ROMANIA INDUSTRIAL COMPETITIVENESS AND CHINA-ROMANIA COOPERATION

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Abstract: This paper will analyze the industrial competitiveness in Romania from the macro and the meso levels, and make a comparative research combined with the conditions of industrial competitiveness in the EU and China. This paper first analyzes the competitiveness of macro-industrial structure in Romania according to the classification of primary industry, resource-intensive industry, labor-intensive industry, capital-intensive industry, technology-intensive industry, traditional service industry and modern service industry. Secondly, the report analyzes the competitiveness of industry sector at meso level in Romania according to the classification of 28 industrial sectors and 9 service industry sectors. Then, based on the above research results, this paper systematically presents the status of the Romanian industrial competitiveness with the rank of industrial competitiveness, vertical and horizontal comparison and other intuitive ways. Finally, the paper combines with the relevant analysis results in the EU and China to make horizontal comparative analysis, and make recommendations on Sino-Romanian industrial connection and Sino-Romanian cooperation in the industry.

Keywords: Industrial competitiveness; Revealed Comparative Advantage (RCA); Industrial cooperation; Current situation of the industry of Serbia and China

Introduction

A country's factor endowment structure determines the relative labor productivity of the domestic industry, which reflects the level of industrial competitiveness (Ricardo, 1951). Therefore, it is necessary to carry out the macro analysis of the industrial structure in the way of factor endowments (Ohlin, 1933), in order to clarify the current situation of the industrial competitiveness of Serbia. We start the analysis of industrial structure at macro level, and then move to meso level which combines 28 industrial sectors and 9 service sectors, using the Revealed Comparative Advantage (RCA) approach (Balassa, 1965) to achieve comprehensive, scientific analysis on the Serbia's industry and industrial competitiveness.

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I. Analysis of industry competitiveness at macro level

1. Overview of gross industrial export

The mainstream of domestic and foreign researches has always viewed the relative export level of the industry as a measure to measure the industrial competitiveness. Therefore, it is necessary to make a comparative description of the export levels of various industries in Romania and the status quo in the EU and China, and to make clear of the Romanian industry characteristics and provide data support for the latter. Figure 1 shows the statistical chart of the gross industrial export in Romania, the EU and China in 2003 and 2014.

Figure 1   Statistical chart of export of the industrial sector
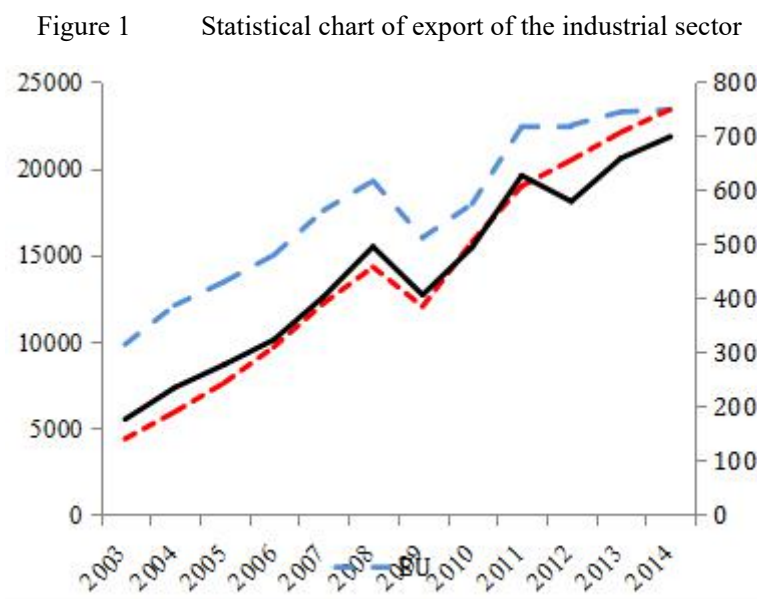
Data source: The export data of industrial sector is obtained by calculation according to UN Comtrade database. Unit: Hundred Million USD.

