japan). Under external pressure, industrial relations systems might change internally, without abandoning their historically developed and culturally rooted overall path. From a VoC point of view, divergence refers to path-dependent stability rather than the ‘absolute’ stability of national institutions. On the contrary, these institutions are not static, but continually face conflict, contradictions and/or change.

It has been argued that ‘(Company) strategy follows (institutional) structure’. Companies remain loyal to certain institutions because these institutions govern and legitimize behaviour seen to be appropriate to a specific culture. In so many words, they preserve social order. In contrast, social conflict

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22 Hall & Soskice, An Introduction to the Varieties of Capitalism, supra.


26 PA. Hall & K. Thelen, Institutional Change in Varieties of Capitalism, 7 Socio-Economic Review (2009); Hall & Soskice, An Introduction to the Varieties of Capitalism, supra.


28 Hall & Soskice, An Introduction to the Varieties of Capitalism, supra, 15.
caused by a break with traditional choices made within specific societies and their constituent institutions tends to undermine the performance of companies, national economies, and society. This distinction helps in part to explain a puzzle: Why is it commonplace that established institutions give rise to advantages for followers, and disadvantages for the disloyal?\(^{29}\)

According to Hall and Soskice, companies in CMEs, like those in LMEs, organize their activities internally by hierarchies and externally by market arrangements. However, they tend to depend more heavily on relationships not fully influenced by economic conditions.\(^{30}\) For the purposes of this article, the following difference is the most significant: In CMEs, compared to LMEs, employees have stronger rights and collective actors (employers’ associations and unions) play a more significant role in the establishment of cooperative relationships.\(^{31}\)

Given the link in CMEs between industrial relations systems and economic performance, the main pillars of industrial relations (e.g., legislation, collective bargaining, and participation rights) have to remain stable, but changes within the system can occur. Responding to this situation, Streeck fears that:

> Today’s second great transformation of the state […] would seem to amount not just to another wave of economic liberalization, but perhaps to a dismantling of collective capacity to resist liberalization or bind it into and reconcile it with a non-liberal institutional context.\(^{32}\)

Thelen seems less sceptical about the resilience of collective power in CMEs.\(^{33}\) She focuses mainly on collective bargaining in LMEs, showing that employers have frequently demanded and won changes in union structures and rights. For example, in the UK and US, collective bargaining has been increasingly decentralized to the company level. In contrast, employers in CMEs try to gain flexibility and retain local industrial relations systems, though bargaining at the national or sectoral level remains important.\(^{34}\) Thus, according to Thelen, ‘while


\(^{30}\) Hall & Soskice, *An Introduction to the Varieties of Capitalism*, supra.

\(^{31}\) Bosch, Rubery & Lehndorff, *European Employment Models under Pressure to Change*, supra.


the industrial relations systems of LMEs become fragile, those of CMEs show greater resilience.\textsuperscript{35}

Several scholars have pointed to fundamental deficiencies in Hall and Soskice’s VoC theory: for example, the lack of focus on diversity or heterogeneity within varieties of capitalism; the tendency to neglect contradictions and struggles (e.g., different interests between capital and labour); the claim that pure varieties of capitalism (LMEs or CMEs) are more efficient than economies between these poles (i.e., mixed market or hybrid varieties); and the assumption that institutions are mainly shaped by nation states and national cultures.\textsuperscript{36} Referring to national cultures, Jessop claims that ‘methodological nationalism’ leads to a disregard for the ‘constitutive outside’ and that this blind spot is especially problematic for small open economies.\textsuperscript{37} After all, the competitiveness of small states depends on national conditions and their capability to adapt to changing international market requirements. This kind of hybridity is the core competitive advantage of small economies. Since our case study is based on a small open economy, a careful survey of a relevant theory is appropriate.

2.2 Small States Thesis

Katzenstein in his small states thesis\textsuperscript{38} presumes that countries can respond to economic change in three different ways: proactive liberalism (e.g., US, UK), proactive statism (e.g., Japan, France), or reactive and flexible adjustment. Small European states such as Austria, Denmark, the Netherlands, Norway, Sweden and Switzerland are characterized by reactive and flexible adjustment, maintaining and increasing economic efficiency under pressure by taking into account the economic and political requirements of rapid change. Political requirements refer to an elimination of institutional rigidities without abandoning (the ideology of) democratic corporatism. When small states acknowledge rapid change in this fashion, they try to balance economic flexibility and political stability, efficiency and solidarity.\textsuperscript{38}

A ‘culture of compromise’ is at the core of democratic corporatism, having three fundamental components: (1) a centralized (sectoral or national level) and

\textsuperscript{35} Thelen, Varieties of Labor Politics in the Developed Democracies, 102.

\textsuperscript{36} For example, Amable, The Diversity of Modern Capitalism; Crouch, Capitalist Diversity and Change; Hall & Soskice, An Introduction to the Varieties of Capitalism; Streeck, Beyond Continuity: Institutional Change in Advanced Political Economies; Kitschelt et al., Continuity and Change in Contemporary Capitalism; Lane & Wood, Rethinking the Diversity and Variability of Capitalism: On Variegated Capitalism in the World Market.

