
Editorial

Andrea Bardi*

Istituto Trasporti e Logistica
Regione Emilia-Romagna
Viale Aldo Moro 38, 40123 Bologna, Italy
E-mail: bardiandrea@gmail.com
*Corresponding author

Francesco Garibaldo

Fondazione Istituto per il Lavoro
Via Marconi, 8, 40122 Bologna, Italy
E-mail: fgaribaldo@gmail.com

Biographical notes: Andrea Bardi is a Researcher in the economic and organisational fields, with a particular focus on local development. After obtaining a degree in Politics, he completed the MBA degree at the University of Bologna, Italy as a distance-learning student while working as the Manager of the Private Sector Area for the Institute for Labour Foundation (IpL) based in Bologna, where he led several European and national projects on organisational innovation at both company and regional levels. He was also the Acting Executive Director of Piminet Innovation Centre, a consultancy created by IpL and the University of Bologna to foster networking between SMEs in industrial sectors. Currently he is a Project Manager at the Institute on Transports and Logistics, Emilia-Romagna Region. He has carried out empirical research and published papers on a variety of topics, including industrial development, innovation management, and regional and local development. His sectors of expertise are the automotive, upholstery, packaging, agricultural machinery, motorcycle, software, transport and logistics sectors.

Francesco Garibaldo has been the Director of IpL (the Institute for Labour Foundation, set up by Emilia-Romagna Region and situated in Bologna) since May 1998. He has been researching and writing on the automotive sector and urban mobility, with a special focus on work and labour and industrial perspectives, since 1988. His latest publication is F. Garibaldo, P. Morvannou and J. Tholen (Eds.) *Is China a Risk or an Opportunity for Europe? An Assessment of the Automobile, Steel and Shipbuilding Sectors*, (Peter Lang, 2008).

The automotive industry is one of the most analysed sectors. Data on overall production, registration of cars, value added, labour market, and import and export trends are normally elaborated and delivered to the research community. The most important information is extensively available according to both country and brand. Furthermore, the biggest well-known consultancies support the main worldwide carmakers, reporting quite frequently on organisational trends and future strategies to be implemented by

Original Equipment Manufacturers (OEMs) and suppliers. Finally, universities and specialised research centres carry out specific reports as well as forecast on main industrial trends.

On the other hand, over the last few years, there have been very few studies focusing on workplaces and workforces in the motor industry. Furthermore, the globalisation processes emphasise the need for a better understanding of the impact of outsourcing/offshoring processes on work organisation and skills. While the reengineering movement primarily aimed at the agility and flexibility of the big companies in order to reduce assets and improve performance, outsourcing also opened up new possibilities for cost savings. Suppliers often gave lower wages and in many cases less union influence.

For these reasons, this special issue contributes to shed light on the neglected research area pictured above.

Most contributions are based on empirical researches and refer to the impact of reorganisation processes on both personnel capabilities (Donadone; Chun-Yao Tseng) and working conditions (Bubbico and Pirone; Garibaldo). On the other hand, Jürgens and Krzywdzinski describe with a longitudinal perspective the implication of the reorganisation processes determined by the so-called globalisation of the economies for work organisation. Batson concentrates on the supplier development strategy as a tool to enhance both performances and innovation capabilities along the overall supply chain.

All contributions more or less treat the problem of the nature of the workforce adaptation to the supply chain reconfiguration. According to the point of view of the writers, this is the way in which the diverse contributions, in terms of both content and research method, could contribute to a better understanding of this overlooked phenomenon.

Batson concentrates on the concept of supplier development technique as an approach to improve the supplier performances. OEM-supplier relationship enhancement is essential because long supplier lead times are the root cause of the excess raw material inventory, the shortage in material, lost productivity and resulting long lead time to the customer.

As a consequence, training activities as well as joint improvement teams and investments in supplier operations emerge as cross-company mechanisms to develop OEM-supplier relationships. An effective method suggested is to consider integrating suppliers into the OEM's product development system. According to the author, to develop effective joint development teams, a cross-functional and multidisciplinary approach is needed. Furthermore, both middle managers as well as technical professionals should be part of the work group.

The contribution by Jürgens and Krzywdzinski demonstrates that there are different types of division of labour between the Western and the Central Eastern European locations of automobile OEMs, which have different consequences for the interaction of work models in both regions.

In their investigation of the effects of changes in the international division of labour on employees, Jürgens and Krzywdzinski focus on the opportunities for developing 'high road' work models in Central Eastern Europe and on the prospects for their continuation in Western Europe. A high road development strategy concentrates not primarily on cutting labour costs, but on developing the potential for productivity and innovation by investing in training the workforce and mobilising the skills acquired. High road strategies imply productivity coalitions between management and labour, in which

high wages and the quality of work combine with high productivity and a quality orientation among employees. A 'low road' strategy accordingly implies a concentration on cost cutting, especially wage reductions and minimising investments in training, in working conditions and in safeguarding jobs.