In terms of gross export value of the industrial sector, Romania, the EU and China present an upward trend. It has declined in 2009 due to the world financial crisis and the debt crisis in Europe, but in recent years, with smooth recovery of the world economy, the export level of industry reaches the highest level in history. Among them, the gross export value of Romania, the EU and China increases from 17.618, 983.918, 438.227 billion US dollars in 2003 to 69.877, 2339.709, 2342.343 billion dollars in 2014, with the average annual growth rates of 13.34%, 8.19% and 16.46% respectively. The export growth rate of the Romanian industrial sector is slightly lower than that in China, but significantly higher than the overall level of EU, indicating that its industrial competitiveness within the EU has gradually emerged. In recent years, with the rapid development of various industries in Romania, the competitiveness has continuous improvement, and its export of industrial sector forms a catch-up trend, with a year-on-year growth rate of 13.77% and 6.06% in 2013 and 2014 (at the same time, 3.38% and 0.57% in the EU).

2 Analysis of export structure of macro industry

The macro-industrial structure is classified and analyzed through the difference in the industrial production factors and technical content. Based on the Appendix 1- "comparison table of classification of macro industry and subdivision industry", according to the production factors and technology content, the industries in the industrial sector are classified into primary industry (pp), resource-intensive industry (agriculture and forestry industry, RB1; other resource-intensive industries, RB2), labor-intensive industry (textile industry, LT1; other labor-intensive industries, LT2), capital - intensive industry (motor vehicle, MT1; processing industry, MT2; engineering industry, MT3), technology-intensive industry (electronics and electrical industry, HT1; other high-tech industries, HT2).

Figure 2 is the export structure of macro industry in the Romanian industrial sector. The Romanian industrial development is more widely distributed, reflecting that industrial exports are mainly distributed in the capital-intensive industry and labor-intensive industry. Among them, the export scale of capital-intensive industry represented by China's technical engineering products is the largest (13.491 billion US dollars in 2014), followed by the motor vehicles (9.632 billion US dollars in 2014) and other labor-intensive products (7.662 billion US dollars in 2014). The export scale growth of China's technical engineering products is the fastest (13.491 billion US dollars in 2014), but the export scale of technology-intensive industry and China's technology processing industry is relatively small (1.001 billion US dollars and 2.371 billion US dollars in 2014).

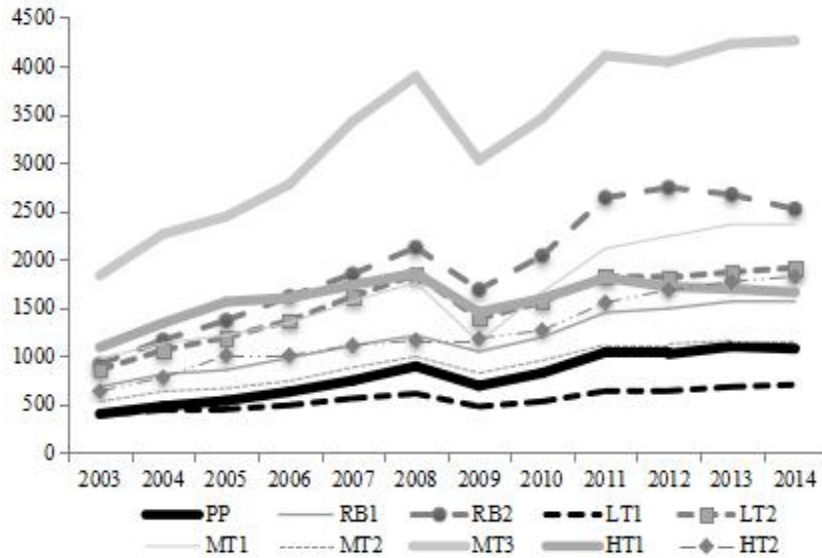Figure 2　　　Export structure of macro industry in Romanian industrial sector
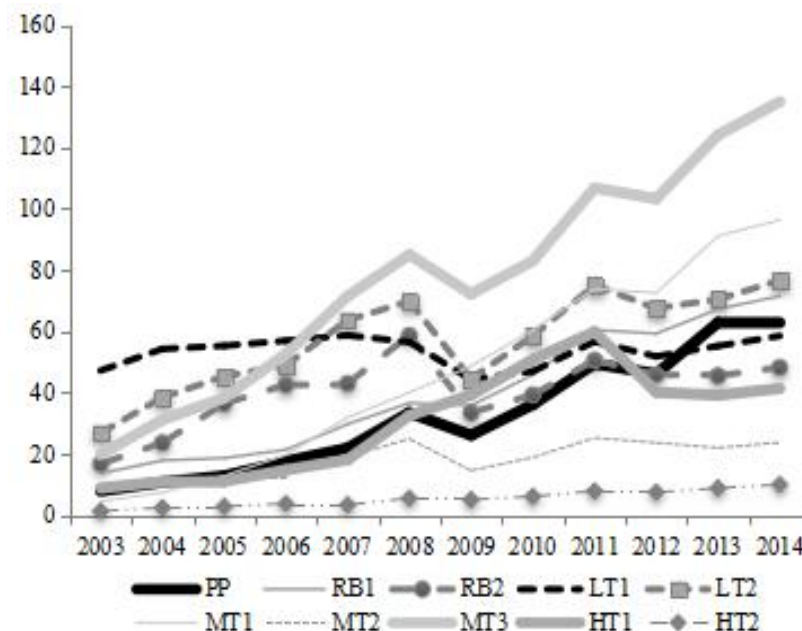
Data source: It is obtained by calculation according to the UN Comtrade database. Unit: Hundred Million USD.

