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TRENDS IN PERSONNEL AND PRODUCTIVITY ASSOCIATED WITH THE STEEL INDUSTRY IN THE ROMANIAN ECONOMY

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When dealing with the issue of increased labour productivity in steel companies, as well as in any other economic sector, managers are faced with a difficult choice – investing in technologies and competencies or diminishing the number of jobs. The economic literature and statistical data available on the Romanian steel industry has revealed that the second option has often been the case in the past 10 years or so. Nevertheless, in order to reach the economic indicators of Westerns countries, the main Romanian steel plants should decrease the number of employees from 18 500 to 8 400. We argue that the accelerated production after the crisis would also entail increased productivity, but the lack of technological advancement and significant investments in competencies will not allow economic efficiency to exceed the average of EU developed member states.

Key words: steel industry, Romanian plants, labour force, yield

Trendovi radne snage i produktivnosti u Rumunjskoj čeličnoj industriji. Kad je riječ o većoj produktivnosti radne snage u poduzećima čelične industrije, kao i drugih sektora gospodarstva, menadžeri su suočeni s jednim teškim izborom – investirati u tehnologije i kvalificiranost radne snage ili smanjiti broj radnih mjesta. Raspoloživa ekonomska literatura i statistički podaci o rumunjskoj čeličnoj industriji pokazuju da je ova druga opcija često prevladala u posljednjih 10 i više godina. Pa ipak, da bi dosegle gospodarske pokazatelje zapadnih zemalja, glavne rumunjske čeličane trebale bi smanjiti broj zaposlenih od 18.500 na 8.400. Smatramo da bi ubrzana proizvodnja nakon krize ujedno trebala biti popraćena povećanom produktivnošću, ali zbog nedostatka tehnološkog napretka i značajnih ulaganja u kvalificiranost neće biti moguće da ekonomska učinkovitost premaši prosjek razvijenih članica EU.

Ključne riječi: čelična industrija, rumunjske čeličane, radna snaga, prihod

INTRODUCTION

On a European Union level, the steel industry is an essential sector, holding a very important position within domestic economies. The EU steel production ranked first on an international level in 2000, with an output that accounted for about one fifth of the world production. At that time, the industry employed around 280 000 people, but provided employment for a much higher number of individuals in the final use and steel recycling fields. [1].

At present, the European steel industry has become a very efficient and competitive branch on a global scale, but without being subsidized.

The EU27 total crude steel production reached a peak in recent years and particularly in 2007 amounting to 210 million tons. This was an increase since 2000 of just 8 %.

In 2008, production decreased by 6 % and in 2009 by 30 %, decreasing the EU27 production by 28 % in 2000, with the EU27's share of global output having fallen from 23 % in 2000 to 11 % in 2009 [2].

However if one excludes the vast increase in Chinese steel output, the EU share of global production has decreased more moderately – from 27 % in 2000 to 21 % in 2009. The 25 % increase in EU27 production seen in 2010 left the EU output 18 % below the recent 2007 peak. Summarised below is the World Steel Association crude steel production data for the EU27 (Figure 1).

It is a notable fact that the EU steel industry has managed to significantly reduce the specific energy consumption per each ton of steel and, at the same time, increase the quantity of recycled metal for more than one third of the output.

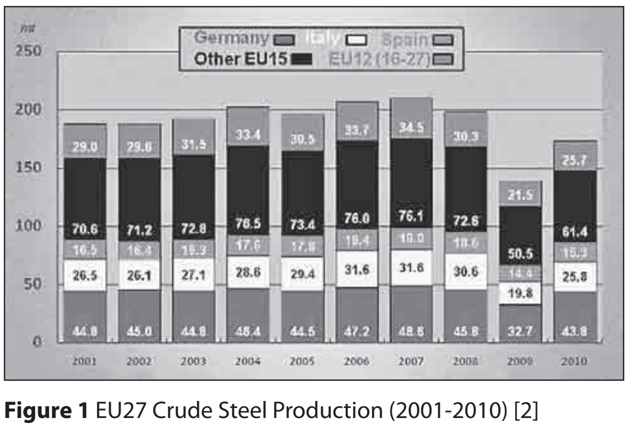

Figure 1 EU27 Crude Steel Production (2001-2010) [2]

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CONSIDERATIONS ON THE ROMANIAN STEEL INDUSTRY IN RELATION TO THE EU INSTITUTIONAL FRAMEWORK

The restructuring of the steel production, in terms of economic viability is a major priority for the domestic economy [3]. Romania is effectively applying the policies of the European Union in the industrial sector in order to develop a competitive domestic market that is integrated on the European domestic market.

The document on "Romania's industrial policy" complies with the Council Decision 96/413/EC on the implementation of the Community Action Programme to strengthen the competitiveness of the European industry [4].

