



LAPLACE CONSEIL

THE PARADOX OF THE AMERICAN STEEL INDUSTRY AND THE LESSONS FOR EUROPE

Donald Trump wants to protect the US steel industry from the onslaught of foreign exporters, which he says threaten the survival of the industry. In addition to the detrimental effects of an overtly protectionist policy, it is surprising that the President ignores the vast majority of its American steelmakers who are among the most successful in the world, with the aim of protecting three traditional companies, including a foreign one, who have been unable for several decades to adapt to social, industrial and technological (r)evolution.

Indeed, the American steel industry is composed of:

- One hundred medium-sized plants owned by 43 companies that recycle American scrap into electric furnaces and produce 67% of all American steel,
- 13 larger plants owned by three companies producing the remaining 33% in large blast furnaces, many (but not all) of which are obsolete, poorly managed and subject to the restrictive practices of the United Steel Workers.

A LARGE INNOVATIVE SECTOR BASED ON RECYCLED SCRAP

With 18 electric steel mills, Nucor is the largest steelmaker and the largest recycler in the country. In 2017, Nucor produced 30% of all American steel. Nucor belongs to the very exclusive club of "Dividend Aristocrats" for having paid 180 consecutive quarterly dividends since 1972. It realized in 2017 a turnover of \$ 26.5 billion and a net profit of \$ 1.75 billion with 24 000 teammates. It is the world's best steelmaker for the environment and emits four times less CO₂ per ton produced than its integrated competitors.

The secret of Nucor is printed in full on the folded cover of its annual reports that lists the names of all Nucor teammates. Nucor is known both for the productivity of its non-union workers that is the best in the steel industry and for paying salaries and bonuses that are also the highest for any steelmaker. This is thanks to an exemplary and non-hierarchical organization that frees the initiatives of all workers. Nucor chairman nevertheless points out that his company could produce more steel, were it not for import surges.

In addition, Nucor has deployed European innovations in his plants, (wide flange beam casting, continuous casting of thin slabs, direct casting in coils, use of natural gas at low prices) which allows it to extend its range of products, reduce production costs, increase quality, respond more quickly to customer needs and, best of all, further reduce CO₂ emissions.

All this information is verifiable in Nucor's reports that, in addition to the usual financial data, describe the recipe for the company's success. In fact, 43 American steel companies are following the Nucor model more or less, including SDI (which possibly outperforms it), and are profitably producing 37% of US steel.

THREE INTEGRATED STEEL COMPANIES PARTLY OBSOLETE

The last third of US production is provided by three companies, US Steel, ArcelorMittal and AK Steel, which operate the last blast furnaces and iron ore mines, some of which date from the industrial revolution of the 19th century.

About half of their 13 integrated plants are obsolete by international standards and are likely to close in the next 10 years. All of them suffer from hierarchical and rigid social relations that slow down technological evolutions and essential restructurings. They contribute, without being the only causes, to the inferior customer service and sometimes to lower product quality.

With the notable exception of US Steel, all of these factories have been through US Chapter 11 bankruptcy law, orchestrated in 2002 by Wilbur Ross, the current US Secretary of Commerce, that allowed troubled steel firms to shed their unfunded pension liabilities and transfer them to the US taxpayers. After emerging from Chapter 11, these companies regrouped by Ross under the name of International Steel Group (ISG) were sold in 2005 to Mittal Steel, now ArcelorMittal.

Moreover, the recurring losses of these companies at the bottom of each cycle, do not allow them to finance the necessary investments or benefit from the revival of the clean gas industry to change their technology that remains based on coal.

The last integrated factories are thus locked in a vicious spiral of decline and Rust Belt job losses, but rather than reflecting on their own shortcomings, they accuse imports of being the cause of all their ills.

To help these three companies in difficulty, the US administration could draw inspiration from the European policy, which, in the 1980s, called "a manifest crisis", and made it possible to restructure a large part of the European steel industry and to revive it at the expense for the taxpayers.

But the Trump administration apparently prefers a solution much more expensive for the US economy by imposing a large tax on all US companies and all US direct or indirect steel consumers who will have to pay for more expensive steel to allow three companies and their workers to continue their activities without reforming.

EUROPE ALSO HAS NOT FINISHED RESTRUCTURING ITS INDUSTRY

This is also true for the European industry, which, nevertheless, does not experience the same disrepair of its integrated industry, nor unfortunately the same successes as Nucor and his peers.

Indeed, Europe is in much the same situation as the US, which is due to the continuous decline in steel demand and imposes recurrent, costly and difficult restructurings with job losses concentrated in declining regions.

But, after the reforms during the "manifest crisis" followed by the integration of the new Central European countries (1980-1993), it now follows substantially the same American policy. The demand for protectionism is growing and the necessary closures of obsolete blast furnaces give rise to considerable political resistance for the same reasons of protecting old jobs.

As a consequence, steel produced in Europe by scrap recycling accounts for only 40% of production, compared to 67% in the USA. Turkey is the main beneficiary of that restrictive policy as the country imports the bulk of European scrap surplus and with it, outcompetes European exports in the Middle East.

In addition, recycled steel, which generates 15% of the 236 million tonnes of CO₂ emitted by the steel industry, bears 54% of the taxes and regulations (2.3 billion euros) imposed in the name of the protection of the environment. On the other hand, the integrated industry almost entirely escapes the ETS payments and sometimes even benefits by the resale of some of the excessive ETS allowances received free of charge.

It is therefore not surprising that Nucor and his colleagues are not trying to gain a foothold in Europe.

In summary, the steel that remains essential for modern economies and will be even more so to build all the equipment necessary for the energy transition (a 2 MW wind turbine needs 400 tonnes of steel) deserves better public policies than those chosen by the US administration and envisaged by a number of European countries.

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