\textsuperscript{37} Jessop, Rethinking the Diversity and Variability of Capitalism: On Variegated Capitalism in the World Market, supra.

\textsuperscript{38} P.J. Katzenstein, Small States and Small States Revisited, 8 New Polit. Econ. (2003); Small States in World Markets.
coordinated (institutionalized) organization of capital and labour in interest groups (employer associations and unions); (2) a shared ideology of social partnership concerning questions of economic and social policy, as well as co-determination of these policies, and (3) the use of consensual bargaining to voluntarily and informally coordinate conflicting objectives.  

Katzenstein claims that such democratic corporatism is essentially the result of pressures from the international environment. Such states, because of the small size of their domestic markets, cannot afford to adopt protectionist strategies. They depend on exports to ensure growth, making them especially vulnerable to international economic turbulence. This perceived vulnerability to volatility, shared by governments, employers and unions, causes these actors to avoid open conflict and reach compromises in order to remain competitive on world markets. Thus, while government and employers will not touch the fundamentals of industrial relations systems, they routinely try to diminish institutional rigidities in cooperation with labour.  

Katzenstein distinguishes between social and liberal democratic corporatism and, in line with Hall and Soskice’s VoC approach, assumes that the Netherlands comes close to the liberal pole, having an internationally-oriented business community along with weakened labour unions (given their low membership rates and internal division).  

2.3 Where the Dutch IR-system stands in this typology  

The Netherlands has been identified as a coordinated market economy. Yet a relatively large number of multinational companies have Dutch roots (e.g., Philips, Randstad), and several are co-owned by companies established or located in LMEs (e.g., Shell, Unilever). Hall and Soskice’s criteria of employment protection and market capitalization are used to warrant the claim that the Dutch and Japanese CMEs are closest to the group of LMEs. It is reasonable to argue that the Netherlands (among the CMEs) appears to be one of the most susceptible to influences from Anglo-Saxon countries, and thus sensitive to neo-liberal ideology such as the claimed benefits of external labour market flexibility. As a result, not surprisingly, the Netherlands has a relatively high degree of external labour market flexibility: approximately 34% of the working 

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39 Small States in World Markets, supra, 32.
40 ‘Small States and Small States Revisited’; Small States in World Market, supra.
41 ‘Small States and Small States Revisited,’ supra.
43 Hall & Soskice, An Introduction to the Varieties of Capitalism, supra.
44 Ibid. Streeck, Re-forming Capitalism: Institutional Change in the German Political Economy, supra.
population are employed on a non-permanent labour contract (e.g., temporary agency workers, fixed-term contracts, self-employment).\textsuperscript{45} Moreover, the Netherlands has one of the world’s highest temporary agency work penetration rates (2.5%), with only South Africa (6.5%), the UK (3.6%), and Columbia (2.8%) having higher penetration rates. In contrast, the penetration rates in Denmark (0.6%), Finland (0.8%), Norway (0.8%), and Sweden (1.0%) are rather low.\textsuperscript{46}

Amable examines the industrial relations features of varieties of capitalism or, in his terminology, social systems of innovation and production (SSIPs).\textsuperscript{47} In his view, market-based SSIPs (i.e., LMEs, best embodied by the United States, UK, Australia and Canada) show strong decentralization of wage bargaining and individualized wage and labour market segmentation. In contrast, meso-corporatist SSIPs (i.e., Japan) show compromise within large corporations but synchronize wage rises; social-democratic SSIPs (i.e., Scandinavian countries) centralize wage bargaining under the constraints of external competitiveness; while in European SSIPs (best embodied by France, Germany, Italy, and the Netherlands) employment rules, working hours, and social protection are strongly institutionalized.

We will now attempt to locate the Dutch industrial relations system within the universe of assumptions of Amable’s typology. It is helpful to start by comparing indicators of the Dutch industrial relations system with those of Germany, Belgium, Sweden, the UK, France, and the EU as a whole (Table 1). It is apparent that the Dutch system has more features in common with Germany, Belgium and Sweden than with France and the UK. This basic generalization flatly contradicts the prediction of Hall and Soskice as well as Katzenstein that the Netherlands is moving towards the liberal market model.\textsuperscript{48} An examination of the fine detail of the Dutch industrial relations indicators reveals consistent evidence of a very different picture.

\textsuperscript{45} U. Kenniscentrum, UWV Kwartaalverkenning 2010-II (UWV 2010).
\textsuperscript{47} Amable, The Diversity of Modern Capitalism; ‘The diversity of social systems of innovation and production during the 1990s’; ‘Institutional complementarity and diversity of social systems of innovation and production’, supra.
\textsuperscript{48} Hall & Soskice, An Introduction to the Varieties of Capitalism. Katzenstein, Small States in World Markets, supra.
Table 1  Dutch Industrial Relations Indicators Compared to Germany, Belgium, Sweden, the UK, France and the Average of the EU 25 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 of 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 in 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>
</tbody>
</table>

Source: Van Gyes et al. (2007).