Under these specific circumstances, the Romanian steel industry has undergone lengthy periods of restructuring and privatisation that have deeply affected its character and what the industry represented before 1989 (when it employed 225 000 workers and had a maximum output of liquid steel of 15 million tons) [5].

These situations have considerably reduced the importance and prosperity of the industry in question: if before the world crisis, in 2007, the crude steel production in Romania was slightly below half of that recorded in 1989, the crude steel production of 2009 amounted to just one fifth of that recorded in 1989 in Romania [6].

Figure 2 outlines the evolution of the Romanian crude steel production for the period 2001-2010.

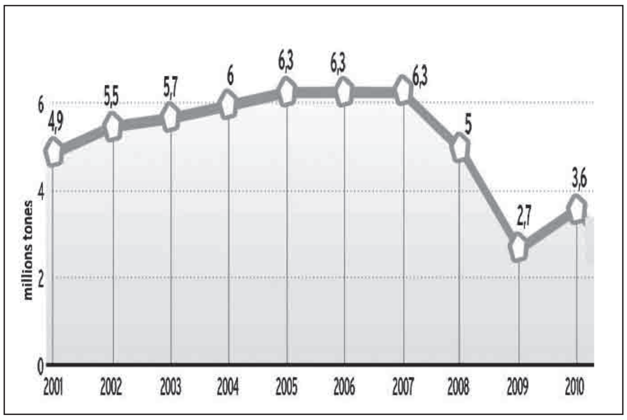

Figure 2 The evolution of the Romanian crude steel production (2001-2010) [7]

On the other hand, the attempt to complete the restructuring of the Romanian steel industry [8] also coincided with the worsening of the effects of the global crisis (2008-2009). The significant decrease in the demand for steel manufactures has resulted in production indicators that were below the targeted objective.

The EU enterprise monitoring programme for companies that have benefitted from state aid for modernising their technologies and eco-investments has also been finalised recently (Tables 1.a-1.f) [9, 10].

The collected data for the enterprises whose indicators are presented in Tables 1 *(a* to *f)* results in the following (Table 2):

Tables 1a–f **Indicators for the steelworks monitored by the EU [9,10]**

a. **ArcelorMittal Galati**

Arcelor Mittal Galati	Year of privatisation	End of monitoring	Occurrence of crisis effects
	2001	2008	2009
Turnover (mil. lei)	2 157,2	7 170,8	3 586,4
Profit (mil. lei)	-809,7	604,9	-1 418,2
No. of employees	27 597	13 709	11 049

b. **Mechel Targoviste**

Mechel Targov.	Year of privatisation	End of monitoring	Occurrence of crisis effects
	2002	2008	2009
Turnover (mil. lei)	295,7	1 107,2	529,6
Profit (mil. lei)	-40,6	106,3	-100,1
No. of employees	5 427	3 513	3 002

c. **Mechel Campia Turzii**

Mechel Campia Turzii	Year of privatisation	End of monitoring	Occurrence of crisis effects
	2002	2008	2009
Turnover (mil. lei)	213,4	668,2	321,5
Profit (mil. lei)	-5,4	48,6	-155,3
No. of employees	5 724	2 685	2 486

d. **ArcelorMittal Hunedoara**

Arcelor Mittal Huned.	Year of privatisation	End of monitoring	Occurrence of crisis effects
	2003	2008	2009
Turnover (mil. lei)	219,1	592,1	133,0
Profit (mil. lei)	-113,9	2,2	-138,8
No. of employees	5 267	1 293	697

e. **TMK Resita**

TMK Resita	Year of privatisation	End of monitoring	Occurrence of crisis effects
	2003	2008	2009
Turnover (mil. lei)	89,1	505,0	284,3
Profit (mil. lei)	-39,3	57,4	2,0
No. of employees	2 354	1 314	1044

f. **Tenaris Donasid Calarasi**

Tenaris Donasid Calarasi	Year of privatisation	End of monitoring	Occurrence of crisis effects
	2004	2008	2009
Turnover (mil. lei)	23,7	765,1	505,8
Profit (mil. lei)	-37,3	117,9	-33,4
No. of employees	206	787	1 129

Table 2 **The collected data for Romanian steelworks monitored by the EU**

Collected data	End of monitoring	Occurrence of crisis effects
	2008	2009
Total result (mil. lei)	937,3	-1 843,8
Total business done (mil. lei)	10 808,4	5 360,6
Total number of employees	23 301	19 407

The steelworks under consideration account for ca. 90 % of the domestic liquid steel production which, during a normal year (from an economic standpoint) can amount to ca. 9 million tons. The steelworks employ 82 % of the industry's workforce.

