## Workplace Policies and Competitive Advantage in the Era of Industry 5.0

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The European Union is undergoing a significant transformation in its approach to economic governance. As Schmitz et al. (2025) argue, the EU has shifted from being a primarily regulatory state to one that takes a more interventionist stance. This shift is most visible in the European Green Deal (Mariotti, 2024) and in the emergence of a new industrial strategy under the banner of Industry

5.0. This new orientation not only reflects a broader conception of innovation and sustainability but, crucially, also brings the European workplace into focus. The question I wish to explore is the extent to which workplace-oriented policies can serve as a source of international competitive advantage. In discussing the promise of Industry 5.0, I will argue that it represents both a political and conceptual departure from previous paradigms and offers an unprecedented opportunity to embed human-centricity at the heart of European industrial policy.

The need for a change in the discourse around industrial transformation is evident. Much of the thinking around Industry 4.0 remains trapped in a mass production mindset—even as its core premise is the customisation of production. This contradiction has limited our capacity to fully integrate the knowledge and expertise of workers into technological development. Industry 5.0 offers an alternative vision. As defined by the European Commission, it promotes three central principles: human-centricity (empowerment, talent, diversity), resilience (through adaptable technologies), and sustainability (respect for planetary boundaries).

Yet these principles remain under pressure in current debates. The role of the worker in Industry 4.0 was often viewed as peripheral—replaceable, with skills seen as transitory. But the European workplace today is far from this model. Rather than generalised tasks, we find highly specialised forms of expertise. Even with advances in artificial intelligence, we face challenges such as small sample sizes due to limited workforces, making it difficult to generate robust datasets. This highlights a central paradox: to automate or digitally transform specialised workplaces, one must first recognise and build upon the tacit knowledge held by workers themselves.

This brings us to a reframing of the concept of competitive advantage. Traditional elements—price, quality, and service—remain crucial in competition. But the European workplace, with its skilled labour and embedded knowledge, should be recognised as a unique resource. Competitive advantage can only emerge if we design tools and technologies that respect and enhance this expertise. In that sense, Industry 5.0 is not just about sustainability or digital transformation—it is also about redefining how we create value.

This is, however, a complicated political discussion. There is currently a battle over how industrial and workplace transformations are framed. Is neoliberalism still the guiding ideology? Can we rely on multilateralism to deliver transparent and reciprocal relationships? In such a context, human-centricity presupposes that companies are willing to take care of their workers. This assumption deserves scrutiny.

One promising field is ESG (Environmental, Social, and Governance) performance. ESG-related research has surged, and there is mounting evidence of its financial relevance. A landmark meta-analysis by Friede et al. (2015), covering over 2,000 studies, found a strong correlation between ESG performance and corporate financial performance (CFP). More recent work—such as Saeed et al. (2023) and Koon (2024)—reaffirms the importance of the social dimension. Investing in human capital not only improves productivity and innovation but also enhances long-term profitability. Other studies (Kim et al., Soh Young et al., Glavas & Visentin) confirm that attention to the workplace positively influences firm outcomes, especially in times of crisis.

Despite this, political resistance to green and social regulation is mounting. The U.S. has dismantled its Green New Deal and promotes fossil fuel dependence. Canada's "Axe the Tax" campaign (by Conservatives in the 2025 Canadian election for parliament) typifies populist resistance to climate and social regulation. In Europe, these developments have led to a weakening of ambitions—for instance, the narrowing of scope within the Corporate Sustainability Due Diligence Directive (CSDDD) in the proposal for Omnibus-legislation. Nonetheless, the Green Deal should not be dismissed. The cost of CSDDD compliance remains minimal (under 0.1% of turnover), and green investments often yield high returns through learning effects and service innovation. Between 1990 and 2024, electricity demand rose by 78%. The EU is able to cover half of this demand with renewable energy. Renewables are emerging as a cornerstone of future competitiveness.

The social dimension is arguably even more central. Workers' commitment and autonomy are key to unlocking productivity from digital technologies. As Acemoglu and others have shown, worker empowerment is critical for making advanced technologies perform effectively. Industry 5.0 introduces not only a new industrial vision but also a new institutional dynamic. It represents a European Commission that is no longer merely a rule-maker but increasingly an actor shaping industrial strategy. My involvement with DG RTD and the German BMBF at Hannover Messe in 2023 attests to this shift. For the first time, the Commission is actively guiding companies towards specific organisational models.

In conclusion, Industry 5.0 offers the Human Factors community a renewed opportunity to influence industrial development. The concept of human-centricity is being appropriated by other fields, yet our expertise in understanding the workplace remains vital. Now, five years after its introduction, Industry 5.0 stands as a call to reimagine both industrial policy and the nature of work in Europe.

It is up to us to ensure that the human factor becomes central—not only in theory, but in practice.