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Tensions in the Periphery: Dependence and the Trajectory of a Low-Cost Productive Model in the Central and Eastern European Automotive Industry

This article analyzes the productive strategy adopted by Renault for its Dacia plant in Romania. It proposes a detailed analysis of the conditions for the success of the Logan project—Renault's radical approach to the concept of the low-cost automobile. We look into both market- and production related aspects that have made the Logan work and highlight the tensions sparked by Renault's drive to capitalize on its favorable market situation as well as the success achieved by Dacia's workers in defending their interests. In particular, we emphasize the company governance compromises that have shaped industrial relations at Dacia over the past decades and show how in recent years the maintaining of such a compromise has come increasingly in question due to threats with automation and relocation in a context of constantly rising wages and improving working conditions. Finally, we discuss the strategic dilemmas facing both management and labor, their possible resolutions, as well as the relevance of the Dacia case for understanding the future of Central and Eastern Europe as a peripheral region attracting automotive FDI.

Introduction

The automotive industry has been one of the vital components of the manufacturing complexes of Central and East European (CEE) countries both before and after the demise of state socialist regimes. During the first postsocialist decade, CEE states privatized most of their assets to foreign multinationals, making the automotive industry a main driver in the region's shift to a new form of dependent development (Nölke and Vliegenthart 2009; Pavlínek 2017). This paper seeks to contribute to the ongoing debate on the development of the CEE automotive industry and industrial relations (e.g., Jürgens, Ulrich and Martin Krzywdzinski 2009a, 2009b; Pavlínek 2015, 2016, 2017; Pavlínek, Domański, and Guzik 2009) by shifting the focus of the debate to the diverse ways of matching companies' profit strategies, sub-national labor markets and local compromises with organized labor. Empirically, we take the case of the Dacia–Renault factory in Romania and discuss the strategy employed by Renault for its Romanian investment, the adaptation of Renault's existing productive model according to this strategy, as well as the implications of this productive model for the stability of enterprise-level industrial relations. While Dacia's success and trajectory has plenty to do with factors usually highlighted by

analyses looking at CEE cost-related competitive advantages and national-level institutional complementarities, we argue that automotive FDI in the region is in fact strategically much more diverse, with complex implications for the way we approach the question of the future of dependent development in the region.

We begin by embedding the story of Dacia's privatization into the larger CEE context. A survey of the literature on foreign direct investments (FDI) in the CEE automotive industry shows that these investments initially followed a "least-cost" strategy that gradually shifted into a "complementary specialization" strategy (Kurz and Wittke 1998), accompanied by an increasingly pronounced interest from components manufacturers to invest in the region. Complementary specialization entailed a deeper level of integration of CEE operations in Western European supply chains and markets. Even though maintaining low costs remained important, the East-West division of labor became increasingly complex, with Western multinationals devising long-term, capital-intensive investment strategies meant to profit from CEE's full gamut of competitive advantages—not just cheap, but also skilled labor, and potentially large automobile markets. Product specialization is a core feature of complementary specialization (Jürgens and Krzywdzinski 2009a:30). While taking advantage of the region's low production costs, some automotive manufacturers like Renault or Volkswagen used CEE as a staging ground for developing low-cost models destined mainly for consumers in postsocialist countries, which eventually also proved appealing to Western consumers. In the case of Dacia, the Logan project took a more radical approach to the concept of low-cost production. The Logan was initially conceived as a car cheap enough to compete with older models produced in the region, yet with high enough quality to compare with Western standards. The project ended up being a remarkable business success. We analyze how this was possible and what turned Dacia into Renault's "profit machine" (Automotive News Europe 2012).

Using the theory of productive models developed by Boyer and Freyssenet (2000), we argue that the success of the Logan project was made possible by a profit strategy based on "innovation and flexibility" that was embedded in a "competitive and price export-oriented" growth mode that preserved Dacia's profit margins even during the financial crisis of 2007-2008. Required levels of flexibility were ensured through a combination of pay rises and improvements in working conditions. A governance compromise forged between the plant

trade union and management that exchanged wage increases for productivity seemed to offer the necessary stability in the relationship between the two actors.

As we will show, however, this compromise proved to be a double-edged sword for both company and union and could not fully contain distributional conflicts at the plant. The compromise was forged at a time when Renault was facing financial difficulties that raised the importance of the Romanian factory in the group and subsequently increased the strategic power of the local union. While the union succeeded in obtaining higher wages, in the medium term it also altered the strategy used by management in attempting to contain future wage increases. In recent years, threats with relocation to lower wage countries and automation have become more frequent and, despite their questionable credibility, have not remained without consequence for the union's negotiation approach. A discussion of these strategic dilemmas suggests that instability generated by endogenous distributional conflicts over wages and working conditions remains a possibility at Dacia. This raises questions about the future of the plant and, by implication, for the future of CEE automotive industry as a whole and the region's peripheral status within the EU.

This article is based on 18 months of ethnographic fieldwork on labor relations at the Romanian Dacia plant undertaken by one of the authors during the second half of 2012 and the whole of 2013. Apart from participant observation in the company town of Mioveni and the automobile plant, the research included extensive interviews with trade union leaders and blue-collar workers. Ethnographic data was supplemented by an assessment of secondary statistical data, and a comprehensive review of national and local media (including internal publications) since Dacia's privatization in the late 1990s as well as of official strategy and financial data published by Dacia. Following the completion of the ethnographic research, interviews were conducted with the trade union leadership during 2015 and 2016 to check the reliability of initial interpretations and update the empirical findings.

Productive models and automotive investment in Central and Eastern Europe

During the past decade, studies have gradually moved from analyzing the political economic transformation of CEE in terms of these countries' capacity to emulate Western models of development towards a historically informed understanding of the factors that are specific to the region. Consequently, the manner in which capitalism in CEE is depicted has changed:

from economic and social systems organized in a sub-optimal fashion, apparently incapable of attaining the institutional coherence found in Western European countries, towards fully-fledged capitalist regimes, espousing their own set of defining features. This has allowed for a more sophisticated analytical understanding emphasizing the region's mode of integration into international markets and its dependency on foreign direct investment as a source of competitiveness leveraging reserves of relatively cheap but skilled labor and an already existing industrial base (Nölke and Vliegenthart 2009).

Facilitated by geographical proximity and lower production costs as well as by state policies supporting the development of national production capacities, FDI in the region's comparatively outdated automotive industry has been a particularly attractive proposal for foreign multinational companies (MNCs). It is by now well ascertained that automotive FDI has not been significant enough to raise the region from its peripheral status (Pavlínek et al 2009, Pavlínek 2015, 2016, 2017), nor to set it on a clearly distinguishable "high-road" trajectory of development (Jürgens and Krzywdzinski 2009b). Questions of market development and delocalization, labor shortage and wage growth, industrial and social upgrading, growing supply chain integration and potential spillover effects nonetheless loom large.