QUANTITATIVE CHANGES RELATED TO THE WORKFORCE

The number of employees in the steel industry (Figure 3) has noticeably decreased: from ca. 65 000 employees (in 2000), only 28 800 were employed in 2009, while during the crisis in 2010, the number of employees has decreased by 18 %.

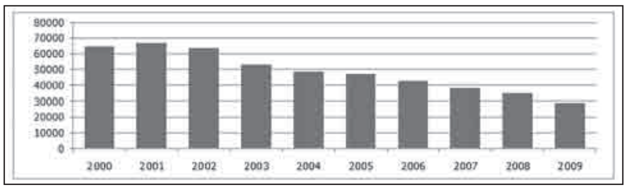

Figure 3 The evolution of the number of employees in the steel industry (2000-2009) [6]

Throughout 2009, there has been a massive decline in the number of employees at ArcelorMittal Hunedoara (46 % personnel reduction), Metalurgica Aiud (43 % personnel reduction), ArcelorMittal Tubular Products Roman (34 % personnel reduction) and Tubinox Bucharest (30 % personnel reduction) [6].

At present, the TMK group has reduced its personnel in Romania by 20,8 %, and the Mechel group has made reductions that amounted to 8,5 % of the total employed.

A radical event occurred the following year (2010): almost all employed personnel of Laminor Focsani has been let go.

EMPLOYEE PRODUCTIVITY

Personnel productivity in the Romanian steel industry has been constantly increasing until 2007 when it recorded the highest level since 1990. In 2007, an employee in this sector accounted for ca. 165,1 tons of crude steel and 197 tons of semi-manufactured and finished goods.

The decreasing demand of 2009 has caused employee productivity to lower to 95,9 tons of crude steel per employee (42 % less than in 2007) and 144,1 tons of semi-manufactured and finished goods (27 % less than in 2007) [6].

The declining production – recorded in 2009 – has had severe economic consequences on Romanian companies, as the global turnover in the steel industry reduced by fifty percent and the total number of employees lowered by 18 %.

VOLUNTARY REDUNDANCY - MONETARY COMPENSATIONS FOR STAFF THAT VOLUNTARILY LEAVE EMPLOYMENT (THE ARCELORMITTAL GALATI CASE)

ArcelorMittal Galati (former Sidex) – that accounts for almost half of Romania's steel output – employed 27 597 workers in 2001. During the following years – until 2010 – the number decreased with about 18 000 employees who voluntarily left their employment [11].

The company management has taken a series of very drastic measures in order to contain the effects of the economic crisis – they discharged personnel, they sent employees on technical leave and they even shut down several production units. A total of 1 050 employees have been discharged in 2011 (while 1 460 employees have submitted applications for voluntary leave).

The voluntary redundancy received by the employees who voluntarily leave employment consisted in the payment of fixed amounts of money and several regular monthly salaries. The total value of the compensations was calculated depending on seniority and regular salaries of the volunteers.

More accurately, the fixed sums paid to each employee ranged between 15 000 and 30 000 Lei, to which 8 to 24 net salaries were added (Table 3).

Table 3 **Method of paying individual compensations depending on seniority [12]**

Length of service (years)	No. of net salaries received	Additional sums (Lei/ RON)
- 5	8	15.000
5 - 10	10	25 000 – 30 000
10 -15	12	25 000 – 30 000
15 - 20	15	25 000 – 30 000
20 -25	18	25 000 – 30 000
25 -30	21	25 000 – 30 000
30 -	24	25 000 – 30 000

We would like to emphasize the fact that the personnel restructuring of the other steelworks was more difficult since the groups did not offer severance packages as generous as the ones paid by ArcelorMittal, the steel industry world leader.

CONCLUSIONS

Leaving technological issues aside, as the situation was deemed acceptable by the EU upon completing the monitoring of the state aid and investments made in the six main Romanian steelworks, the present paper only focuses on the issue of personnel and its labour productivity.

The major difficulties faced by the Romanian steel industry are mainly related to "productivity" and arise from the fact that the number of employees in this sector exceeds the optimal estimate. A notable fact is that in most western companies all repair and maintenance services, including commercial processes are external and the steelworks is just an operating unit, while Romanian steelworks include repair and maintenance, sales and purchase departments that should be the concern and activity of other companies.

The largest six steelworks employed a total of ca. 18 500 workers in 2009, 27 500 less than when they were privatised. Even though they have met the objectives set in their viability plans, the productivity of this specific sector expressed in tons/employee is a few times lower than the one recorded in western countries.

Therefore, consistent investments should be made both in technological upgrading and in the training and development of the human resources employed in the steel manufacturing industry.

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Note: The responsible for English language is the lectures from Faculty of Economics Suceava, Romania