

Identifying business relationships in textile cluster: The case of the Ivanovo region



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Study focus and result

The study focuses on identifying relationships of textile cluster actors, with the aim to further developing recommendations for increasing their effectiveness.

The authors propose a method for identifying industrial clusters based on the analysis of business links, testing this method on the case of the Ivanovo region textile cluster.



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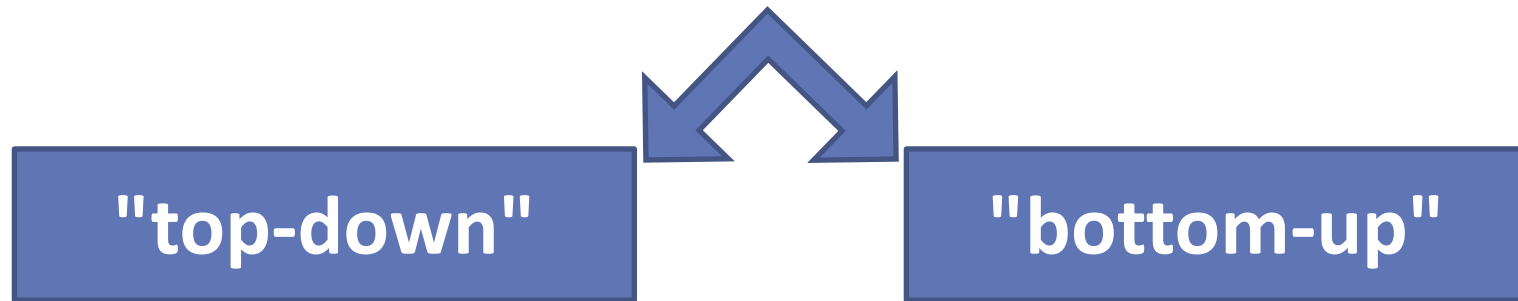
4 steps of the study

- **1 step** – we have determined the [industry affiliation](#) of potential [participants](#) of the Ivanovo textile cluster
- **2 step** – based on the data from the industrial registers, we will compile [a list of potential participants](#) in the textile cluster and determine their characteristics (age, product range, size, key performance indicators, form of ownership, and others).
- **3 step** – we have [built visualization of ties](#) for actual interacting enterprises using the service Kontur.Focus.
- **4 step** – we conducted [a series of in-depth interviews](#) with the heads of firms on the history of education, the cluster management system, the availability of a common infrastructure and platform for enterprise interaction, the nature of relations between the participants and, finally, the presence of a synergetic integration (system) effect for the cluster participants (*not finished step*).

The specific features of industry clusters

- geographical localization;
- the "core" of manufacturing companies in a certain industry;
- complementarity of resources and competencies (*Brandenburger, Neilbaff, 2012*);
- coopetition;
- network externalities (*Felzensztein, Gimmo, Deans, 2018*);
- the long-term and stable relationships of cluster members (*Bode et al., 2010; Breznitz, 2013*)

Approaches to identifying industrial clusters



- "top-down" approach - focused on identifying vertically organized structures (the analysis of intersectoral balance sheets – "input-output" tables containing coefficients of direct costs of related industries' products)
- "bottom-up" approach - looking for clusters in a specific territory based on the presence of previously known enterprises and leading industries (network analysis has a number of tasks related to the identification of business relationships – one of the most difficult to observe indicators)