These issues have so far been addressed either from the standpoint of the CEE region as a whole, with an emphasis on competitive advantages and developments widely shared between countries and production sites, or from the standpoint of differences between countries, based on the assumption of international capitalist diversity in the region springing from national-level institutional complementarities. While these perspectives have so far proven productive, we believe the debate on the CEE automotive industry needs to shift to a more detailed assessment of intra-industry and subnational variations. After all, research on the global automotive industry has long rejected the idea of there being "one best way" to achieve success (Freyssenet, Mair, Shimizu, Volpato 1998) and beyond the rather abstract issue of low-cost production it is difficult to say why things should be different in CEE. Moreover, competition over FDI in CEE has been accompanied by increasing fragmentation of national state spaces (Drahokoupil 2007), rendering national-level analyses less relevant than they are usually assumed to be. The importance of uneven development for CEE's industrial trajectory is not limited to the East-West continental divide, but rather extends to the increasingly wide

subnational (inter-regional and inter-local) differences in investment and labor market dynamics.

To be sure, differences between automotive assemblers investing in CEE have been discussed in the literature (e.g., Jacobs 2017), but this has at best been done in a highly descriptive fashion and with very limited insight into how strategic differences between companies relate to questions of dependency and development. To address this shortcoming, we use Boyer and Freyssenet's (2002) framework of automotive "productive models", which is effectively a comprehensive theory of strategic differences in the global automotive industry. More specifically, we argue that the combination of strategically-diverse FDI and deepening intranational uneven development managed to generate an assorted array of productive models based on firm- and even location-specific governance compromises that have been key in enabling an as of yet durable implementation of carmakers' CEE-specific profit strategies. Addressing the increasing concerns on automotive investment and dependency in the region needs to account for this diversity of productive models, together with their specific sources of strength and vulnerability.

A company's profit strategy can tap into one or, at best, two of six possible available sources of profit (Boyer and Freyssenet 2002): economies of scale, supply diversity, product quality, pertinent commercial innovation, productive flexibility, and the permanent reduction of costs at a constant volume. The viability of profit strategies is dependent on their being adapted to the specificities of markets where they try to sell their products and labor markets where they set up production operations. These two markets are in their turn shaped by what Boyer and Freyssenet call "national growth modes", which are differentiated by the major source of growth (either investment, consumption or export) and form of income distribution (competitive, coordinated etc.). In other words, to implement a given profit strategy successfully a company first needs to take account of available demand for its products and supply of labor, which translates into achieving relevancy "within the framework of the growth mode that governs the economic and political entity within which the firm is deploying its activity" (Boyer and Freyssenet 2002:19-20). The second condition of profitability consists in setting up "a durable company compromise [...] between the firm's various actors (owners, executives, employees, labor unions and suppliers) concerning the means that are to be used so that the chosen strategy can be implemented in a coherent manner" (Boyer and Freyssenet 2002:19-20). More precisely, the compromise concerns the type of product sold and market

segments targeted (the product policy), the actual means of implementing this policy (the organization of production), and the role and compensation of labor (the employment relationship).

A productive model is the unintended outcome of achieving a stable equilibrium between these elements, implying that a constant work of adjustment has to be made in order to fit a profit strategy to the available product and labor markets, as well as to the possibilities of shaping relations in production. The stabilization of a profit strategy into an established productive model is neither automatic, nor the result of a single actor's purposive design, but rather emerges "from these partly unintended processes which result in coherence between strategies, organization forms and practices, and the fit between these and the economic and social environment. It is a process of achieving internal coherence and external fit which makes companies successful." (Boyer and Freyssenet 2002:xiv).

This dynamic understanding of the links between firm strategies, markets and industrial relations allows for a more realistic investigation of change, which emphasizes the endogenous nature of the processes that impact firm-level governance compromises and places firm-level employment relations at the heart of the success or failure of a firms' profit strategy. To be sure, employment relations can function as a major source of vulnerability as they are not always coherently embedded into the overall profit strategy of the firm. The least-cost strategy initially adopted by many CEE automotive manufacturers was focused on exploiting the availability of cheap labor in a context of relatively weak labor movements and state policies that favored the interests of employers. This allowed Western MNCs to use CEE plants as testing sites for experimenting with labor management practices that were unfeasible in their countries of origin — e.g., flexibility policies in terms of working time arrangements or the widespread use of atypical work contracts (see Drahokoupil, Myant and Domonkos 2014). The success of these management policies depended to a large extent on alignments between national regulatory regimes, regional labor market dynamics and degrees of strength (or weakness) of local trade unions. Increasingly acute labor shortage (Meardi 2007), a reversal of long-standing weakness on the side of organized labor (Ost 2009), or heightened costs due to relatively high rates of wage growth over longer periods of time can all put established productive models in question by destabilizing existing governance compromises. Such issues are bound to become more pronounced as the political economic dependency of CEE becomes consolidated.

"European quality with Romanian prices"

Located outside the strong CEE automotive cluster (Pavlínek 2015, 2016) the Romanian automotive industry started to truly benefit from FDI inflows only in the late 1990s and early 2000s. Investments have since remained primarily dependent on the country's cheap labor (Ban 2013; 2014) and MNCs have kept their ties to global production networks while avoiding high levels of embeddedness in the local economy (Egresi 2007). Export-oriented automotive suppliers have flocked especially to the Western part of the country, which ensures easier access to export destinations, as well as around several traditional industrial centers, where skilled labor was more readily available. As for assemblers, Romania has yet to attract any greenfield investments. Oltcit and Dacia, the two producers of personal cars set up under state socialism, are today both owned by foreign multinationals—Ford and Renault, respectively.

Despite Dacia officials' active efforts at seeking foreign investors starting with the early 1990s, political instability and dissatisfaction with foreign companies' interest in pursuing a least-cost strategy entailing a significant downsizing of its highly integrated production activities kept the company under state ownership until the end of the first postsocialist decade. Talks with producers such as Audi, Peugeot, and even Renault failed in the first half of the 1990s. Even though towards the end of this decade both management and plant unions were willing to compromise and assemble vehicles from imported parts, the Asian crisis put a swift end to an agreement signed with Hyundai in the second half of 1997.¹

At the same time, Renault used the Asian crisis as an opportunity to boost its production of small passenger cars and expand its operations into developing markets (Freyssenet 2009). Alongside the Samsung acquisition in South Korea, the opening of the Curitiba plant in Brazil and the founding of Avtoframos in Russia, buying Dacia was an integral part of Renault's plans to globalize. Privatized to Renault in 1999, it took less than a decade for Dacia to become a genuine "revelation" (Freyssenet 2009) both within and outside Europe. Production boomed after the launch of the Logan in 2004 and its quick development into full low-cost range based

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¹ The agreement included the annual production of 50 thousand vehicles and 100 thousand engines under a Hyundai license. Initial vehicles were to be assembled from imported CKD kits and were not meant to replace the production of existing Dacia models. The agreement was explicitly regarded as a major step in securing privatization by making the Romanian plant more attractive to foreign buyers.

on the same platform. With uncertainty permanently looming at Ford, the other manufacturer in Romania, it was the Dacia plant in Mioveni that put Romania on the map of European car producers and secured its spot among the rising CEE and European producers (see Figure 1).