The conclusion is that the integration of Central Eastern European low-wage sites into the production networks of the automotive industry involves both the relocation of production from West to East and complementary forms of division of labour and win-win constellations.

A trend towards high road work models, based on upgrading the skills, wages and working conditions, is hence in evidence in the Central Eastern European automotive industry, even though it remains precarious.

Bubbico and Pirone demonstrate in their paper that the introduction of a just-in-time model at the Fiat assembly plant located in Melfi (a supply park based in southern Italy), combined with an inadequate level of staffing, seriously affected the working conditions (excessive workloads, environmental health issues, unjustified increases in the speed of the line, *etc.*) of both assembly plant and supplier plant workers. Most of the limiting conditions that have been recognised are due to muscular problems (tendonitis, carpal tunnel syndrome, slipped disk, *etc.*), deriving from repeated and intense effort which, in certain cases, can also lead to the formation of skeletal and muscular pathologies.

This implies a vicious circle. In fact, the presence of workers with limiting conditions as well as temporary contracts rendered the rotation of work roles even more complicated, enhancing as a consequence the risks in terms of worsening working conditions.

Garibaldo proposes that the intervention in the productive process, and thus the organisational model, has direct repercussions on working conditions. According to the results of a survey carried out at Mirafiori's Fiat plant (located in Turin, Italy) in 2007, as regards the performance of the work, the situation appears to have the typical characteristics of a traditional Taylorist and Fordist company of the 1960s: a very intense working performance even if regulated by union accords that have, however, progressively lost their efficacy since the 1960s and 1970s.

Nearly 43% of the workers that submitted the questionnaire reported that they worked in uncomfortable work positions and/or ones that caused pain always or three-quarters of the time; for nearly 29%, they performed moving or shifting of heavy objects always or three-quarters of the time; for nearly 61%, they performed repetitive movements of the arms and hands.

The author's final statement is that the respondents perceive that the performance standards required by the production process have had negative impacts on health.

On the other hand, FIAT AUTO is actually going through a transition phase. Indeed, after having remedied the situation and revived the company's brand image, Marchionne launched the World Class Manufacturing (WCM) project. He redefined the work benchmark with the introduction of the ERGO-UAS (Universal Analysing System) standard (MTM) and put forward a different approach to the ergonomic problems with the introduction of the Occupational Repetitive Actions (OCRAs) method, a project due to involve all of the plants. Great emphasis has been placed on the radical transformation that this will cause and in particular on the different role assigned to the workers in the manufacturing process with a view to achieving the typical goals of the WCM.

As for the skills and competence in the automotive industry, two papers, one by Donadone and another by Tseng, stress respectively the point that broader functional flexibility and knowledge-intensive competence are actually very much required at the shop-floor level. Donadone sustains the thesis that the maximisation of the use of state-of-the-art technologies requires that employees should have a broader and general knowledge instead of a specific technique qualification. This broader knowledge has enabled employees to learn continuously, becoming more easily adaptable to the changes in the productive organisational environment.

A not divergent result seems to emerge in an empirical study conducted in Taiwan by Tseng. Research findings demonstrate that from 1998 to 2005, the number of knowledge workers employed in Taiwan's vehicle industry grew at a faster rate than non-knowledge workers.

According to the author, technological change, international trade and educational attainment are the three main factors of the employment shifts from non-knowledge workers to knowledge workers.

Finally, in the last paper, Greca provides a broader perspective on the importance of a virtuous and effective governance system that aims to design and implement tailor-made public-private actions that are able to set up a win-win strategy for both capital and labour.

Thanks to this approach, the Ingolstadt regional government (Germany), public bodies, universities as well as the leading company Audi were able to set up a sustainable development process based on excellence in technology, high wages and better education.

Investments in the automotive sector in this region were made (since the end of World War II) by the OEM, the regional and local government, suppliers and other enterprises. Public investments were followed by private money. The actual positive development of the Ingolstadt region started with investments by the regional and local administration in infrastructure.

It was demonstrated with the chronicle of the car producer that in the course of more than half a century, its evolution was interrupted by periodic crises. While other manufacturers had to give up, Audi came out stronger from all the difficulties. In each case of problem solving, endogenous and exogenous resources played different important roles. While through the first phases, specific regional and national factors were the most influential, from the 1980s the globalisation process has affected the car industry and thereby also the regional development negatively and positively: a loss of jobs and turbulence because of reengineering processes were followed by growing economic success; new strategies opened worldwide markets with an increased demand for expensive and prestigious cars; this in turn resulted in job growth and prosperity.

In fact, albeit a turbulent period where outsourcing/offshoring strategies risk reducing the local industry and employment rate dramatically, opposite developments occurred: the production was expanded worldwide, but it was also increasingly embedded in regional networks.