First, the collective bargaining coverage indicator points to a sharp contrast between the UK and CMEs (like Belgium Germany, and Sweden). Second, in comparison to France, there is an important distinction in the degree of wage bargaining centralization. These indicators suggest that the Netherlands should be placed in the middle of the CMEs group, somewhat closer to the more coordinated countries such as Sweden and Belgium than to a less coordinated country like Germany. Without a doubt the most glaring and formidable difference between the Netherlands and Belgium/Sweden is the telltale indicator of trade union density: Dutch unions saw a decline in membership from about
40% in 1960 to 19% in 2008, whereas in Belgium and Sweden union membership remained relatively stable.

However, it is all too easy to misread the long-term decline in Dutch union density as a symptom of the decline of worker rights. In point of fact the diminished membership demographic had hardly any impact on the position of the unions at the national or industry level. Unions today remain the official employee representatives on national bodies like the Social and Economic Council (Sociaal-Economische Raad) and the Foundation for Labour (Stichting van de Arbeid). Moreover, only unions are allowed to engage in collective bargaining. Since 1980 coverage of collective agreements (i.e., the number of employees covered by collective agreements as a percentage of all employees) has grown from 78% to 88%, and decentralization still occurs primarily within the existing negotiating frameworks for collective agreements. Despite the fact that the absolute number of company collective agreements increased, the sectoral level remains in effect dominant.

A recent and noteworthy comparative analysis of European industrial relations provides persuasive evidence that the Dutch industrial relations system has remained stable, with adequate constraints in place to respond to economic pressure within the given structure. Moreover, this analysis, taken together with the earlier position of the Dutch Social and Economic Council (see below), suggests that democratic corporatism, quaintly termed the ‘Polder-model’, is still at the heart of the Dutch coordinated system and has once again been used to respond to the recession.

Reference should be made in this connection to the 1982 Wassenaar Agreement that sought to defy the symptoms of the ‘Dutch disease’ – low growth, high unemployment, strong government intervention, and a high tax burden. This agreement between the stakeholders (government, unions, and employers’ associations) finally marked the move away from centrally directed wage policy, opting instead for wage moderation, adjustments in social security schemes, the introduction of active labour market policies, and an enhanced acceptance of external labour market flexibility as a means to solve labour market rigidities. As a result, within a decade the Netherlands was renamed ‘the Dutch

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51 Carley, Comparative Overview of Industrial Relations in 2009, supra.
52 Social and Economic Council, Industrial Relations and the Adaptability of the Dutch Economy, supra.
miracle’: from 1991 to 1996 the country’s scores on all economic indicators were above the European average, and unemployment fell back to 6% (from over 10% in the 1980s). 55

These interventions constitute the Dutch flexicurity approach, balancing the employers’ need for flexible adjustment to market turbulence with the workers’ need for continuity of employment, income, and social security. The Dutch Flexibility and Security Act 1999 (Wet Flexibiliteit and Zekerheid) illustrates well the basic goal of flexicurity policy in the Netherlands, 56 of balancing the employers’ need for external labour market flexibility and the workers’ need for security. Moreover, there is substantial involvement of unions and employers’ associations in the implementation of this Act. 57 We have already identified external labour market flexibility as an important feature of LMEs, but in contrast to LMEs, in the Netherlands external labour market flexibility is neither minimally regulated nor deregulated, but strongly institutionalized.

A unilateral attempt to change Dutch industrial relations can be witnessed from the beginning of the right-wing government, Balkenende 2 (2003–2006), that was supported by the employers’ organizations. This government advocated a number of dramatic changes to industrial relations legislation (e.g., pension arrangements, dismissal law, Dutch Law on works councils) that would have weakened the position of labour. Most of these proposals were withdrawn (works councils, dismissal law) or relaxed (pension reform) due to fierce resistance from unions and left-wing political parties. In hindsight we can state that, unlike Wassenaar, these proposals lacked direction (with no connection with economic performance) and cooperation with/support from all parties (especially the unions). As a result, it is difficult to deny that these right-wing proposals were initiated for a symbolic political motive (myths and rhetoric about more market orientation) rather than for logical reasons (aimed at specific economic improvements).

In 2007, the Social and Economic Council again emphasized the value of the ‘consensus economy’. Democratic corporatism remains essentially for adaptability, a necessary condition for maintaining prosperity. Current developments again prove the deeply embedded nature of compromise in Dutch culture: to combat the present crisis, the Dutch social partners cooperate. In 2009 they reached a consensus on a host of anti-crisis measures, with a view to

promoting employment, wage moderation, training, and assistance for redundant workers. Moreover, with a growing recognition of the relatively large number of malafide temporary work agencies in the Netherlands, new institutionalization initiatives sought to protect temporary agency workers, their user firms and the image of agencies operating in good faith. Since 2010 user firms have been financially liable if the pay and/or vacation bonus of temporary agency workers is less than the statutory minimum and in 2011 the secretary of state for social affairs and employment introduced a bill in Parliament on the mandatory registration of temporary agencies.