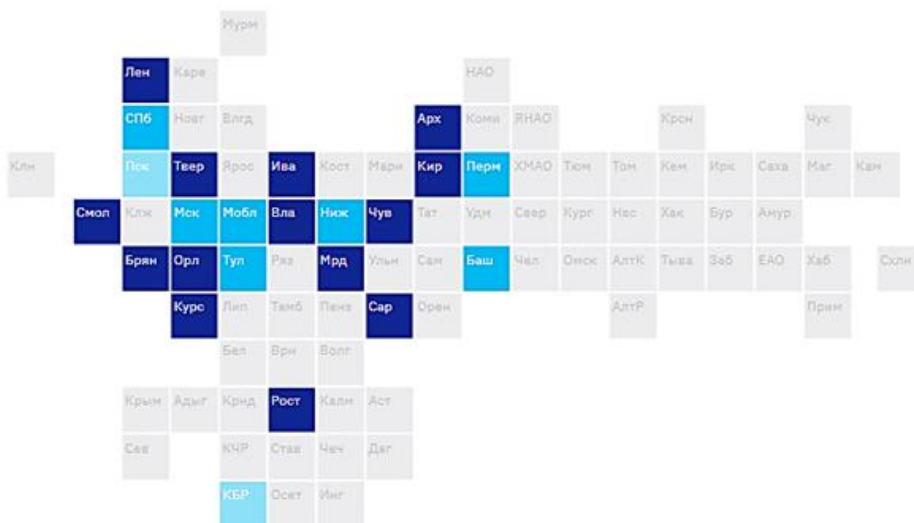
Russian Cluster Observatory of the HSE

Clothers

<https://map.cluster.hse.ru>



Регионы, специализирующиеся в отрасли



	Доля региона в отраслевой занятости, %	Доля отрасли в региональной занятости, %	Зарплата, тыс. руб.
Ростовская область	9.32	0.90	25.8
Республика Мордовия	6.28	2.65	7.4
Чувашская Республика	5.12	1.67	11.5
Кировская область	4.41	1.18	10.4
Смоленская область	4.16	1.48	22.7
Ивановская область	2.77	1.31	11.5
Курская область	2.75	0.81	10.6
Владимирская область	2.70	0.68	14.2
Орловская область	2.62	1.17	5.5
Саратовская область	2.51	0.38	7.5
Тверская область	2.50	0.68	18.8
Ленинградская область	1.83	0.36	22.9
Брянская область	1.71	0.54	16.3
Архангельская область	1.65	0.43	5.3
Московская область	6.19	0.28	32.8
Москва	3.36	0.07	67.1
Нижегородская область	3.03	0.28	22.5
Пермский край	2.46	0.31	8.5
Республика Башкортостан	2.38	0.23	16.5
Санкт-Петербург	1.94	0.10	52.3
Тульская область	1.31	0.30	25.2
Псковская область	1.14	0.62	32.0
Кабардино-Балкарская Республика	0.82	0.62	14.2