EU (Figure 3) is similar to Romania. In the macro-industrial structure of the industrial sector, the export scale of China's technical engineering industry and motor vehicle industry is relatively large,

the primary products are at the middle level and the export scale of textile industry is relatively small. However, the technology-intensive industry with the smallest scale in Romania occupies a relatively high share in EU's industrial structure.

Figure 3   Export structure of macro industry in the EU industrial sector

Data source: It is obtained by calculation according to the UN Comtrade database. Unit: Hundred Million USD.

The export structure of macro industry in China (Figure 4) is widely different from that in Romania. In China, the export scale of electronics and electrical industry is the largest, while China's technical engineering industry and motor vehicle industry occupies smaller share in the export structure of the industry. It is worth mentioning that the scale of electronics and electrical industry is the smallest in the Romanian industrial structure, while the scale of China's technical engineering industry and the motor vehicle industry is the largest in the export structure of Romanian industry. Viewing from the export structure, the industries have a certain complementarity.
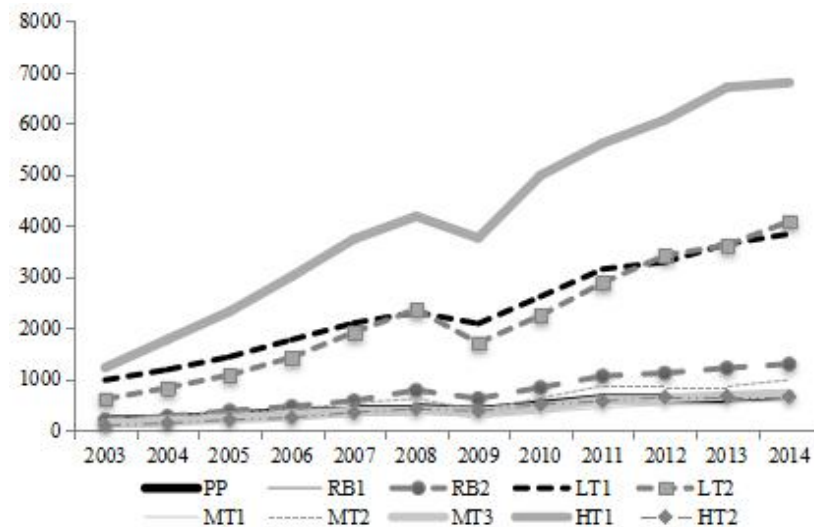
Figure 4   Export structure of macro industry in China industrial sector

Data source: It is obtained by calculation according to the UN Comtrade database. Unit: Hundred Million USD.