[Figure 1 about here]

In broad strokes, Renault's investment at Dacia followed in the footsteps of other Western assemblers setting up operations in the region: labor costs were low, even lower than in the countries of Central Europe; skilled labor was available, with Dacia peaking at just under 30,000 employees before privatization; the Romanian market was very far from being saturated and good prospects for the national economy would make it grow rapidly in the years to come. After having missed out on acquiring Škoda in favor of Volkswagen, in the late 1990s Renault was actively seeking to benefit from the labor and market resources of CEE before they were all grabbed by its competitors. Renault planned to take the low-cost approach adopted by other assemblers moving into the region to an entirely new level. Driven by a strategy of pushing for innovation, Renault planned to use the Dacia brand and its production facilities to put out a much cheaper and more cost-effective model than any of its competitors had done in CEE (see Figure 2).

[Figure 2 about here]

The project of "the 6000-dollar car"—or, as it would later be known, "the 5000-euro car"—was aimed at producing an automobile with a similar price to old Dacia models but with vastly improved design, equipment, and quality. "European quality with Romanian prices" was one of the intensely circulated slogans at Dacia in the first half of the 2000s. With such a product, Renault intended to conquer emerging postsocialist markets, which were becoming more and more heterogeneous as advancing social differentiation transformed consumer needs. Due to increasing consumer dissatisfaction with the aging models produced by indigenous companies since before 1989, in the 1990s these markets were quickly falling prey to the massive imports of used vehicles from Western Europe. With the 6000-dollar car, Renault meant to offer to customers from CEE an alternative to both imports and aging indigenous models. This was a textbook case of complementary specialization, which fit in quite well with the desires of Dacia management and employees.

Renault's plans closely aligned with Dacia's hopes of survival and ambitions of keeping a strong foothold on the Romanian market. Though its production had grown significantly in the 1990s and reached a peak of over 100,000 units in 1997 and 1998, both managers and workers at Dacia were well aware that their outdated technological means, comparatively low levels of quality, and inability to invest in the development of new models would render them increasingly vulnerable to competition and eventually spell their demise. The 6000-dollar car project, for which Renault firmly committed in the privatization contract signed with the Romanian government, would allow Dacia to retain its dominance on the Romanian market. It also meant that production would not be downsized and, despite a thorough restructuring program, that a considerable number of jobs would be kept.

The launch of the Logan, the long-awaited truly low-cost vehicle, in 2004 marked Dacia's rise as one of the largest car producers in CEE. The Logan quickly gained dominance on the Romanian market, which was booming in the mid-2000s as a result of rising incomes, a rapidly growing national economy, as well as accelerating financialization. Contrary to initial expectations, the Logan performed poorly on other CEE markets and registered a striking success on Western European markets.² By the end of the decade, with the Romanian market having collapsed after the onset of the 2008/9 crisis, exports accounted for around 90 percent of production (see Figure 3). Around the same time, the Mioveni plant reached its full capacity of just under 350,000 units per year. Production and exports were boosted by the expansion of the Logan program into a fully-fledged low-cost range, once the Sandero hatchback and Duster SUV entered production.

[Figure 3 about here]

In parallel with the development of its Romanian operations, Renault turned the Logan into a global project. By the end of 2012, it was assembling cars based on the Logan platform not only in Romania, but also in Brazil, Russia, Iran, India, Colombia, Brazil, South Africa, and Morocco. At the time, Dacia's operating margin was estimated at around 9-10%, equivalent to that of premium assemblers (Automotive News Europe 2012). If in 2009 Dacia accounted for

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² In 2016, the two main export markets for Dacia were France and Spain, followed by Italy, Germany, Turkey, Morocco, Romania, Great Britain, Poland and Algeria (Dacianews.com 2017). 112,000 Dacia cars were sold in 2016 on the French market alone. In Romania, Dacia maintains a market share of over 30 percent.

around 90% of Renault sales growth (Freyssenet 2009:280), in 2012 it proved decisive in maintaining positive financial results for Renault's global operations.

The Logan program was thought out as a radical version of the low-cost strategies pursued by Western European automotive producers in investing in CEE. It ended up appearing as radical not just because of the degree to which costs and prices were minimized, but also because of its success on Western markets, its global spread, its financial yield, and its contribution to the growth of its mother company. However, the success of the plant's profit strategy has not been without consequence for the local level industrial relations, especially in terms of a push for a greater flexibility and higher levels of automation.

Success, innovation, and the tensions therein

In this section, we will look at Renault's European strategy for the Logan in terms of how its productive model has achieved a certain level of coherence between its product policy on European markets, on the one hand, and its productive organization and employment relations in Romania, on the other.

If investments by automobile producers in CEE after 1989 generally followed the principles of minimizing costs and conquering new markets, they also mirrored the diversity of productive models of their main operations in Western Europe. In spite of the apparent similarities, Volkswagen's low-cost strategy at Škoda was markedly different from Renault's low-cost strategy at Dacia. To be sure, Volkswagen also intended to develop a low-cost brand targeted primarily at CEE markets dominated by low-income consumers, but Renault idea of a "6000-dollar car" was impossible by Škoda standards. Consistent with its "volume and diversity" profit strategy (Boyer and Freyssenet 2002:66076), Volkswagen used its common platforms in designing Škoda models and, indeed, in time the latter became increasingly more difficult to distinguish from their Volkswagen equivalents. Conversely, having turned to a productive model based on innovation and flexibility in the early 1990s (Freyssenet 1998; 2003), Renault opted to design the Logan project from scratch, on an entirely new, low-cost dedicated platform. This justified describing the Logan as "the epitome of conceptual innovation" (Freyssenet 2009:280), or, in the words of Renault's CEO, as a "major innovation" and "strategic pillar for the enterprise and the [Renault–Nissan] Alliance" (Jullien, Lung, and

Midler 2012:vii). The major difference was that, as opposed to other assemblers moving into the region, the Logan was not simply conceived as a cheaper version of an existing Renault model, but rather as an entirely new concept that needed to stand on its own.

The idea of producing a vehicle as affordable as possible was anything but new in the 1990s.³ With German producers dominating the market segment for middle-class cars, in the 1990s all other non-premium producers had oriented themselves toward small and affordable vehicles (Williams et al. 1994:170-1). For these companies, investing in CEE was meant to lower costs even further and the region quickly became specialized in producing large volumes of small cars (Pavlínek 2017:10). What was truly innovative in Renault's case was the belief that costs and prices could be driven down far below what was at the time considered to be the industry's minimum threshold of profitability. Taken seriously, "European quality with Romanian prices" is where the real innovation began.