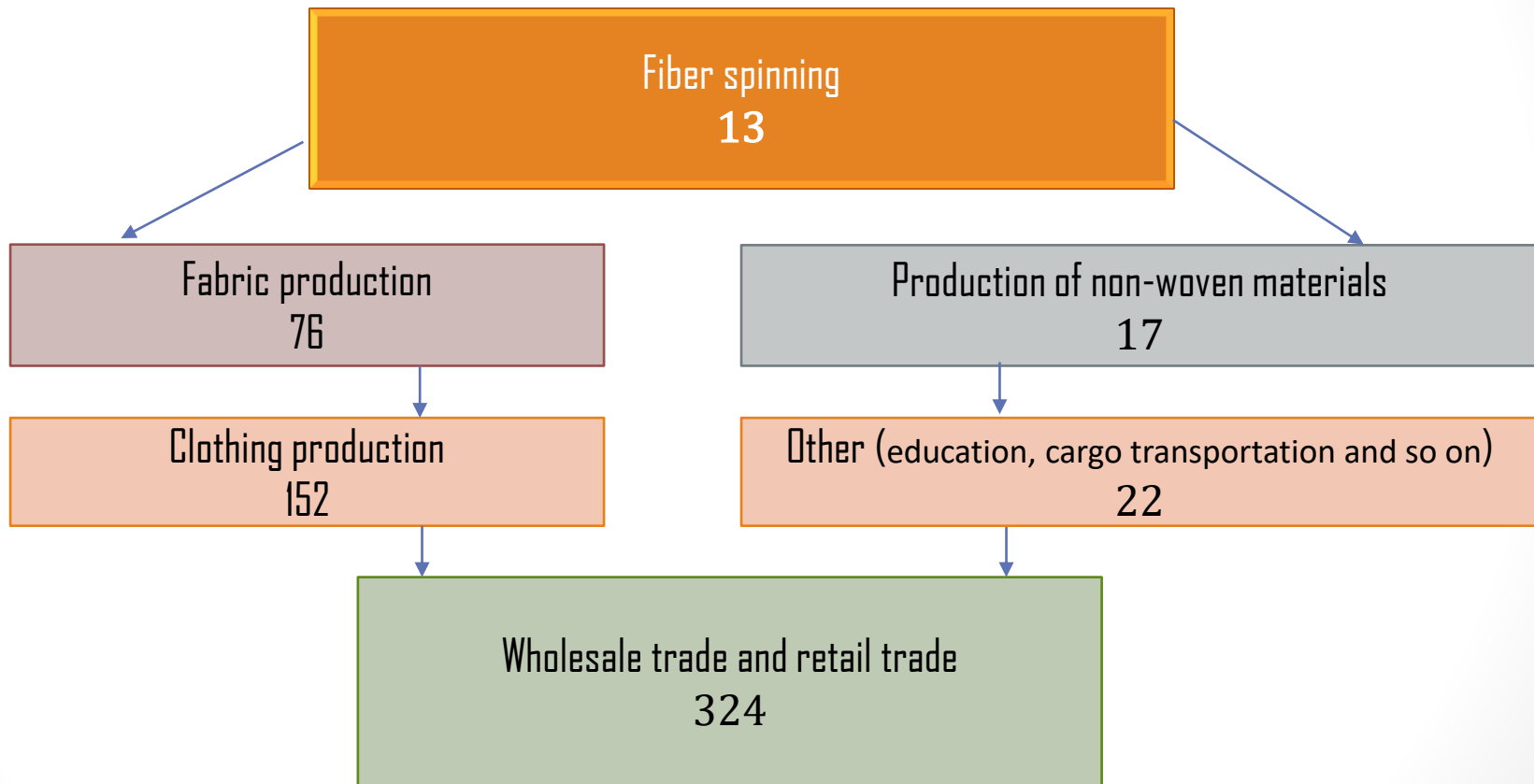
■ Отрасль национальной и локальной значимости
 ■ Отрасль национальной значимости
 ■ Отрасль локальной значимости