3 Analysis of comparative advantages of macro industry

Based on clarifying the export structure of Romanian macro industry, the analysis method of Revealed Comparative Advantage (RCA) is used to research the comparative advantages of Romanian macro industry and make comparative analysis of the advantages and disadvantages macro industry in Romania, EU and China. Revealed Comparative Advantage is a method used by the American economist, Balassa (1965) to measure comparative advantages of some international trades in 1965, which can reflect the comparative advantages of trade in a country (area). It is represented by the ratio of the share of industry export in the country to the share of the industry in the world trade, excluding the effect of aggregate national fluctuations and aggregate world fluctuations, which can better reflect the relative advantages after comparison with the export of a certain industry in a country and the world's average export level.

As shown in Table 1 below, according to the index of comparative advantages of macro industry in the Romanian industrial sector, the macro industries in the Romanian industrial sector with comparative advantages are successively the agriculture and forestry industry (1.67), labor-intensive industry (LT1 and LT2 are respectively 1.76 and 1.20), motor vehicle industry (1.86), China's technical engineering industry (1.53). The high-tech industry has the largest comparative disadvantage (HT1 and HT2 are respectively 0.44 and 0.36). The index of comparative advantage of technology-intensive industry is lower than 0.5, with significant comparative disadvantage. Overall, Romania has obvious competitive advantages in resources, labor and capital-intensive industries, but it lacks competitiveness in technology-intensive industry.

Table 1   Table of comparative advantages of macro industry in Romania's industrial sector

	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2
2003	0.36	1.16	1.27	4.70	1.72	0.28	0.81	0.83	0.33	0.21
2004	0.37	1.19	1.23	4.38	1.81	0.35	0.90	0.97	0.30	0.28
2005	0.34	1.10	1.46	3.98	1.81	0.54	0.89	1.04	0.26	0.28
2006	0.35	1.14	1.43	3.69	1.69	0.75	0.85	1.25	0.30	0.31
2007	0.37	1.24	1.13	3.12	1.69	0.95	0.93	1.33	0.32	0.23
2008	0.41	1.28	1.13	2.68	1.53	1.08	0.97	1.32	0.52	0.31
2009	0.44	1.40	0.86	2.31	1.23	1.82	0.73	1.37	0.70	0.33
2010	0.47	1.55	0.76	2.10	1.39	1.76	0.76	1.33	0.74	0.34
2011	0.48	1.59	0.71	2.04	1.40	1.72	0.79	1.37	0.76	0.36
2012	0.48	1.71	0.70	2.07	1.34	1.78	0.82	1.44	0.54	0.35
2013	0.58	1.70	0.61	1.84	1.25	1.96	0.69	1.55	0.46	0.36
2014	0.65	1.67	0.64	1.76	1.20	1.86	0.69	1.53	0.44	0.36

Data source: It is obtained by calculation according to the UN Comtrade database.

Note: The values with red color in the table indicate "comparative advantages".

As shown in Table 2 below, the macro industry with comparative advantages established by EU includes not only agriculture, forestry and capital-intensive industries possessed by Romania, but also includes disadvantaged high-tech industry in Romania (HT2, 1.95).

Table 2   Table of comparative advantages of macro industry in the EU's industrial sector

	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2
2003	0.33	1.04	1.23	0.70	0.98	1.07	1.04	1.37	0.71	1.69
2004	0.31	1.05	1.18	0.69	0.97	1.05	1.00	1.37	0.72	1.69
2005	0.29	1.04	1.12	0.66	0.98	1.05	0.96	1.36	0.76	2.01
2006	0.27	1.12	1.17	0.68	1.02	1.10	1.01	1.42	0.71	1.78
2007	0.29	1.06	1.11	0.68	0.98	1.07	0.99	1.46	0.71	1.67
2008	0.28	1.09	1.05	0.74	1.03	1.22	0.99	1.56	0.76	1.67
2009	0.30	1.04	1.10	0.63	0.97	1.09	1.05	1.46	0.66	1.92
2010	0.30	1.11	1.09	0.65	1.01	1.33	1.06	1.52	0.64	1.91
2011	0.28	1.07	1.04	0.64	0.95	1.37	0.97	1.47	0.64	1.99
2012	0.28	1.11	1.08	0.65	0.93	1.41	1.00	1.45	0.60	2.01
2013	0.29	1.12	1.02	0.64	0.94	1.44	1.03	1.49	0.56	2.02
2014	0.33	1.10	0.99	0.63	0.89	1.37	1.02	1.45	0.52	1.95

Data source: It is obtained by calculation according to the UN Comtrade database.
Note: The values with red color in the table indicate "comparative advantages".