The initial strategy was for the Logan to provide the means for conquering the growing markets of postsocialist countries in CEE. It was assumed that these countries would continue to experience economic growth and the distribution of incomes would be shaped in such a way as for them to develop strong middle classes, whose consumption preferences and purchasing power would make them ideal buyers for such a car. This plan never materialized. With the exception of Romania, the Logan's performance on CEE markets remained relatively modest and the rapid growth of the Romanian market was cut short once the Great Recession set in. On Western markets, it is difficult to estimate how much worse the Logan would have fared had it not been for the crisis. A direct consequence of the economic and social turmoil that came in the aftermath of the events in 2008/9 was the widening of that particular market segment of "people who want to buy a new car but who cannot do it—or who cannot no longer do it—due to insufficient income" (Freyssenet 2009:280). This is a market segment carmakers were used to ignoring and for which Dacia filled the supply gap. Government scrappage programs and the rapidly gained confidence in the quality offered under the Dacia brand

³ To be sure, the entire history of automobile production is replete with attempts at producing "people's cars"— from Ford's Model T in the US, to Germany's Volkswagen Beetle and practically all models produced in state socialist countries starting with the 1960s. For a comparison along these lines between the Logan and the Citroën 2CV, see Loubet (2006).

⁴ As a consequence of growing income inequality, the European car market has in fact become increasingly polarized between entry- and premium-segment vehicles. The flourishing of low-cost vehicle sales thus mirrors the sustained growth of demand for more expensive cars and SUVs.

compounded the effects the crisis had on incomes, credit, and the overall willingness to spend money on expensive commodities like automobiles (Wall-Street.ro 2009).

The crisis therefore allowed Renault to cash in a lot more innovation rent on the Logan than it had initially expected to do.⁵ As some authors argued early on (Croué 2006), and despite other producers announcing they would follow in Renault's footsteps, so far it seems that the Logan productive model is difficult, if not impossible, to replicate. With no competition in sight when it came to price, it was soon enough clear that Dacia held a massive advantage in the growing market for low-priced personal cars. Using the Logan platform to develop a 3- and then a 5model range provided Dacia with the necessary flexibility to meet fluctuations in demand and expand its market foothold. Brisk demand allowed for the rapid expansion of volumes considerably beyond the initially planned figures. Furthermore, problems with insufficient productive capacities risked depriving Renault of its potential innovation rent. Capacity was accordingly increased at the Romanian plant and new investments in Northern Africa were undertaken. Apart from innovation rent, Dacia was thus able to extract profit from expanded demand and economies of scale (Boyer and Freyssenet 2002:14). Tapping into multiple profit sources, it has thus managed to successfully subordinate a volume and diversity strategy to the one based on innovation and flexibility. This allowed the brand to quickly rise to the status of an important player in the European market, with a market share of 2.8% in 2016 (see Figure 4).

[Figure 4 about here]

This combination was only partly made possible by the Logan's overly favorable market position. The distinctive manner of organizing design and production was another factor that contributed to the success of the low-cost project, as all stages, from design to manufacturing and sales, were targeted for drastic cost cutting. This involved new approaches to R&D, project management, flexibilization and rationalization of production, a markedly tough approach in purchasing, and maintaining strict control over costs and quality in manufacturing. Some of

⁵ Innovation (or Schumpeterian) rents are earnings resulting from a monopoly held by innovators before competitors can imitate an innovation. According to Boyer and Freyssenet (2000), this is a core profit strategy of the innovation and flexibility productive model.

⁶ This possibility is discussed in Boyer and Freyssenet (2002:90). Before the launch of the Logan, Freyssenet (2003:123-4) considered this combination as one possible pathway for the Renault–Nissan alliance in the new millennium.

these entailed revamping already existing arrangements found at Dacia along the lines of Renault principles and production methods. Others—like the "design to cost" concept, the extensive reuse of parts from existing Renault models, or the rationalization of labor-intensive production—were genuine organizational innovations specifically tailored for cost minimization within the Logan program.⁷ Importantly, the Logan was from the very beginning designed for a labor-intensive manufacturing process, purposely aiming to take advantage of Dacia's reserves of cheap and skilled labor. This low-cost-by-design approach thus compounds the importance of the labor question.

Labor relations comprise the final dimension of Dacia's low-cost productive model. The labor question at Dacia concerns not just the cost of labor, but also employees' willingness to follow through with and contribute to implementing changes and innovations in productive organization. Since privatization, labor relations at Dacia have gone through three phases in which different governance compromises were struck between management's goal of confining labor within the requirements of the low-cost program and the local union's demands for higher wages and improved working conditions.

Despite a substantial restructuring program that from the very beginning included the shedding of more than 11,000 jobs (a number that eventually grew to approximately 16,000), there was no major conflict between management and union from 2000 to early 2003. Immediately after privatization, organized labor proved to be largely cooperative and union leaders voiced their willingness to contribute to fulfilling Renault's plans of turning the company around by upgrading technology, reorganizing production, and improving quality. As agreed during the negotiations for privatization, in which union leaders took part alongside government and company officials, the union would cooperate insofar as Renault kept its end of the bargain and minimized the social impact of restructuring. In doing this, union leaders were responding to workers' concerns regarding the survival of the company. For several years after it bought Dacia, Renault could capitalize on employees' pre-privatization fears of Dacia's imminent demise and the French company's image as a savior capable of doing whatever it was necessary to keep Dacia afloat and set it on the path to success.

⁷ Most authors dealing with the Logan's success focus on Dacia's distinctive productive organization (Angelescu 2007; Croué 2006; Debrosse 2007; Jullien et al. 2012). If they are correct in highlighting the degree of novelty involved in the design and manufacturing of the Logan, then Dacia is a perfect example of automakers' experimenting with new ways of organizing production in CEE (see above). Descolonges (2011: ch.3&ch.4) paints a more nuanced and critical picture of the rationalization of production at Dacia.

A general strike in February 2003 put an end to the post-privatization settlement and set the stage for an openly confrontational relationship between management and labor. Alongside wage demands, the union criticized the abuses of French managers, the harshness of the restructuring program, and the failure to fulfill promises of improving working and social conditions. At the time, the union's failure to resist to sustained management pressure and inability to properly organize workers led to defeat and the reaching of a new governance compromise in which labor grudgingly accepted to put off part of its demands in wait for the company cutting its losses and improving its financial results. Though the union continued to successfully negotiate wage increases over the next years (see Figure 5), these were far from satisfactory for both union leaders and regular members. By the time of the 2007 annual negotiations, the union was already showing signs of breaking the power play tactics that management had adopted since the 2003 strike (see Adăscăliței and Guga 2017).

[Figure 5 about here]

A lengthy strike in the spring of 2008 again reset the terms between the two sides. The union demanded that employees receive a bigger share of what was by then the obvious market success of the Logan program. Strikers' sound victory was a watershed for labor relations at the Mioveni plant and since then the union has managed to obtain substantial wage increases every year, as well as significant improvements in working and social conditions. Besides wage increases, which until recently remained well above the national average (see Figure 5), workers benefit from paid overtime, Christmas and vacation bonuses as well as a performance bonus which is depends on the firms' sales performance. Though union—management relations have remained declaredly confrontational, the tensions of the 2003- 2007 period made room for a trade-off between sustained wage increases and substantial and likewise sustained productivity increases.

