

## CONSIDERATIONS ON THE CELLULOSE AND PAPER INDUSTRY IN ROMANIA

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**ABSTRACT:** *In the following lines, we will find a past and present radiography of the cellulose and paper industry in Romania. Data on cellulose and paper industry, aspects from the history and the present of the production units will be provided.*

**Keywords:** *industry; cellulose; paper;*

In Romania the paper was first obtained in "paper mills". Such installations are dated at the beginning of the 16th century: in Transylvania, Brasov (1546) and Tâlmăciu (1575); in Moldavia (1583) and Romanian Country (1646, probably in Călimănești locality or in its vicinity), respectively 1673 (in Râmnicu Vâlcea or surroundings). The transition from the traditional, rudimentary to the mechanized industry was made towards the end of the nineteenth century. Not only mechanization was the new stage in cellulose and paper production, but also the replacement of raw material - the waste of cloth (rags) with wood.

The first paper factories were built at Zarnesti (1857), Bacau - Letea (1884/1885<sup>1</sup>), Busteni (1883) Piatra Neamt (1909). The use of wood as a raw material led to the emergence of many production units, so in 1938 there were 16 factories<sup>2</sup> at: Vama (Suceava), Busteni, Zărnești, Ghimbav, Piatra Neamț (with two factories), Letea (Bacau), Scăieni, Orlat, Petrești, Cluj - Napoca, Prundul - Bârgăului and the ones mentioned above, only those with a significant quantity production. The total production covered not only the domestic demand, the surplus being exported to: the US, Spain, Bulgaria, Italy, Turkey and Egypt. Romania imported however: technical and special paper.

Another important stage in the cellulose and paper industry occurred with the

establishment of the communist regime and resulted in:

- production of new production centers: Ghimbav (1956), Braila (1959), Constanta (Pallas, 1960), Suceava (1962), Drobeta Turnu Severin (1972), Adjud (1977);
- diversification of cellulose products: 52 types of paper and special technical cartons such as coated paper, corrugated cardboard, newspaper paper, hygienic paper, wrapping paper, special paper for electronics, computing paper, sack paper, bags and various packing, paper for bank-notes, but also other products such as: school supplies, beer yeast, cellulose fibers;
- secondary introduction of new raw materials: reed, straw and paper waste recovery<sup>3</sup>.

We will present some quantitative data to be analyzed and expressed in order to outline the image of the cellulose and paper industry from the beginning to the present.

If during the inter-war and post-war period, the measured quantitative production was inferior to that of the communist period when the industrialization of the country happened, however this covered the domestic need, an export was realized and the imports were made only by quality finished products (technical and specialty paper).

Since 1960 new productive units have been put into operation, resulting in product

diversification, but also implicitly a quantitative increase. This produces more than 86 thousand tons of cellulose and semi-cellulose; so that in the 1980s, more than 600 thousand tons could be obtained, recording a record; and for paper products and other products, we are witnessing record increases, from 70 thousand tons to 160 thousand tons and then over 800 thousand tons.

After 1989, a period of resettlement of Romania's entire economy followed, and implicitly, of the branch that we analyze. It has gone from a centralized, planned economy to a capitalist one; the free economic market has also produced major changes in this industrial segment. The closure of some production units, sections, the reduction in the number of employees, the search for new outlets markets led to a

paper waste<sup>4</sup>.

Ten years later, the global economic crisis followed. If initially the outputs were comparable in quantity to those in the communist period<sup>5</sup> to about 600 thousand tons of paper and cardboard, based on 170 thousand tons of cellulose, the economic crisis - as I have previously written has diminished production consistently, halving it. Thus, the decrease was over 57% in paper production.

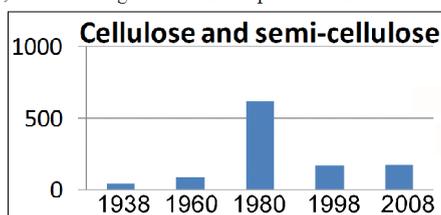
The cellulose and paper industry recovered in 2015, reaching a production of around 400 thousand tonnes, exceeding this figure in the coming years, and for the near horizon 2020, relative growth is expected. The statement is due to the opening of new production capacities in the recent period<sup>6</sup> the modernization of some factories<sup>7</sup>, and in the future the expansion of other units<sup>8</sup>.

Table no. 1: Production of cellulose and paper during the period 1938 – 2008

Year	1938	1960	1980	1982	1998	2008
Cellulose and semi-cellulose*	39.200	86 470	619.000	588 000 **	162 000	170 000
Paper and other products*	70 263	160 200	822. 000	801 000****	306 000	-

Sources of Detectors: N. Ilinca, 2012, Romania - population, settlements, economy, CD Press, Bucharest; XXX, (1984), Geography of Romania - Human and Economic Geography, Vol. II, Ed. Academy, Bucharest; for the years 1938 and 1960 - dates were calculated.

\* - expressed in tonnes; \*\* - plus 31,000 semi-cellulose, and the final result leads us to the same 1980 data; \*\*\* 625,000 tons of paper, the rest being cardboard and pasteboard.



decrease in production in 1998 to 162 thousand tons of cellulose and 306 thousand tons of paper and cardboard, other products. Other causes that led to this situation were: upgrading to comply with environmental protection norms, upgrading as a result of technological progress requiring qualitative progress. It has also passed from the manufacture of wood cellulose to the use of

In trying to make a comparison of production with neighboring countries, we see a near-value production of that from Bulgaria, but away from Slovenia and Slovakia - with more than double than the production produced in our country.