Table 3   Table of comparative advantages of macro industry in China's industrial sector

	PP	RB1	RB2	LT1	LT2	MT1	MT2	MT3	HT1	HT2
2003	0.38	0.49	0.65	3.95	1.58	0.17	0.84	0.24	1.81	0.56
2004	0.31	0.49	0.58	3.80	1.56	0.20	0.96	0.23	1.94	0.64
2005	0.27	0.51	0.56	3.77	1.58	0.22	0.92	0.24	2.01	0.75
2006	0.25	0.55	0.53	3.84	1.65	0.25	0.88	0.25	2.06	0.69
2007	0.23	0.52	0.50	3.69	1.68	0.29	0.87	0.23	2.20	0.77
2008	0.18	0.49	0.53	3.79	1.79	0.33	0.84	0.22	2.32	0.82
2009	0.22	0.47	0.54	3.69	1.60	0.32	0.67	0.23	2.26	0.82
2010	0.20	0.48	0.51	3.67	1.67	0.32	0.80	0.23	2.27	0.88
2011	0.20	0.52	0.50	3.75	1.78	0.35	0.90	0.25	2.35	0.87
2012	0.18	0.52	0.48	3.71	1.92	0.35	0.82	0.25	2.31	0.86
2013	0.18	0.51	0.49	3.62	1.92	0.34	0.81	0.25	2.34	0.80
2014	0.21	0.50	0.51	3.44	1.91	0.34	0.86	0.24	2.15	0.71

Data source: It is obtained by calculation according to the UN Comtrade database.
Note: The values with red color in the table indicate "comparative advantages".

As shown in Table 3 above, China has a comparative advantage in the labor-intensive industry and the electronics and electrical industry (HT1, 2.15). Romania's economic and trade cooperation can effectively compensate disadvantages of electronics and electrical industry in Romania, while the advantages of Romania's agriculture and forestry industry and capital-intensive industry can make up for China's deficiencies in the field, thus achieving mutual benign development.

II. Analysis of industrial competitiveness at meso level

1. Analysis of the industrial competitiveness of 28 industrial sectors

According to the classification of 28 industrial sectors[3] concentrated in the *International Trade Classification* (Appendix), by the use of data from the UN Comtrade database, the index of Revealed Comparative Advantage of 28 industrial sectors in Romania, the EU and China can be obtained through calculation. Table 4 shows the comparative advantages of 28 industrial sectors in Romania.

As shown in Table 4, Romania's industries with core competitiveness are characterized by capital-intensive or resource-intensive elements, which are respectively tobacco processing industry, wood processing and bamboo and rattan grass industry, rubber industry, furniture industry, leather fur and down feather industry, clothing and other fiber products. In addition, Romania has comparative advantages in the textile industry, chemical fiber industry, ferrous metal smelting and rolling industry, metal product industry, general machinery industry, transportation equipment industry and electrical machinery and equipment industry, with stronger industrial competitiveness.

However, the disadvantages of some labor-intensive or technology-intensive industries in Romania are also very prominent, which are mainly in the stationery and sporting industry, non-metallic mineral industry, professional equipment industry, instrumentation and stationery & office machinery, beverage industry. In addition, Romania has a very weak competitiveness in the plastics industry, non-ferrous metal smelting and rolling processing industry, paper making and paper product industry and food processing industry.

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[3] 28 industrial sectors: 1.Food processing industry 2.Beverage industry 3.Tobacco processing industry 4.Textile industry 5.Clothing and other fiber products industry 6.Leather fur feather and down industry 7.Brown wood and bamboo processing industry 8.Furniture industry 9.Paper and paper products industry 10.Printing industry record media replication 11.Stationery and sporting goods industry 12.Petroleum processing and coking industry 13.Chemical raw materials and chemical products industry 14.Pharmaceutical industry 15.Chemical fiber industry 16.Rubber industry 17.Plastics industry 18.Non metallic mineral industry 19.Ferrous metal smelting and rolling processing industry 20.Non-ferrous metal smelting and rolling processing industry 21.Metal products industry 22.General machinery industry 23.Professional equipment industry 24.Transportation equipment industry 25.Electrical machinery and equipment industry 26.Electronic and telecommunication equipment industry 27.Instrumentation and cultural office machinery 28.Other industry