After 2008, the plant quickly reached full capacity and diversified its production. Management continued pushing for permanent cost reduction and productivity growth, a result of which were the new models launched in 2012—much improved, though at practically unchanged prices. If old fashioned labor intensification proved acceptable, the union has been less keen on fully giving in to attempts at increasing labor flexibility. As a result, the wages-for-productivity compromise has started showing signs of weakness, especially since 2012. In

response, management developed new strategies in attempting to either break the existing compromise or turn it more clearly in its favor by forcing the union to tone down its demands. At present, the question remains as to whether this will spark new conflict, reshuffle the existing compromise, or bring about entirely new challenges and resolutions.

New threats and responses in search of a new labor settlement

As we have argued so far, the success of the Dacia's productive model was based on a combination of factors comprising its monopoly over a new market segment, its rigorous overall approach to cost cutting, as well as its ability to maintain low labor costs and secure compliance from its employees in Romania. Low labor costs and high productivity levels have thus been essential in squeezing expected profit margins. With wages in the Romanian plant following a sustained upward trend (see Figure 5) and productivity increases being slowed down as a result of industrial action by the local union, management has developed a new repertoire of threats for containing workers' demands. Most commonly, these consist of explicit threats with relocation to other low-cost sites where the group has set up assembly facilities or threats with removing jobs by increasing the level of automation in manufacturing. Both sets of threats have contributed to the erosion of the governance compromise established after the 2008 strike and challenged the sustainability of the profit strategy implemented at Dacia.

Talk of relocation to other low-cost sites became common practice at the Romanian plant especially after the 2008 general strike, when the union obtained a significant wage increase despite tough opposition from management. These threats were meant to coerce Romanian workers into giving up on their wage demands by pointing at the danger of them losing ground in favor of assembly plants in Morocco, Turkey, or Russia. Starting with 2012, after the opening of Renault–Nissan's new low-cost plant in Tangiers, Morocco has been routinely cited as the likely competitor for the Romanian site. Tangiers has been said to have a number of comparative advantages pertaining to comparatively lower labor costs, geographical proximity to Western markets, as well as transportation infrastructure. Time and again, management has

⁸ This is not to say that the union opposed changes meant to improve productivity while maintaining or improving working conditions. It has nonetheless forcefully rejected attempts at increasing productivity at the cost of rendering labor more precarious. One result of such opposition has been the limited use of atypical work contracts at Dacia, especially in comparison to other car plants in the region (see Drahokoupil, Myant and Domonkos 2014).

underlined that the Mioveni plant is no longer competitive enough in comparison to its counterparts outside Europe, and that relocation to Morocco is a feasible strategy in the medium term. In 2012, for example, company officials publicly argued that wages in Romania were twice bigger than those in Morocco, which was said to weigh heavily on a possible future choice by Renault to downsize or even discontinue its operations in Romania (Ziarul Financiar 2012). Likewise, in the fall of 2014, the Romanian plant was singled out as no longer being a low-cost location for Renault, since it had become the most expensive production location for the low-cost models in Europe's immediate vicinity (LesEchos.fr 2014).

Management has also been using indirect relocation threats by emphasizing that future projects developed by the group will be assigned to the plant that is more competitive in terms of costs (HotNews.ro 2014). One such example was said to be the Dokker project, assigned exclusively to the Moroccan site, which nonetheless failed to meet the expected sales volumes. In Romania, company officials framed the choosing of Morocco for producing the new model as a definite loss for Dacia and argued that future investments in Romania would depend on how it fares in competition with places such as Morocco and not with European countries like France or Germany (Ziarul Financiar 2011). After the 2008 strike, both local and central media have systematically, and more or less unanimously, taken the company's side in attacking both union leaders and workers for their irresponsibility in asking for higher wages and refusing to give in to management's attempts at adopting more flexible working arrangements. Thus, apart from management's changing tactics the union has also had to face an increasingly hostile public sphere. Consequently, although in recent years the union has organized several protests against the government, these have had no tangible impact.

The local union's reaction to these relocation threats has been twofold. On the one hand, it has questioned the feasibility of relocation, given the importance of the Dacia factory for the entire group. The union has denounced these threats as part of a blackmailing strategy difficult to put into practice since the Romanian site is of strategic importance and delivers not just assembled vehicles but also complete knocked down (CKD) kits, engines and gearboxes to plants in the rest of the group. On the other hand, especially in recent years, the union has often borrowed management's discourse of competitiveness, which indicates that relocation threats have not been entirely without consequence. The changing manner in which the union negotiates the annual collective labor agreements also indicates that it has toned down its confrontational tactics. Since the general strike of 2008, the number of strike threats and protests at the plant

has been on the decline, with the union choosing to negotiate with management behind closed doors and delivering somewhat poorer than expected wage increases (Adăscăliței and Guga 2017). More recently, relocation threats have lost clout, as the Romanian plant has become increasingly specialized in producing the Duster, while production for the Logan and the Sandero has progressively moved to Morocco.

Instead of relocation, automation is the newest threat used by management in attempting to curtail the union's demands for higher wages. Replacing human labor with robotic manufacturing systems has been presented as a viable option in mitigating and even reversing the trend of rising wage costs. Although after privatization the Dacia factory underwent substantial upgrading, its present level of automation is estimated to be at around 10 percent (Jurnalul de Argeş 2014), far below industry standards and in defiance of lean production orthodoxy (Camuffo and Comacchio 1999; MacDuffie and Pi 1997). Despite its labor-intensive manufacturing processes, the Dacia factory has achieved similar productivity levels with more capital-intensive sites in CEE (see Jakubiak et al. 2008, 40). During all this time, the union has kept a reserved attitude towards automation and has accepted the push for higher productivity levels while negotiating for safe working conditions.

As with relocation, the extent to which these threats can materialize is uncertain. There are at least two reasons why the robots-for-humans equation is anything but straightforward at Dacia. First, since Renault's low-cost range is designed for labor-intensive production, there is a question as to the extent to which automation is actually possible without having to bear the massive costs of extensive productive reorganization. This would simply translate in the plugging of one leak in the low-cost productive model at the cost of springing another that would be just as major. Second, it is clear that the Dacia union will not remain passive if faced with a concerted strategy aimed at removing jobs by increasing the plant's degree of automation. Job security is a most prized asset for Dacia union members and the union has made no compromises in regard to this after the post-privatization restructuring program ended. Dacia workers have proved their readiness to take action if their jobs are threatened. In March 2013, a two-day spontaneous work stoppage was sparked by workers' dissatisfaction over the delaying of the signing of the collective labor contract, the company's attempt at introducing a

⁹ Low automation levels are far from uncommon in low-wage regions like Central and Eastern Europe. Just like with relocation, the debate around automation in response to wage increases thus relates to the CEE automotive industry as a whole and is not specific to Dacia.

more flexible work schedule, and an announcement that jobs in the paint shop will be cut in favor of automated machinery. Just like with relocation, moving beyond simple threats in regard to automation risks provoking a serious conflict, which, as it happened in the past, would most likely catalyze the reaching of a new compromise between management and labor.