Taking into account all the aforementioned indicators (Table 1) and recent events in Dutch industrial relations, are we to conclude that the substance of this system is a reflection of ‘liberal convergence’ or of ‘coordinated divergence’? It is reasonable to acknowledge that the Dutch industrial relations system has remained fairly stable. International market pressures produce ‘converging divergences’ within the Dutch industrial relations system: for example, the Dutch unions’ acceptance in the 1980s of external labour market flexibility as a means to combat unemployment, but not convergence. The most accurate interpretation is that the facts support the divergence thesis, especially Katzenstein’s small states thesis and an emphasis on the role of democratic corporatism as a binding element. The relevant slogan of course is ‘Long live corporatism’, but here we need to ask how ‘profitable’ the Dutch culture of compromise actually is, and consequently, learn about the future stability of its industrial relations system. The next section addresses this question by pointing to a key predecessor of economic performance: innovation. We will elaborate on the connection between industrial relations systems and innovation, and translate this narrative into a conceptual model to visualize this relationship.

3 INDUSTRIAL RELATIONS SYSTEMS, INNOVATION, AND ECONOMIC PERFORMANCE

There is a vast literature on national innovation systems claiming that nowadays technology and technical innovation — together with cost effectiveness, quality

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58 Carley, Comparative Overview of Industrial Relations in 2009, supra.
60 J. Visser, Two Cheers for Corporatism, One for the Market: Industrial Relations, Wage Moderation and Job Growth in the Netherlands, supra.
and flexibility\textsuperscript{62} are important factors for securing economic vitality. Technical innovation refers to the improvement or introduction of products/services or processes new to the firm or the market.\textsuperscript{63} Minor improvements or simple adjustments refer to incremental innovations. Fundamental changes that represent a break with or departure from existing practice refer to radical innovations.\textsuperscript{64} Different economies or varieties of capitalism have been associated with different forms of innovation, i.e., radical vs. incremental. For example, Hall and Soskice\textsuperscript{65} assume that radical technological innovations dominate in LMEs, while innovations in CMEs tend to be incremental. Amable supports their view by linking market-based SSIPs to radical innovation, but further differentiates for other economies: socio-democratic SSIPs excel in innovation aiming to overcome social or economic problems, whereas meso-corporatist SSIPs and European SSIPs excel in incremental innovations.\textsuperscript{66} Generally, institutional differences (including those related to industrial relations systems) appear to be an underlying cause of different forms of innovation. However, in the theoretical literature (Crouch, 2005) these kinds of explanation are controversial, and empirical evidence is at best mixed.\textsuperscript{67}

This article focuses on one institutional domain of capitalist economies, industrial relations systems, and their impact on innovation and, consequently, economic performance. There has been increasing attention to the role of industrial relations within firms (i.e., unions, works councils, alternative representation bodies not covered by law) in relation to technical innovation at the company level, with mixed results.\textsuperscript{68} In contrast to US studies, German research finds no statistically significant negative influence of unions on


\textsuperscript{65} Hall & Soskice, \textit{An Introduction to the Varieties of Capitalism}, supra.

\textsuperscript{66} Amable, \textit{The Diversity of Modern Capitalism}, supra.


innovative activity. A recent study by Kraft et al. yielded similar results in relation to co-determination and innovation. Moreover, recent studies have highlighted the contribution of industrial relations to local production and regional innovation systems.

The literature on national innovation systems suggests that all institutions affecting ‘intellectual capital’ (a precondition for technology and technological renewal) should be included in the analysis. Yet a careful search of this literature failed to identify any reference to industrial relations systems. As a result, although we acknowledge Amable’s observation that one should not isolate institutions, but consider their joint effects on the economy (see introduction), we will proceed to concentrate on the potential effects of industrial relations systems on intellectual capital, innovation and economic performance.

### 3.1 Industrial Relations Systems and Intellectual Capital

How can industrial relations systems contribute to innovation and economic performance at national level? Taking action on intellectual capital might well be the key since several scholars perceive such capital as decisive for innovation performance at the national and the company level. One definition of intellectual capital, ‘the sum of all knowledge an organization is able to leverage in the process of conducting business to gain competitive advantage’, is particularly incisive. Building on previous literature, we consider intellectual

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74 Amable, Institutional Complementarity and Diversity of Social Systems of Innovation and Production, supra.


76 Younus, Subramaniam & Snell, Intellectual Capital Profiles: An Examination of Investments and Returns, supra, 337.
capital to be a multidimensional concept and distinguish the interrelated components of human, organizational, and social capital.

Human capital refers to the skills, knowledge and attitudes of individuals; organizational capital to institutionalized knowledge and codified experience stored in databases, routines, patents, manuals and structures; social capital concerns knowledge in internal and external networks and relationships, as well as characteristics of these relationships such as associability and trust.  