S/N	Name	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1	Food processing	0.27	0.30	0.29	0.28	0.28	0.31	0.44	0.49	0.53	0.54	0.53	0.51
2	Beverages	*0.27*	*0.24*	*0.23*	*0.28*	*0.32*	*0.47*	*0.30*	*0.30*	*0.30*	*0.30*	*0.29*	*0.29*
3	Tobacco processing	*0.21*	*0.05*	*0.08*	*0.21*	*2.89*	*5.17*	*6.67*	*6.36*	*6.33*	*5.96*	*5.95*	*7.40*
4	Textile industry	1.02	1.05	1.15	1.34	1.32	1.25	1.22	1.17	1.14	1.19	1.13	1.10
5	Clothing and fiber products manufacturing	*7.66*	*7.25*	*6.28*	*5.31*	*4.21*	*3.56*	*2.86*	*2.58*	*2.48*	*2.60*	*2.23*	*2.10*
6	Leather fur and down feather	*7.04*	*6.15*	*5.67*	*5.45*	*4.67*	*4.02*	*3.48*	*3.13*	*3.01*	*2.78*	*2.48*	*2.35*
7	Wood processing, bamboo and rattan grass	*3.34*	*3.49*	*3.34*	*3.42*	*3.41*	*3.44*	*3.71*	*4.12*	*4.04*	*4.77*	*4.98*	*4.65*
8	Furniture	*4.37*	*4.43*	*4.23*	*4.13*	*4.05*	*3.74*	*3.73*	*3.55*	*3.56*	*3.43*	*3.48*	*3.60*
9	Paper making and paper manufacturing industry	0.98	0.94	0.79	0.77	0.76	0.65	0.63	0.65	0.61	0.72	0.71	0.75
10	Recorded media in the printing industry	0.19	0.30	0.30	0.30	0.31	0.29	0.33	0.37	0.44	0.59	0.57	0.55
11	the stationery and sporting goods	*0.75*	*0.60*	*0.51*	*0.43*	*0.49*	*0.52*	*0.48*	*0.49*	*0.45*	*0.44*	*0.36*	*0.33*
12	Petroleum processing and coking industry	2.28	1.97	2.57	2.18	1.63	1.52	1.16	0.94	0.87	0.83	0.77	0.92
13	Chemical raw materials and chemicals	0.61	0.71	0.73	0.73	0.70	0.73	0.46	0.51	0.56	0.56	0.44	0.42
14	Pharmaceutical	0.05	0.05	0.06	0.06	0.11	0.18	0.37	0.52	0.59	0.71	0.66	0.54
15	Chemical fiber	0.14	0.19	0.18	0.32	1.03	1.26	1.53	1.66	1.79	1.92	1.70	1.64
16	Rubber	*2.22*	*2.30*	*2.47*	*2.59*	*3.27*	*3.66*	*3.81*	*3.95*	*4.07*	*4.27*	*4.33*	*4.34*
17	Plastic	0.31	0.35	0.42	0.54	0.51	0.55	0.54	0.61	0.67	0.71	0.75	0.77
18	Non - metallic minerals	*0.68*	*0.56*	*0.46*	*0.47*	*0.40*	*0.30*	*0.27*	*0.27*	*0.26*	*0.29*	*0.24*	*0.24*
19	Ferrous metal smelting and rolling	3.03	3.09	2.95	2.46	2.35	1.98	1.51	1.86	1.87	1.76	1.48	1.41
20	Nonferrous metal smelting and rolling	1.16	1.14	1.07	1.02	1.04	0.95	0.65	0.65	0.68	0.79	0.78	0.74
21	Metalwork	0.94	0.97	1.07	1.23	1.34	1.31	1.21	1.36	1.42	1.41	1.30	1.27
22	Ordinary machinery	0.69	0.88	0.84	1.00	1.13	1.06	1.05	1.07	1.13	1.17	1.30	1.28
23	Professional equipment	*0.31*	*0.31*	*0.35*	*0.40*	*0.39*	*0.45*	*0.43*	*0.34*	*0.31*	*0.36*	*0.36*	*0.42*
24	Transportation equipment	0.48	0.55	0.71	0.92	1.07	1.20	1.82	1.62	1.56	1.60	1.79	1.66
25	Electrical machinery and equipment	0.81	0.92	1.07	1.24	1.35	1.51	1.41	1.34	1.49	1.53	1.43	1.48
26	Electronic and communication equipment	0.38	0.32	0.20	0.17	0.21	0.52	0.95	1.17	1.18	0.66	0.54	0.49
27	Instrumentation and stationery & office machinery	*0.13*	*0.12*	*0.20*	*0.32*	*0.28*	*0.40*	*0.39*	*0.39*	*0.42*	*0.40*	*0.39*	*0.42*
28	Others	0.13	0.11	0.17	0.09	0.40	0.40	0.39	0.38	0.40	0.61	0.81	0.64