This apparently zero-sum game between management and union reflects the tensions inherent to the low-cost, flexible, and labor-intensive production process that has, alongside a favorable market situation, ensured success for the Logan. Behind the glorified façade lie acute conflicts between management and labor over remuneration and working conditions—conflicts which, when won by labor, can put a severe strain on the profitability of the low-cost productive model discussed in the previous section. If we were to listen to voices coming from the side of both Renault and Dacia management, in the medium and long term the solution to the profitability issue can take two forms. Either the company puts its threats into practice and completely relocates to a new periphery, or the plant upgrades its production in order to produce more expensive models that provide higher profit margins (Digi24.ro 2014). In both cases, for Renault's investment in Romania this would effectively mean the end of low-cost production as it has been understood since the birth of the Logan project in the late 1990s—and which, after all, was the raison d'etre of Renault's acquisition of Dacia.

Conclusion

Renault's radical approach to low-cost production in CEE did not come without its specific antinomies. At present, it is difficult to go beyond speculation regarding Dacia's future. It is more or less certain, however, that regardless of the shape taken by the future governance compromise between labor and management, it will have to be based on significant changes in either labor's demands or the productive model employed so far. Without a functioning social settlement at its Romanian plant, neither its favorable market situation nor its innovative productive organization will be enough to reproduce Dacia's European success.

Immediately after the 2008 strike, some observers (Delteil and Dieuaide 2008) expressed their hopes that this conflict was merely a sign of a broader movement that would set the stage for a change in the CEE capitalisms, translating into a tendency toward the equalization of wages and working conditions across the EU and putting an end to the destructive intra-regional competition and delocalization of industrial capital Eastwards. Apart from pre-crisis optimism,

at that time such a hypothesis certainly had the backing of historical precedent. Throughout the twentieth century, similar waves of automotive investment in other peripheral regions of the globe had contributed substantially to pushing for national settlements favorable to labor (Silver 2003). The fragmentation of union movements and the rescaling of the state have nonetheless rendered this hypothesis largely invalid in the case of CEE. Instead of a shift towards better economic and social rights, in response to the crisis, governments have liberalized labor markets, cut back collective bargaining rights and reduced social protection expenditures (Guga and Constantin 2017; Adăscăliței and Pignatti-Morano 2016; Ban 2016).

In such a context, the consolidation of automotive investments in CEE have at best led to the emergence of pockets of localized Fordist-like arrangements built around assemblers' pursuit of a relatively limited focus on collective bargaining rights and secure employment (Jürgens and Krzywdzinski 2009a; 2009b). This has definitely been the case at Dacia. Though the low-cost model has proved relatively stable so far, our analysis of Renault's investment in Romania points to its inherent tensions as well as to some of its possible future limitations. In responding to pressure coming from labor, companies pursuing a low-cost strategy have two options. First, they can relocate to other low-cost locations within CEE, as some components manufacturers have done already (Pavlínek et al. 2009), or they can even re-establish operations in locations in Western Europe where dismantled social settlements have given way to previously unforeseen labor deregulation. Second, they can search for other peripheral regions with cheap labor and favorable governments in close proximity to EU borders. Renault has already done so with its Tangiers plant for low-cost models.

For CEE, these scenarios highlight another possible outcome of European integration and the changing division of labor between Western and Eastern countries of the EU: neither remaining a single, quiet periphery, nor catching up to its neighboring core, but rather entering into competition for grabbing as much as possible of the value chain with peripheral regions just outside the EU and even with parts of the core that have fallen victim to peripheralization as a result of new policies of spatial selectivity. The case of Dacia, in this sense, might just be an example of how both capital and labor attempt to solve an entirely different kind of strategic dilemma from those that plagued the CEE (or, for that matter, the European) automotive industry in the 1990s, from the overcoming of which they nonetheless originate. As we argue throughout this article, on the other hand, the concrete shape and content of these struggles will depend on concrete variations in companies' product policies, regional labor markets and local

compromises with organized labor. Once again, Volkswagen's "volume and diversity" profit strategy has allowed Škoda to directly compete with the core brand of its owner, which, at least theoretically, allows CEE to compete with Western Europe over the development of traditionally "core" operations like R&D and strategic management. The situation is quite different at Dacia, which is in a league of its own and, at least as long as the current profit strategy stands, poses no threat to Renault's Western European operations. In addressing questions of dependency and industrial upgrading in the CEE automotive industry, research thus has to go beyond assessments of regional competitive advantages and national institutional complementarities and pay more attention to how they interact with diverse profit strategies and subnational patterns of uneven development. We would thus gain an empirically richer and theoretically more sophisticated understanding of the mechanisms at hand in deciding the present course of CEE in the European capitalist landscape.

References

- Adăscăliței, Dragoș and Ștefan Guga. 2017. "Negotiating Agency and Structure: Trade Union Organizing Strategies in a Hostile Environment." *Economic and Industrial Democracy* 38(3) 473–494.
- Adăscăliței, Dragoș and Clemente Pignatti Morano. 2016. "Drivers and Effects of Labour Market Reforms: Evidence from a Novel Policy Compendium." *IZA Journal of Labor Policy* 5 (1):15.
- Angelescu, Georgiana. 2007. "Une analyse du processus d'apprentissage organisationnel dans un contexte spécifique: la gestion de projet (Étude de cas sur l'entreprise Dacia Groupe Renault)." Unpublished PhD Thesis, Université Paris 1 Panthéon Sorbonne.
- Automotive News Europe. 2012. "Renault's Profit Machine." Global Monthly 1(9).
- Ban, Cornel. 2013. "From Cocktail to Dependence: Revisiting the Foundations of Dependent Market Economies." Retrieved March 28, 2015 (http://ssrn.com/abstract=2233056).
- ——. 2014. Dependență Și Dezvoltare: Economia Politică a Capitalismului Românesc. Cluj: Tact.
- ——. 2016. *Ruling Ideas: How Global Neoliberalism Goes Local*. New York: Oxford University Press.
- Boyer, Robert and Michel Freyssenet. 2002. *The Productive Models: The Conditions of Profitability*. New York: Palgrave Macmillan.
- Camuffo, Arnaldo and Anna Comacchio. 1999. "Diffusion Patterns of Lean Practices: Lessons from the European Auto Industry." Pp. 92-118 in *Automation in Automotive Industries: Recent Developments*, edited by A. Comacchio, G. Volpato, and A. Camuffo. Berlin: Springer.
- Croué, Charles. 2006. "La Logan, un produit 'low cost' de conquête du marché mondial." Décisions Marketing (43/44):123-36.
- Dacianews.com. 2017. "Dacia had record sales in 2016." Retrieved December 14, 2017 (http://www.dacianews.com/dacia-had-record-sales-in-2016/).
- Delteil, Violaine and Patrick Dieuaide. 2008. "Le conflict Renault-Dacia en Roumanie: Quand le Local et l'européen ont partie liée." *Revue de la régulation* (3/4).

- Descolonges, Michèle. 2011. Des travailleurs à protéger. L'action collective au sein de la sous-traitance. Paris: Hermann.
- Silver, Beverly J. 2003. Forces of Labor: Workers' Movements and Globalization since 1870.