An interesting statistical situation is given by the economic balance of exports and imports, where we observe some

Table no. 2: Production of cellulose and paper in the period 2008-2017

Year	2008	2009 / 2010	2015	2016 / 2017
Papers and other products (tones)	584 720	250 000 (-57%)	390 000	> 400 000

Data source: Eurostat

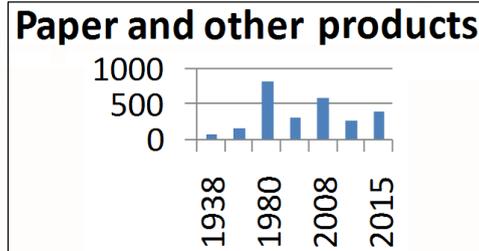
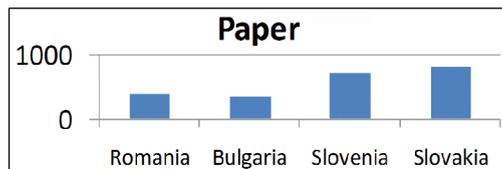


Table no. 3: Paper production compared to other countries in the central SE area (2015)

Countries	Romania	Bulgaria	Slovenia	Slovajia
Quantity (tones)	390 000	352 000	721 300	812 200

Data source: Eurostat<sup>11</sup>

discrepancies.

Thus, in terms of exports, there was an increase of 127.4% in October 2017 compared to the same month before, meaning: 38.2 thousand euros, respectively 345.5 thousand euro.

Paper imports are equally surprising by their dynamics. In October 2016, imports amounted to 117.8 thousand euro, and in one year they increased by 112.3%, reaching the value of 1045.9 thousand euros.



Fig. 1. Cellulose and Paper Factory

- a. the abandoned Factory from Braila, which didn't adapt to the economical market so it went to bankrupt.  
b. the functional Factory from Suceava

Table 4: Value of imports and exports

	<b>Exports</b>	<b>Imports</b>	<b>Trade balance *</b>
October 2016	38,2 thousands euros	117,8 thousands euros	-79,6 thousands euros
October 2017	345,5 thousands euros	1045,9 thousands euros	-700,4 thousands euros
Increase %	127,4%	112,3%	

Source: National Institute of Statistics; \* - calculated data.

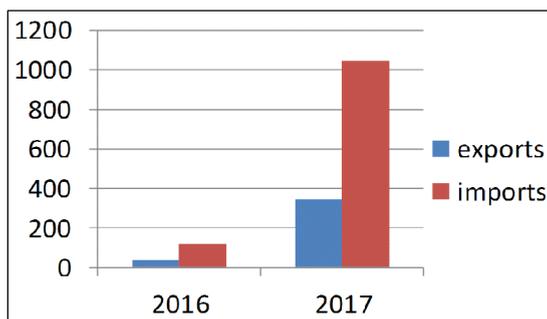


Fig. 2. Cellulose and Paper Factory.  
 a. Vrancea Adjud - functional factory; b. the abandoned factory from Bacău.

**Notes**

1. For the year 1884, the source was Geography of Romania - Human and Economic Geography, vol. II, Ed. Academiei, Bucharest; for the year 1885 the source is Botez, C., Saizu, I., (1981), Letea - a century of history, Ed. Sport - Tourism, Bucharest, 264 pp.: The construction of the factory began on 12 July 1882, the leadership of engineer Radu Porumbaru and lasted until May 21, 1885 ... "
2. The location in the Carpathian and Subcarpathian Areas was due to the existence of the raw material.
3. XXX, (1984), Geography of Romania - Human and Economic Geography, Vol. II, Academy Ed., Bucharest.
4. It has been preferred to export wood with immediate profit than cellulose processing; the forests have also been transferred to private ownership.
5. Although, the number of employees has fallen due to robotic mechanization, a higher quantitative production has been achieved.

6. In 2017 on the basis of major investments, the new production capacity is inaugurated by Rossman in Bucharest; The company is the first foreign investor in the cardboard field in Romania after 1990, taking over the Cardboard Enterprise and Packaging Bucharest established in 1978. - For more details see: <http://www.rossmann.ro/rmc-amb/> - accessed on 18.08. 2018; The same company of French origin also owns AMBRO factory in Suceava, which took over in 1996 the AMBRO SA Factory, founded in 1962 under the name Suceava Cellulose and Paper Compound. The most recent modernization was carried out in 2014 on the basis of European structural funds - see: <http://www.rossmann.ro/rmc-amb/> - accessed on 18.08.2018.
7. See the previous note, but also the following: In 2016 the production unit CELROM SA Drobeta Turnu Severin will be reopened, employing over 400 workers. The factory was bought in 2012 for 10.2 million euros, and by 2014 another 20 million euros will be invested. The origin is the Drobeta Turnu Severin cellulose and paper, established in 1974, but went bankrupt in 2008-2009. Source of information: <https://www.digi24.ro/stiri/economie/bani-afaceri/fabrica-cellulose-rebooted-after-eight-years-636253> and [http://adevarul.ro/locale/turnu-severin/cum-sa-prabusit-combinatul-celuloza-hartie-cea-mai-mare-fabrica-carton-based-oltenia-1\\_54ce4985448e03c0fd2d8869/index.html](http://adevarul.ro/locale/turnu-severin/cum-sa-prabusit-combinatul-celuloza-hartie-cea-mai-mare-fabrica-carton-based-oltenia-1_54ce4985448e03c0fd2d8869/index.html) - both accesses at 05.V. 2018.
8. See the intentions of the manufacturer Vrancart SA in Adjud: <http://www.zf.ro/companii/ionel-ciucioi-vrancart-vrem-sa-construim-o-noua-fabrica-de-hartie-la-adjud-16318384> - accessed at 08/17/2018

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