Data source: It is obtained by calculation according to the UN Comtrade database.

Note: The values with red color indicate the industries with "comparative advantages"; the italic

values indicate that the "comparative advantages" of the industry are more prominent; the values with blue color indicate the disadvantaged industries.

2. Analysis of horizontal comparison on industrial competitiveness at meso level

With the rank of competitiveness of the industrial sector in Romania as a reference, the rank of industries in EU and China is shown in Table 5.

Table 5   Comparison of competitiveness ranking of 28 industrial sectors in Romania, the EU and China

Product name	Romanian ranking	EU ranking	Chinese Ranking
Tobacco processing industry	1	12	28
Wood processing and bamboo rattan grass industry	2	14	8
Rubber industry	3	18	13
Furniture industry	4	15	5
Leather fur and down feather industry	5	19	3
Clothing and other textile products industry	6	26	1
Transportation equipment industry	7	6	23
Chemical fiber industry	8	27	14
Electrical machinery and equipment industry	9	23	7
Ferrous metal smelting and rolling processing industry	10	20	12
General machinery industry	11	4	16
Metalwork industry	12	8	9
Textile industry	13	25	4
Petroleum processing and coking industry	14	13	25
Plastic industry	15	17	11
Paper making and paper manufacturing industry	16	9	22
Non-ferrous metal smelting and rolling processing industry	17	22	21
Others	18	5	17
Printing and reproduction of recorded media	19	10	20
Medical industry	20	2	27
Food processing industry	21	21	24
Electronic and communication equipment industry	22	28	2
Professional equipment industry	23	3	18
Chemical materials and chemical product industry	24	7	19
Instrumentation and stationery & office machinery	25	16	10
Stationery and sporting goods industry	26	24	6
Beverage industry	27	1	26
Non-metallic mineral industry	28	11	15

Data source: It is obtained by calculation according to the UN Comtrade database.
Note: The values with red color indicate the industries with "comparative advantages"; the values with blue color indicate the disadvantaged industries.

According to the level of competitiveness, Romania's competitive industries are successively ranked in the top 13, while the industries ranked in 14 to 28 do not have competitive advantages and its competitiveness level is getting lower and lower.

There are 13 industries with competitive advantages in Romania, including four industries with competitive advantages same with the EU, such as tobacco processing industry, transportation equipment industry, general machinery industry and metal product industry, which form competition effect within the EU. However, the EU has weak competitiveness in the wood processing and bamboo rattan grass industry, rubber industry, furniture industry, leather fur and down feather industry, clothing and other fiber products industry, chemical fiber industry, electrical machinery and equipment industry, ferrous metal smelting and rolling processing industry and textile industry, while Romania still has an advantage in these nine industries. For the top 13 advantaged industries in Romania, China has three industries with weak competitive advantages, including tobacco processing industry, transportation equipment industry and general machinery industry, and these industries are ranked after China's industrial rankings. There is a need to actively carry out economic and trade cooperation between China and Romania to promote the development of these industries, which is conducive to strengthening the industrial structure optimization and value chain upgrade, and also the only way to enhance China's industrial competitiveness.