 Cambridge: Cambridge University Press.
- Digi24.ro. 2014. "Fără Dacia made in Romania? Fabrica de la Mioveni ar putea produce mașini mai scumpe [Without Dacia Made in Romania? The Mioveni Factory Could Produce More Expensive Cars]." Retrieved November 10, 2014 (http://www1.digi24.ro/Stiri/Digi24/ Economie/Stiri/Fabrica+Mioveni+fara+Dacia+masini+scumpe+Renault).
- Drahokoupil, Jan. 2009. Globalization and the State in Central and Eastern Europe: The Politics of Foreign Direct Investment. London and New York: Routledge
- Drahokoupil, Jan, Martin Myant, and Stefan Domonkos. 2014. "The Politics of Flexibility: Employment Practices in Automotive Multinationals in Central and Eastern Europe." European Journal of Industrial Relations.
- Egresi, Istvan. 2007. "Foreign Direct Investment in a Recent Entrant to the EU: The Case of the Automotive Industry in Romania." *Eurasian Geography and Economics* 48(6):748-64.
- Freyssenet, Michel. 1998. "Renault: From Diversified Mass Production to Innovative Flexible Production." Pp. 365-94 in *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*, edited by M. Freyssenet, A. Mair, K. Shimizu, and G. Volpato. Oxford: Oxford University Press.
- ———. 2009. "Renault, 1992-2007: Globalisation and Strategic Uncertainties." Pp. 267-86 in *The Second Automobile Revolution: Trajectories of the World Carmakers in the 21st Century*, edited by M. Freyssenet. New York: Palgrave Macmillan.
- Freyssenet, Michel, Andrew Mair, Koichi Shimizu, and Giuseppe Volpato (eds.). *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*.

 Oxford: Oxford University Press.
- Guga, Ștefan and Camelia Constantin. 2017. *Analiza impactului legislației dialogului social adoptate în 2011*. 2nd edition. Bucharest: Next Publishing.

- Herod, Andrew. 2001. *Labor Geographies: Workers and the Landscapes of Capitalism*. New York: Guilford Press.
- HotNews.ro. 2014. "Uzina Dacia Presiuni crescande, amenintarea Tanger si despre cum robotii tind sa devina mai ieftini decat oamenii la Mioveni [The Dacia Plant Increased Pressure, the Tangiers Threat and How Robots Tend to Become Cheaper Than People in Mioveni]." Retrieved October 13, 2014 (http://economie.hotnews.ro/stiri-auto-18294243-analiza-uzina-dacia-presiuni-crescande-amenintarea-tanger-despre-cum-robotii-tind-devina-mai-ieftini-decat-oamenii-mioveni.htm).
- ICCT. 2017. European Vehicle Market Statistics Pocketbook 2017/2018. Berlin: International Council on Clean Transportation Europe.
- Jacobs, A. J. 2017. Automotive FDI in Emerging Europe: Shifting Locales in the Motor Vehicle Industry. London: Palgrave Macmillan.
- Jakubiak, Malgorzata, Kolesar, Peter, Izvorsky, Ivailo, and Kurekova Lucia. 2008. "The Automotive Industry in the Slovak Republic: Recent Developments and Impact on Growth." Working Paper No. 29 The International Bank for Reconstruction and Development / The World Bank. Washington, DC.
- Jullien, Bernard, Yannick Lung, and Cristophe Midler. 2012. L'épopée Logan. Paris: Dunod.
- Jürgens, Ulrich and Martin Krzywdzinski. 2009a. "Changing East—West Division of Labour in the European Automotive Industry." *European Urban and Regional Studies* 16(1):27-42.
- ——. 2009b. "Work models in the Central Eastern European car industry: towards the high road?." Industrial Relations Journal 40(6):471-490.
- Jurnalul de Argeș. 2014. "Nicolas Maure, director general Dacia: 'Nivelul salariilor de la Mioveni ne obligă la mărirea gradului de automatizare a uzinei' [Nicolas Maure, Dacia General Manager: 'The Level of Wages in Mioveni Forces Us to Increase the Degree of Automation'." Retrieved October 13, 2014 (http://www.jurnaluldearges.ro/index.php/economic-2/10737-nicolas-maure-director-general-dacia-nivelul-salariilor-de-la-mioveni-ne-obliga-la-marirea-gradului-de-automatizare-a-uzinei).
- Kurz, Constance and Volker Wittke. 1998. "Using Industrial Capacities as a Way of Integrating Central-East European Economies", *BRIE Working Paper* nr. 123. Retrieved October 9, 2017 (http://brie.berkeley.edu/publications/WP123.pdf).

- LesEchos.fr. 2014. "La Roumanie n'est plus assez low cost pour Renault." Retrieved October 29, 2014 (http://www.lesechos.fr/industrie-services/automobile/0203774133292-laroumanie -nest-plus-tout-a-fait-assez-low-cost-pour-renault-1042220.php#).
- Loubet, Jean-Louis. 2006. "La Logan sur les pas de la 2CV ?" *Gérer & Comprendre* (86):11-22.
- MacDuffie, J.P. and F.K. Pil. 1997. "From Fixed to Flexible: Automation and Work Organization Trends from the International Assembly Plant Study." Pp. 238-54 in *Transforming Automobile Assembly: Experience in Automation and Work Organization*, edited by K. Shimokawa, U. Jürgens, and T. Fujimoto. Berlin: Springer.
- Meardi, Gugliemo. 2007. "More voice after more exit? Unstable industrial relations in Central Eastern Europe." *Industrial Relations Journal* 38(6):503-523.
- Nölke, Andreas and Arjan Vliegenthart. 2009. "Enlarging the Varieties of Capitalism: The Emergence of Dependent Market Economies in East Central Europe." *World Politics* 61(4):670-702.
- Ost, David. 2009. "The Consequences of Postcommunism Trade Unions in Eastern Europe's Future." *East European Politics and Societies* 23(1):13-33.
- Pavlínek, Petr. 2008. A Successful Transformation? Restructuring of the Czech Automobile Industry. Heidelberg: Physica-Verlag Heidelberg.
- ———. 2015. "The Impact of the 2008–2009 Crisis on the Automotive Industry: Global Trends and Firm-Level Effects in Central Europe." *European Urban and Regional Studies* 22(1):20-40.
- ———. 2016. "Whose Success? The State–Foreign Capital Nexus and the Development of the Automotive Industry in Slovakia." *European Urban and Regional Studies* 23(4):571-593
- Pavlínek, Petr, Bolesław Domański, and Robert Guzik. 2009. "Industrial Upgrading through Foreign Direct Investment in Central European Automotive Manufacturing." *European Urban and Regional Studies* 16(1):43-63.