The phrase 'taking action on intellectual capital' refers to interventions aiming to increase human, organizational, and social capital: these interventions refer to 'social innovation'. Empirical evidence shows that social innovation affects technical innovation and vice versa, and that in general both forms of innovation positively influence the economic performance of a firm. In the literature it is well documented that economic performance can positively influence (investment in) social and technical innovation.

How can industrial relations systems increase intellectual capital? Van Gyes and Heron delineate three interrelated conditions that have to be improved and can be linked to the three components of intellectual capital. First, awareness in general among actors in industrial relations systems is required for innovation, and in particular awareness about the industrial relations-innovation connection. The attitude of the social partners to this matter should be open, proactive, and characterized by reciprocal interests (i.e., human capital). In other words, the intellectual capital of the industrial relations actors themselves needs to be optimized before they can aspire to be innovation gatekeepers or promoters.

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80 G. Van Gyes & L. Heron, *Bridges to the Future – Industrial Relations as a Key to Strengthening Innovation in Europe* (HIVA 2002).

Second, representatives of employers’ associations and trade unions supported by government should cooperate and engage in social dialogue, publicly demonstrating a shared vision and partnership in promoting innovation (i.e., social capital).

Finally, innovation agreements should be institutionalized, resulting in policies, practices, and rules that aim to strengthen dialogue about innovation and action on the national, regional, sectoral, and company level (i.e., organizational capital). The national level refers to macro-consultation or bargaining initiatives the outcomes of which can directly affect the innovation capacity of individual companies, or through actions directed towards the sectoral and/or regional level (e.g., innovation networks, funding for training). The sum of intellectual capital, technical innovation capacity and economic performance at company level determines intellectual capital, technical innovation capacity, and economic performance at national level.

There are two ways that industrial relations can improve human, organizational, and social capital at the company, regional, sectoral and consequently national level. First, the Dutch Social and Economic Council\textsuperscript{82} as well as Van Gyes and Heron\textsuperscript{83} refer to collective agreements. Van Gyes and Heron emphasize that innovation should figure more prominently in collective wage bargaining, while the Council stresses more collective arrangements at company level, less detailed rules in collective agreements, a greater variety of options in collective agreements and more results-related pay systems. These propositions point to the ‘organized decentralization’ of collective bargaining\textsuperscript{84} or collective bargaining innovation,\textsuperscript{85} that are meant to increase the innovative capacity of a country. Decentralized collective bargaining offers the opportunity to develop more individualized and/or tailor-made contracts, with terms and conditions that can be influenced by the employees themselves. Such agreements constructed from the bottom up will no doubt be significantly better aligned to the individual preferences and situations of employees, possibly leading to improved ‘psychological contracts’.\textsuperscript{86} They may have a positive impact on hope,

Second, the social partners and the government should cooperatively support and financially stimulate the widely acknowledged precursors of technical innovation: vocational training and lifelong learning, direct participation at company level, (internal and external) labour mobility (i.e., workers, students, researchers, teachers), expert and technical resources available to companies (particularly SMEs), research on social and technical innovation, innovation networks, and stronger linkages between researchers and practitioners.\footnote{Van Gyes & Heron, \emph{Bridges to the Future – Industrial Relations as a Key to Strengthening innovation in Europe}, supra.}

Van Gyes and Heron emphasize that innovative capacity (and consequently economic prosperity) requires centralization, cooperation, institutionalization, partnership, and policy concentration. They argue that the industrial relations systems of CMEs should be maintained, but relationships and contents need to be improved, and where necessary complemented with ‘innovation corporatism’.\footnote{Id.} What is most striking about their key ideas is that they implicitly point to a ‘reverse globalization’ thesis: in order to optimize innovation capacity, LMEs should adopt aspects of the industrial relations systems of CMEs.

These conclusions shed a different light on Hall and Soskice’s and Amable’s claim that market-oriented institutions of LMEs better support radical and exploratory innovation than those of other varieties of capitalism.\footnote{Hall & Soskice, \emph{An Introduction to the Varieties of Capitalism}. Amable, \emph{The Diversity of Modern Capitalism}.} Our alternative claim is that non-LMEs industrial relations systems do not hamper radical and exploratory innovation. We gain much by acknowledging that actors in these systems may well pay insufficient attention to stimulating innovation within their given structures, and be lacking in cooperation and a relational bond concerning this goal. With this background we are now in a position to outline the relationships between industrial relations systems and technical innovation.
3.2 The Netherlands: National Intellectual Capital, Innovation Capacity, and Economic Performance

It is well-known that the capacity for innovation and economic performance of a country derives from multiple factors, not only from the industrial relations system. However, when challenging the view that the industrial relations systems of non-LMEs and, implicitly, democratic corporatism are (co-)responsible for a lack of radical innovation, it is essential to focus on some relevant concrete
indicators. It is important to examine the comparative data on Dutch economic and innovation performance before elaborating on national intellectual capital.