Fragment of the “input-output” table

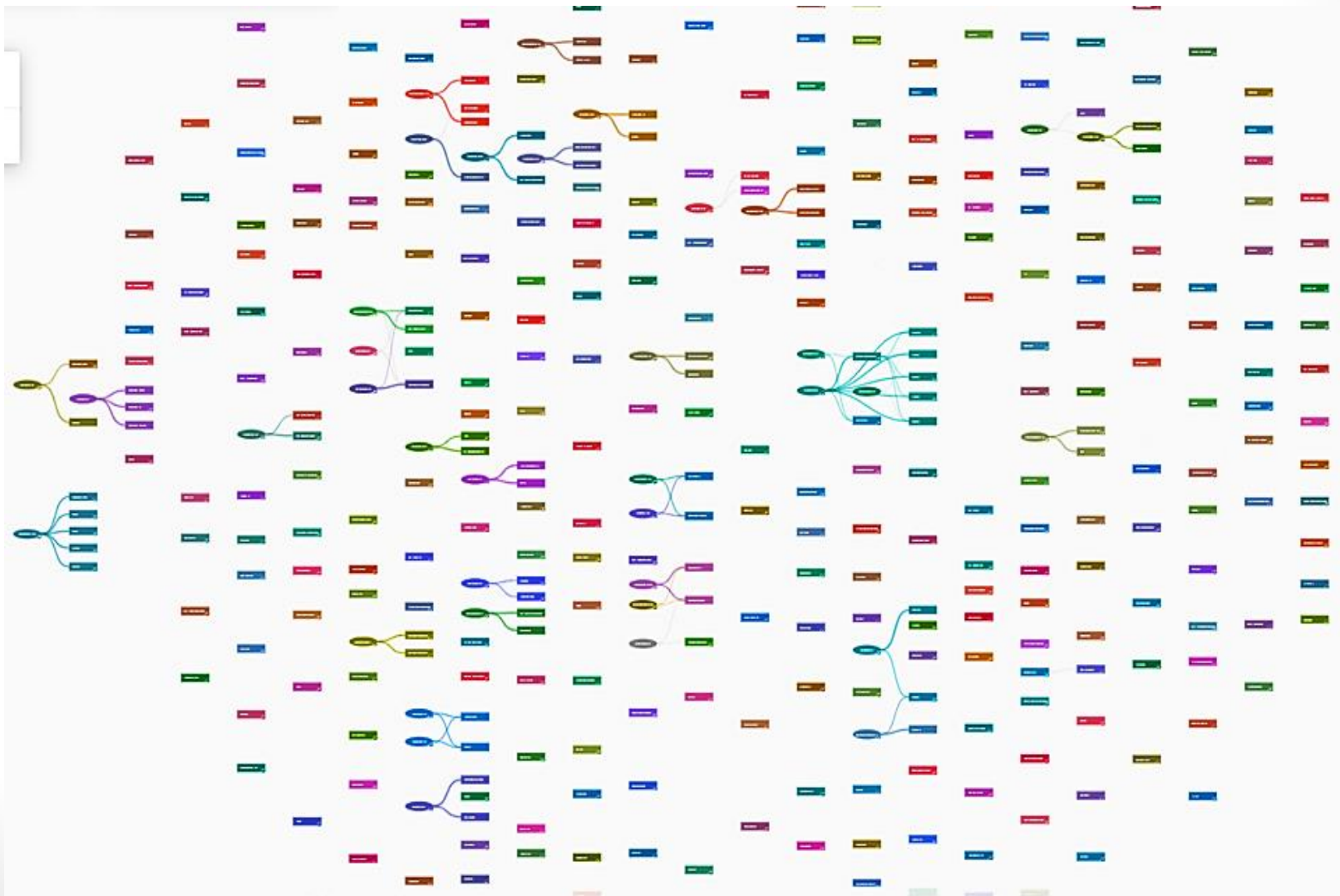
COEFFICIENTS OF TOTAL COSTS of DOMESTIC PRODUCTS for 2016 (in rubles per 1000 rubles of products)

		PRODUCTS	Textiles	Clothing and its accessories	Leather and leather products
	Codes		17	18	19
№			024	025	026
010	12	Uranium and thorium ores	0,01	0	0,01
011	13.1	Iron ores	0,59	0,41	0,46
012	13.2	Non-ferrous metal ores	0,39	0,32	0,26
013	14	Other mining products	2,56	0,94	1,28
014	15.1	Meat, meat products and other animal processing products	1,48	0,81	83,13
015	15.2	Fish, processed fish products and canned	0,02	0,02	0,06
016	15.3	Fruits, vegetables, potatoes, processed	0,08	0,05	0,18
017	15.4	Oils and fats, animal and vegetable	0,25	0,1	0,66
018	15.5	Dairy products and ice cream	0,10	0,07	0,25
019	15.6	Products of flour and cereal production, starches	0,25	0,1	0,46
020	15.7	Ready-made animal feed	2,34	0,66	5,92
021	15.8	Other food products	0,27	0,21	1,25
022	15.9	Drinks	0,06	0,05	0,06
023	16	Tobacco products	0,00	0	0
024	17	Textiles	1122,57	183,92	33,36
025	18	Clothing and its accessories	0,53	1019,52	9,92
026	19	Leather and leather products	0,16	4,34	1149,15