- Vardie, Dan. 2009. Renault și Dacia de 10 ani împreună. Bucharest: Arta Grafica.
- Vliegenthart, Arjan. 2010. "Bringing Dependency Back In: The Economic Crisis in Post-Socialist Europe and the Continued Relevance of Dependent Development." *Historical Social Research* 35(2):242-65.
- Wall-Street.ro. 2009. "Programul Rabla din Germania avantajeaza producatorii straini ca Dacia [German Scrappage Program Advantages Foreign Manufacturers such as Dacia]", https://www.wall-street.ro/articol/Auto/59292/Programul-Rabla-din-Germania-avantajeaza-producatorii-straini-ca-Dacia.html, Retrieved on December 14, 2017.
- Williams, Karel, Colin Haslam, Sukhdev Johal, and John Williams. 1994. *Cars: Analysis, History, Cases*. New York: Berghahn Books.
- Ziarul Financiar. 2011. "Lodgy, primul brand Dacia produs integral în străinătate, în fabrica Renault din Maroc [Lodgy, the First Dacia Brand Fully Produced Abroad, at the Renault Plant in Morocco]." November 11.
- ———. 2012. "Numărul doi din Renault amenință: Oricând ne putem muta producția în Maroc dacă România nu rămâne competitivă [Renault's Second in Command Threatens: We Can Move Production to Morocco at Any Time If Romania Does Not Remain Competitive]." October 1.
- ———. 2014. "Ford taie în carne vie: Unu din cinci angajaţi ai Ford Craiova pleacă până la finalul anului [Ford Cuts to the Bone: One in Five Ford Employees Will Leave by the End of the Year]." November 20.

Figures

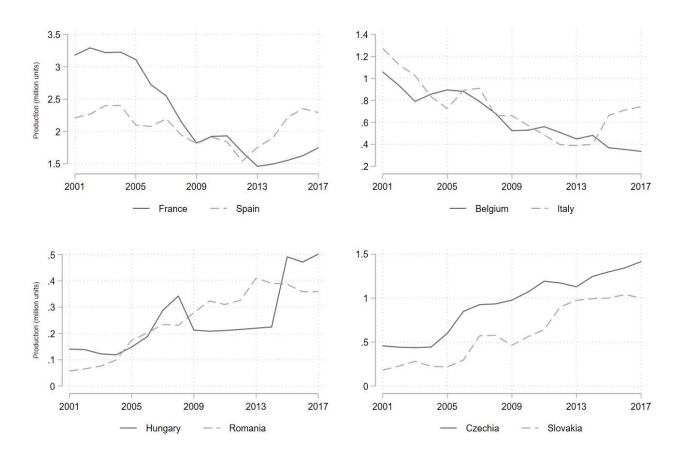


Figure 1. Passenger car production (units) in selected European countries, 2001–2017. Data source: OICA.

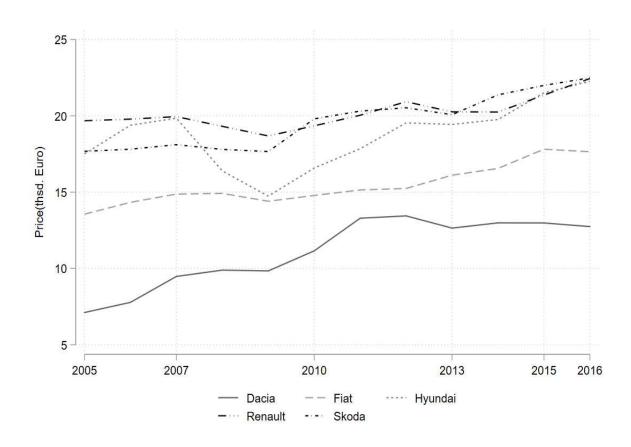


Figure 2. Average price of EU sales (Euro, including tax), 2005–2016. Data source: ICCT (2017).

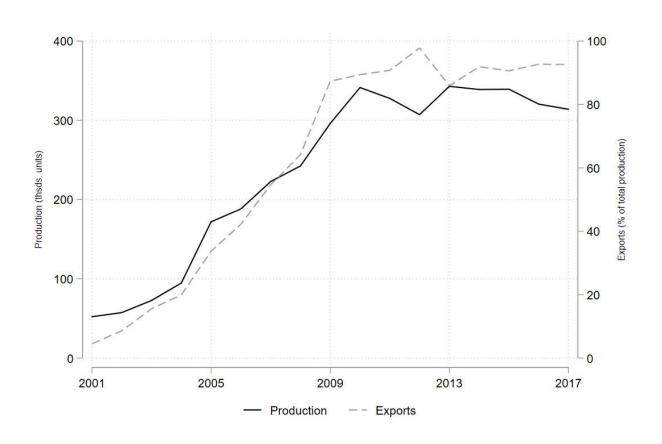


Figure 3. Dacia vehicle production (units) and exports (% of total sales), 2001–2017. *Data source:* Dacia annual reports, Vardie (2009), press reports.

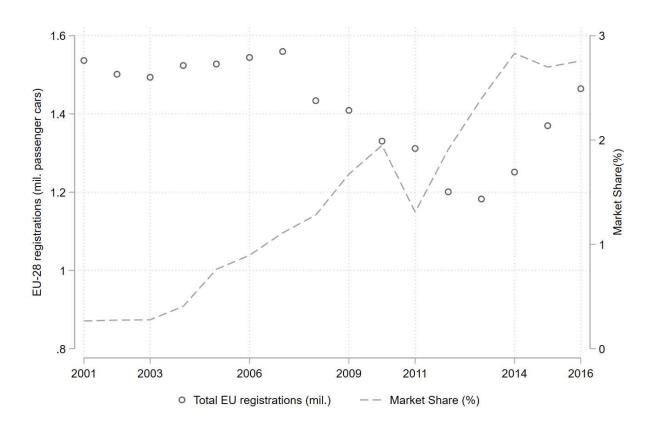


Figure 4. Dacia's market share (%) in Europe and total EU-28 registrations (million passenger cars) 2001-2016.

Data sources: ICCT (2017).

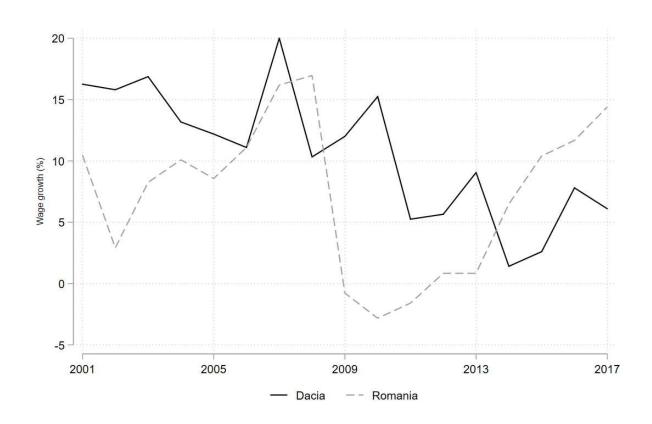


Figure 5. Annual real average wage growth at Dacia, and in Romania 2001-2017 *Data sources:* National Institute of Statistics, press review for nominal gross wages. Real wage growth was obtained by deflating nominal wages using the CPI published by the National Institute of Statistics. 2017 Dacia figures are estimated using the growth of average personnel costs.

Authors' calculations.