The Nordic Innovation Monitor\textsuperscript{91} for the period 1997–2007 offers an overview of economic growth in different regions: the Nordic region with its small corporatist states has had the highest increase in wealth (per capita GDP: 2.6%), followed by Korea and Japan (2.4%), the US, UK, Canada, Australia, and New Zealand (2.2%) and Continental Europe (1.8%). The OECD data provide an incisive picture of the Dutch situation. In 2007 GDP was 3.6%, in 2008 2.0%.\textsuperscript{92} The country seems to have overcome the recent crisis, as shown by an increase in GDP from -0.2% in 2009 to 1.4% estimated for 2011.\textsuperscript{93} It is significant that 75.8% of the Dutch population are employed, much higher than the OECD average of 66.1%. The 3.9% rate of unemployment is the third lowest in the OECD (Korea: 3.8%; Norway: 3.2%). The proportion of the population classified as living in poverty in the Netherlands (7.2%) is well below the OECD average of 11.1%. Perhaps the most striking statistic is that just 9% of the population find it hard to live on their current income, well below the OECD average of 24%.\textsuperscript{94}

According to the Nordic Innovation Monitor ‘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’.\textsuperscript{95} Although the role of democratic corporatism and industrial relations systems for innovation capacity are not referred to explicitly by the Monitor, some of the competitive advantages mentioned in the study point to the characteristics of this form of capitalism: equality, limited distance from power, trust, inclusion, and flexibility (i.e., adaptability to change).

Innovation is defined as ‘new solutions which add value to both customers and firms’.\textsuperscript{96} The Netherlands ranked tenth among the world’s most innovative countries in 2008, after South Korea, the US, Japan, Denmark, Sweden, Iceland, Finland, Canada and the UK, an improvement after ranking twelfth in 2003(Table 2). The Monitor’s definition of innovation refers to exploratory innovation. Given that only LMEs and CMEs, and from this cluster just small

\textsuperscript{91} Nordic Council of Ministers, Nordic Innovation Monitor 2009 (Nordic Council of Ministers 2009).
\textsuperscript{93} Netherlands – Economic Outlook Country Summary, http://www.oecd.org/document/36/0,3746,en_33873108_33873626_452706521_1_1_1_1,00.html.
\textsuperscript{95} Nordic Council of Ministers, Nordic Innovation Monitor 2009, 17.
\textsuperscript{96} Id. 11.
corporatist European states, are represented among the top-ten innovating countries, one of Hall and Soskice’s and Amable’s claims\(^97\) seems to be refuted prima facie: small CMEs can outperform large LMEs in exploratory and radical innovation.

*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>

*Source: Nordic Council of Ministers (2009).*

Moreover, these findings challenge several major conclusions of the Dutch Innovation Platform\(^98\) (a network organization set up in 2003 by politicians and employers and dismantled in 2010) which characterized the Netherlands as ‘only’ an innovation follower. Given their absence from this platform, it is not known whether Dutch labour representatives chose not to spend their intellectual capital on collective innovation. In 2006 the Dutch unions, employers’ associations and...

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\(^97\) Hall & Soskice, *An Introduction to the Varieties of Capitalism.* Amable, *The Diversity of Modern Capitalism.*

research institutes together set up the Dutch Centre for Social Innovation. Although this centre admits that implementation was not fully realized and exploited, in 2012 it closed down, claiming that its assignment had been fulfilled: boosting social innovation (i.e., renewals in employment relationships and work organizations that foster organizational performance, job satisfaction, and the development of talents).\textsuperscript{99} We can conclude with reference to the two ways in which industrial relations systems can improve intellectual capital\textsuperscript{100} that the Dutch social partners are used to cooperatively supporting the precursors of technical innovation. However, it is important to stress that innovation is in the main still a neglected topic in collective agreements.

Our argument can be further strengthened by reference to the invaluable information in the Nordic Innovation Monitor. In addition to comparing the framework conditions and innovation policies among OECD-countries, it is important to assess the performance of these policies based on the output indicators of four drivers of innovation: human resources, knowledge creation, ICT, and entrepreneurship (see descriptions in Appendix 1). Countries, or more specifically industrial relations actors in the decision-making process concerning innovation policies, practices, regulations, and rules, can be guided by insight into the quality of these drivers.

Three of the four drivers offer comparative insights into national intellectual capital (i.e., human resources, knowledge creation, ICT). One driver provides information about ‘Creative Capital’,\textsuperscript{101} a concept that emphasizes the importance of entrepreneurship for innovation.

\textit{Table 3} Dutch Innovation Indicators Compared to Other OECD-countries in 2008 (and Change in Rank Compared to 2003)

<table>
<thead>
<tr>
<th></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>Human Resources:</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>Performance</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Human Resources:</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>Framework conditions</td>
<td></td>
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\textsuperscript{100} Van Gyes & Heron, Bridges to the Future – Industrial Relations as a Key to Strengthening Innovation in Europe.