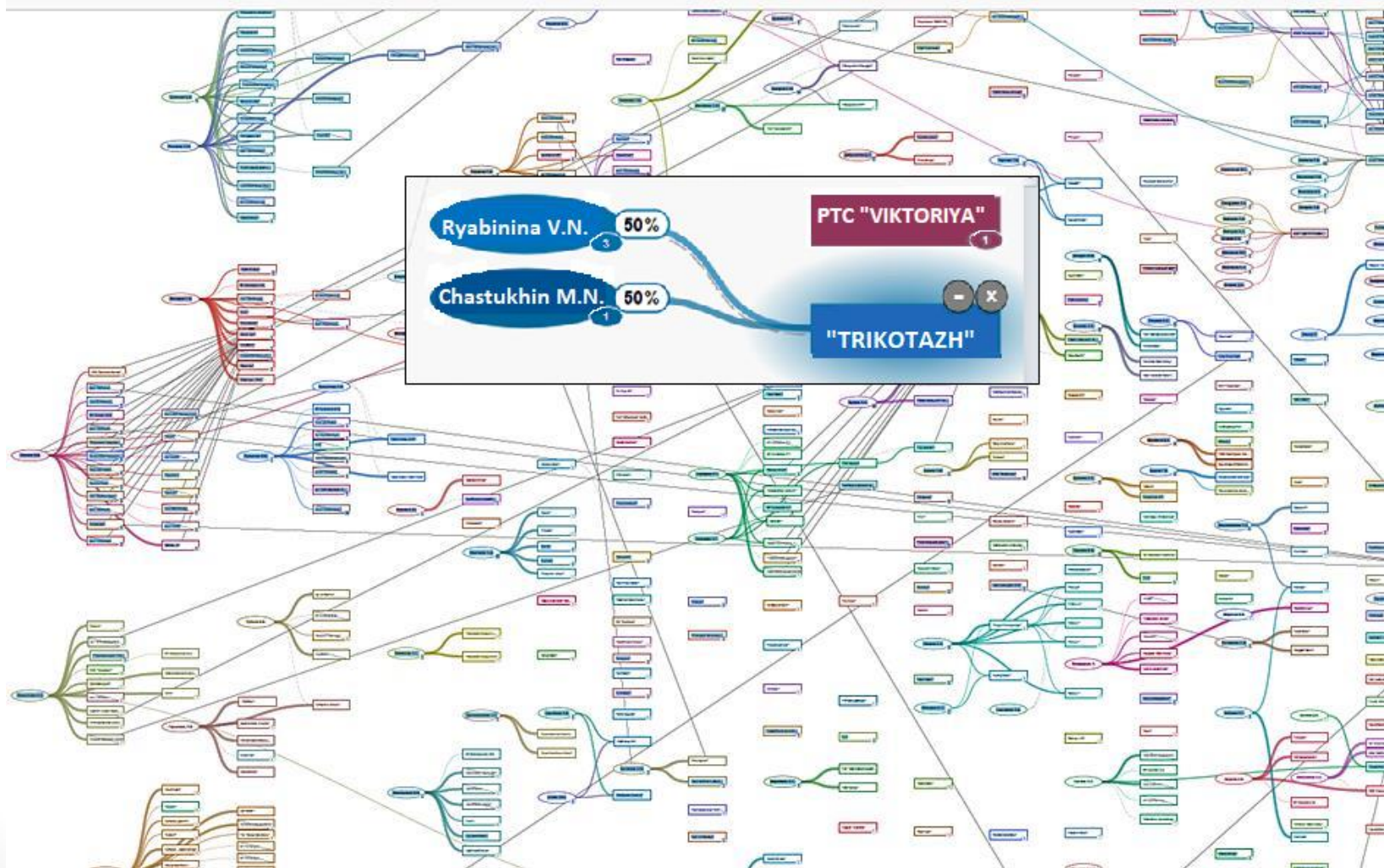
A list of 928 companies related to the production and trade of textiles and clothing operating in the Ivanovo region