Among 15 industries with relatively weak industrial competitiveness in Romania, China has stronger industrial competitiveness in five industries, which are plastic industry, electronic and communication equipment industry, instrumentation and stationery & office machinery, stationery and sporting goods industry and non-metallic mineral industry. These industries have capital-intensive or technology-intensive endowment, with possibility to discuss the industry connection in Sino-Romanian economic and trade cooperation.

III. Suggestions on the industrial competitiveness between China and Romania

In the segmentation level of mid-scale sectors, Romania's industrial competitive advantages are successively in the tobacco processing industry, wood processing and bamboo rattan grass industry, rubber industry, furniture industry, leather fur and down feature industry, clothing and other fiber products industry, chemical fiber industry, electrical machinery and equipment industry, ferrous metal smelting and rolling processing industry, textile industry and other 13 industrial sectors, the weak competition is concentrated in the oil processing and coking industry, plastic industry, electronics and communication equipment industry, instrumentation and stationery & office machinery, stationary and sporting goods industry, non-metallic mineral industry and other 15 industrial sectors, and its industrial competitiveness has obvious advantages and disadvantages.

Because China's overall industrial competitive advantages are mainly in the labor-intensive and

technology-intensive industries, which are the weakness of Romania's industrial competitiveness. On the contrary, Romania has obvious advantages in the capital-intensive and resource-intensive industries that are relatively weak in China. It is suggested that Sino-Romanian economic and trade cooperation is carried out in the form of "industrial connection and industrial cooperation" to realize the vision of complementing the bilateral industries, optimizing the industrial structure, improving the industrial value chain and enhancing the industrial competitiveness.

The starting point of industrial connection is divided into the following two aspects:

(I) "Industry connection and industrial cooperation" is concentrated in the industries with "Romania's advantages and China's disadvantages", forming complementary effects in the industry. In accordance with the gap between advantages and disadvantages, they are successively tobacco processing industry, transportation equipment industry and general machinery industry;

(II) "Industrial connection and industrial cooperation" is concentrated in the industries with "China's advantages, Romania's disadvantages", to enhance the bilateral industrial competitiveness. In accordance with the gap between advantages and disadvantages, they are successively plastic industry, electronics and communication equipment industry, instrumentation and stationery & office machinery, stationery and sporting goods industry and non-metallic mineral industry.

Reference

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Appendix

Comparison table of classification of macro industry and subdivision industry

Macro industry	Corresponding subdivision industry
Primary industry, PP	1. Food processing industry 2. Beverage industry 3. Tobacco processing industry 20. Non-ferrous metal smelting and rolling processing industry
Resource - intensive industry	
-Agriculture and forestry industry, RB1	7. Wood processing and bamboo rattan grass industry 8. Furniture industry 9. Paper making and paper product industry 15. Chemical fiber industry 16. Rubber industry
-Other resource-intensive industries, RB2	12. Petroleum processing and coking industry 13. Chemical materials and chemical product industry 18. Non - metallic mineral industry 20. Non-ferrous metal smelting and rolling processing industry
labour intensive industry	
-Textile industry, LT1	4. Textile industry 5. Clothing and other fiber products industry 6. Leather fur and down feather industry
- Other labor-intensive industries, LT2	10. Printing and reproduction of recorded media 11. Stationary and sporting goods industry 19. Ferrous metal smelting and rolling processing industry 21. Metal product industry 28. Others
Capital - intensive industry	
-Motor vehicles, MT1	24. Transportation equipment industry
-Processing industry, MT2	13. Chemical materials and chemical product industry 17. Plastic industry 19. Ferrous metal smelting and rolling processing industry 24. Transportation equipment industry
- Engineering industry, MT3	21. Metal product industry 22. General machinery industry 23. Professional equipment industry 24. Transportation equipment industry 27. Instrumentation and stationery & office machinery
technology-intensive industries	
-Electronics and electrical industry, HT1	25. Electrical machinery and equipment industry 26. Electronics and communication equipment industry 27. Instrumentation and stationery & office machinery
-Other high-tech industries, HT2	13. Chemical materials and chemical product industry 14. Medical industry, 24. Transportation equipment industry 27. Instrumentation and stationery & office machinery