Table 3 shows that the Netherlands performs on most indicators on average: lower than Sweden, Denmark and the US, but better than Germany, Belgium, the UK and France. However, compared to 2003, there has been a (slight) deterioration in human resources, knowledge creation improvement and entrepreneurship, but also an improvement in ICT. A Lisbon Council report\(^\text{102}\) supports this conclusion, ranking the Netherlands fourth in the European Human Capital Index. While since the 1990s the Netherlands seems to have done quite well (ranking first in Europe), especially in Human Capital utilization (national human capital taking part in the active workforce), in Human Capital productivity the score is much lower (ranking tenth in Europe).

According to the Nordic Innovation Monitor, Dutch human resource performance ranks high on the following indicators: share of professionals, delegation of authority in organizations, international experience of management, adaptability of the workforce when faced with new challenges, ethical practices, and worker motivation. However, the same report identifies Belgium, Denmark, Sweden, and the US as outclassing the Netherlands in human resource performance. The Netherlands also scores lower in human resource framework conditions, mainly due to relatively low scores in education.

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expenditure, entry rates to higher education and lifelong learning, as well as low performance in flexibility of hiring and firing employees.\textsuperscript{103}

Current developments in the Netherlands are indicative of a further deterioration in education-related parameters, resulting in a decline in the rate of innovation and subsequent rankings. Although the right-wing government that took office in 2010 pays lip service to a ‘knowledge-driven economy’, in practice it has chosen to cut expenditure on education and research and points to the current crisis as the main cause. We agree with the Nordic Innovation Monitor’s conclusions on the framework conditions for education, but for two reasons we take a very different position concerning flexibility in the hiring and firing of employees as a condition for innovation.

First, the research results on the relationship between employment security or external labour flexibility and innovation at the company level are ambiguous.\textsuperscript{104} Second, although Dutch unions still oppose a relaxation of dismissal law in exchange for employment security, they agree to cooperate on other measures for meeting employers’ wishes on external labour flexibility (e.g., temporary agency work, fixed-term contracts, self-employment) and flexibility in working hours (i.e., reduction of working hours). In other words, the relaxation of dismissal laws – the bone of contention in flexicurity debates – is just one way to meet changing demands in terms of workforce numbers.\textsuperscript{105}

Table 3 shows that the Netherlands performs better in knowledge creation than the more innovative countries such as Denmark, the UK and the US. This can be explained by the number and quality of scientific publications, the share of professionals, the share of government R&D financed by industry, and the local availability of specialized research and training facilities. The Dutch Innovation Platform concludes that the Netherlands is relatively strong in its focus on scientific research and educational infrastructure, although investments are lagging behind. Moreover, over the period 2003–2008 the rate of knowledge transfer between companies and universities increased. However, the Netherlands still has a mid-ranking position on several parameters, such as R&D expenditure in general, the percentage of public researchers, availability of scientists and engineers, and the percentage of high-skilled foreign workers.\textsuperscript{106}

The Dutch scores in ICT – both performance and framework conditions – are relatively good. Access to and the use of internet is quite high, although e-learning and e-working are lagging behind other countries. Finally, Dutch

\textsuperscript{103} Nordic Council of Ministers, Nordic Innovation Monitor 2009.
\textsuperscript{104} For an overview, see Torka, Loose & Zagelmeyer, Ordinary Atypical Workers, Participation within the Firm, and Innovation: A Theoretical Endeavour and Theoretical Outlook.
\textsuperscript{105} Tros, The Netherlands: Flexicurity and Industrial Relations.
\textsuperscript{106} Platform, Nederland in de versnelling De kennisinvesteringagenda (KIA) 2006-2016.
performance in entrepreneurship is rather low and has declined since 2003. The Netherlands has relatively low scores on cultural factors such as the perceived desirability of becoming self-employed, self-employment preference, the propensity to risk of business failure, and entrepreneurship among managers. On the other hand, we note a considerable growth in new companies and, to a lesser extent, in framework conditions such as university-industry collaboration, the availability of private credit, and access to loans and venture capital. These patterns generally support the conclusions of the Dutch Innovation Platform that the Netherlands is weaker in entrepreneurship, and especially that the propensity towards entrepreneurship is quite low.\textsuperscript{107}

4 DISCUSSION

For some time, the neo-liberal rhetoric has advocated the need to change or relax supposedly rigid institutions, including the industrial relations systems of CMEs, in order to improve economic performance. Advocates of this neo-liberal ideology favour certain dominant features of industrial relations systems in LMEs: less legislation, state intervention, collective and centralized bargaining, and employee co-determination rights at company level. We have attempted in this article to contribute to this discussion with empirical evidence, as well as to elaborate theory by strongly focusing on a single market economy that is culturally and historically rooted in democratic corporatism: the Netherlands.

We first delineated the pillars of the Dutch industrial relations system that seem to remain intact. There is ample evidence that the industrial relations system of this coordinated market economy will survive, despite external pressures. Moreover, to deal with the current economic crisis, the Dutch social partners (employers’ associations and unions) and the government have cooperated once again, learning from the lessons of the 1980s.

Our analysis then moved on to highlight how the industrial relations systems of CMEs and especially small corporatist states\textsuperscript{108} do not seem to undermine one important precondition for economic performance: technical innovation. It is well documented that Denmark, Sweden, Iceland, Finland, and the Netherlands are among the world’s top-ten most innovative countries, outperforming some LMEs as well as large CMEs.\textsuperscript{109}

Drawing on these indicators, we conclude that the claims of supporters of the liberal market model do not reflect reality. In contrast, for example, to what

\textsuperscript{107} Ibid.
\textsuperscript{108} Katzenstein, Small States in World Markets.
\textsuperscript{109} Nordic Council of Ministers, Nordic Innovation Monitor 2009.
Hall and Soskice and Amable assume,\(^{110}\) CMEs are not necessarily less successful in exploratory and radical innovation than LMEs. This is also mirrored in the empirical work of Akkermans et al. and Taylor.\(^{111}\) Moreover, the patterns of activity we have seen should persuade anyone that in an innovative sense successful European small states not only practice reactive flexible adjustment,\(^{112}\) but simultaneously aspire to a proactive market exploring strategy. We contend that such a policy mix, that may be termed ‘hybridity’,\(^{113}\) constitutes the distinctive competitive advantage of these successful small corporatist states.

Is all well that ends well? Looking closely at the Netherlands, our answer is doubly negative. First, we noted that the Nordic Innovation Monitor has uncovered several critical and problematic framework conditions for this country: low scores on education and research expenditure, entry rates to higher education, lifelong learning; and only a mid-ranking position on R&D expenditure, percentage of public researchers, availability of scientists and engineers, and the percentage of high-skilled foreign workers. Moreover, Dutch performance in terms of entrepreneurship is rather low. Despite the fact that the right-wing government that took office in 2010 pays lip service to a ‘knowledge-driven economy’, it has cut investment in education and research, essential conditions for preserving and enhancing intellectual capital, and, consequently, innovative capacity. Overall, we expect a further deterioration of these conditions and a decline in innovation and the related rankings.

Our second critical remark relates to Streeck’s comment about the dismantling of collective capacity.\(^{114}\) The continuing importance of collective bargaining and the interplay of the social partners and government to overcome and move beyond the current economic crisis show that the Dutch union pillar is still standing. However, when we peer inside there is considerable evidence that only the frame seems intact. The position of Dutch unions is weak in terms of membership density, shop-floor impact, and pro-activity in economic and innovation issues. Thus, in sum, the collective capacity of labour seems to be on a downhill slide.

In the past the Dutch unions were not only able to represent the majority of workers, but also to mutually connect them. This no longer seems to be the

\(^{110}\) Hall & Soskice, ‘An Introduction to the Varieties of Capitalism’; Amable, The Diversity of Modern Capitalism.


\(^{112}\) Katzenstein, Small States in World Markets.

\(^{113}\) For example, Jessop, Rethinking the Diversity and Variability of Capitalism: On Variegated Capitalism in the World Market.

\(^{114}\) Streeck, Introduction: The Origins of Nonliberal Capitalism: Germany and Japan in Comparison, supra.
case. In practice, most unions still have only limited contact with their members, and hardly any contact with workers in general. They mainly operate in existing institutions at the national and industry or sectoral level, in effect isolating them from the shop-floor. This situation is accentuated by the dual employee representation system (unions at national and industry level, works councils at company level) as constituted in the Netherlands. This organizational structure contrasts with countries such as Belgium and Sweden, where the unions are present also at company level.

We strongly concur with Korver’s claim that there is a genuine need for Dutch unions to innovate themselves, both in terms of shop-floor organization and policies and practices, acting as representatives of the entire workforce. Unions in the Netherlands should first invest in their own intellectual capital – displaying consistent social innovation within the organization – before they can effectively act as innovation gatekeepers or promoters for their potential supporters, or legitimately claim a more active role in innovation consultations with their social partners. Recently the largest Dutch trade union confederation (FNV) publicly recognized the need to reinvent itself.

In December 2011 the presidents of the member unions of the FNV decided to call on the organizations they represent to actively participate in the establishment of a New Trade Union Movement, acknowledging ‘that the confederation’s current organizational structure no longer corresponds to modern demands’. In recognizing this need for change, by implication the Movement seems to admit the importance of the broad aims of recognizability, proximity to people (including the organizing principle ‘building from below’), the stimulation of mutual solidarity, and the current diversity in needs and working conditions. For effective solutions, the Movement aims to benefit from human capital and explicitly invite people to participate and communicate innovative ideas. Given this tough assignment, not made any easier by a tendency towards individualization in society, we remain skeptical. However, if FNV succeeds and is able to bring along other confederations, collective labour capacity has an opportunity to earn credit for a future and possible trail-blazing role in social partner consultations on innovation.

Appendix 1: DESCRIPTION OF INNOVATION FRAMEWORK INDICATORS

- 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 labour 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, labour market regulation, administrative burden, technology transfer regulations
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