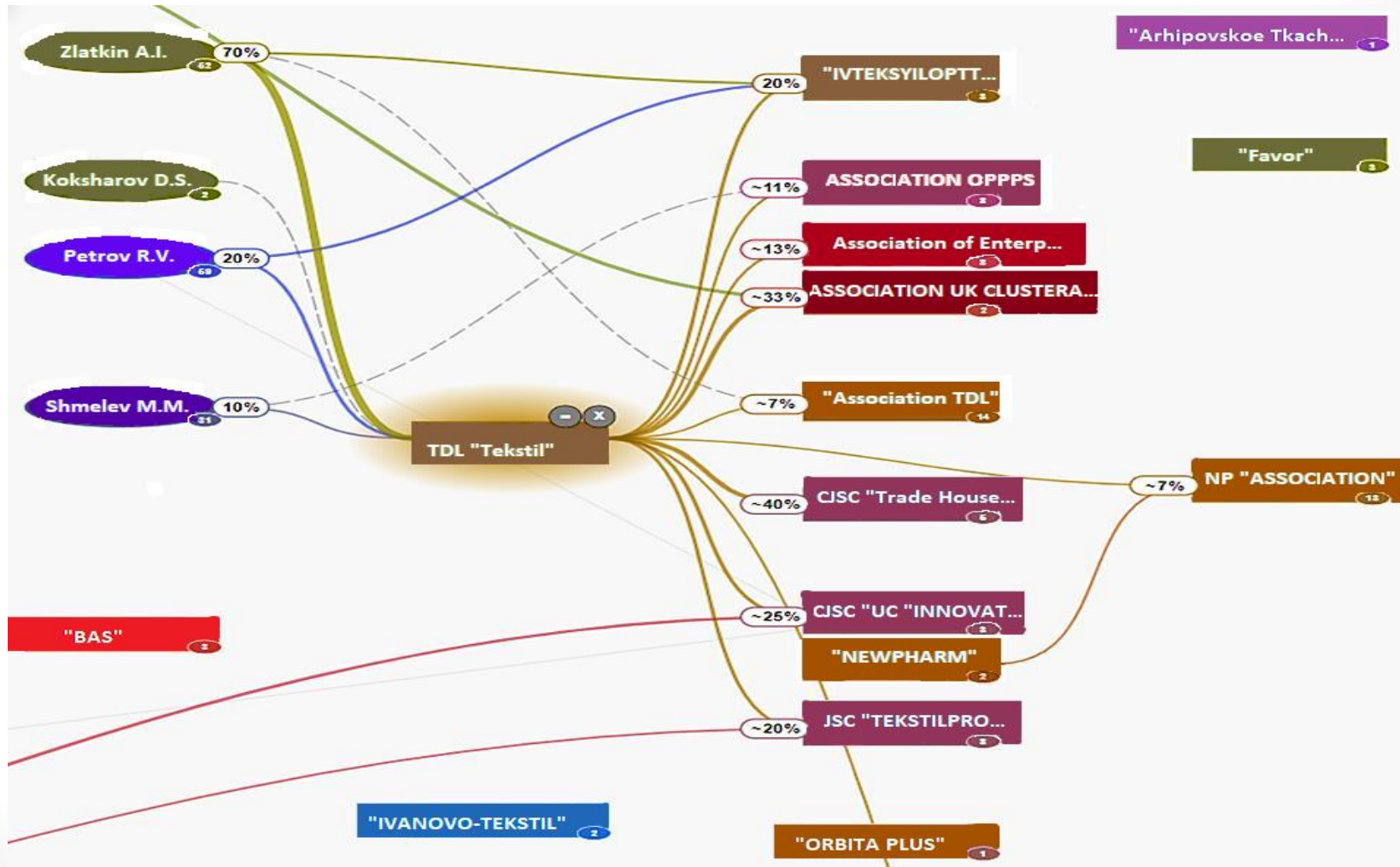
Visualization of ties between textile industry enterprises in the Ivanovo region (fragment)



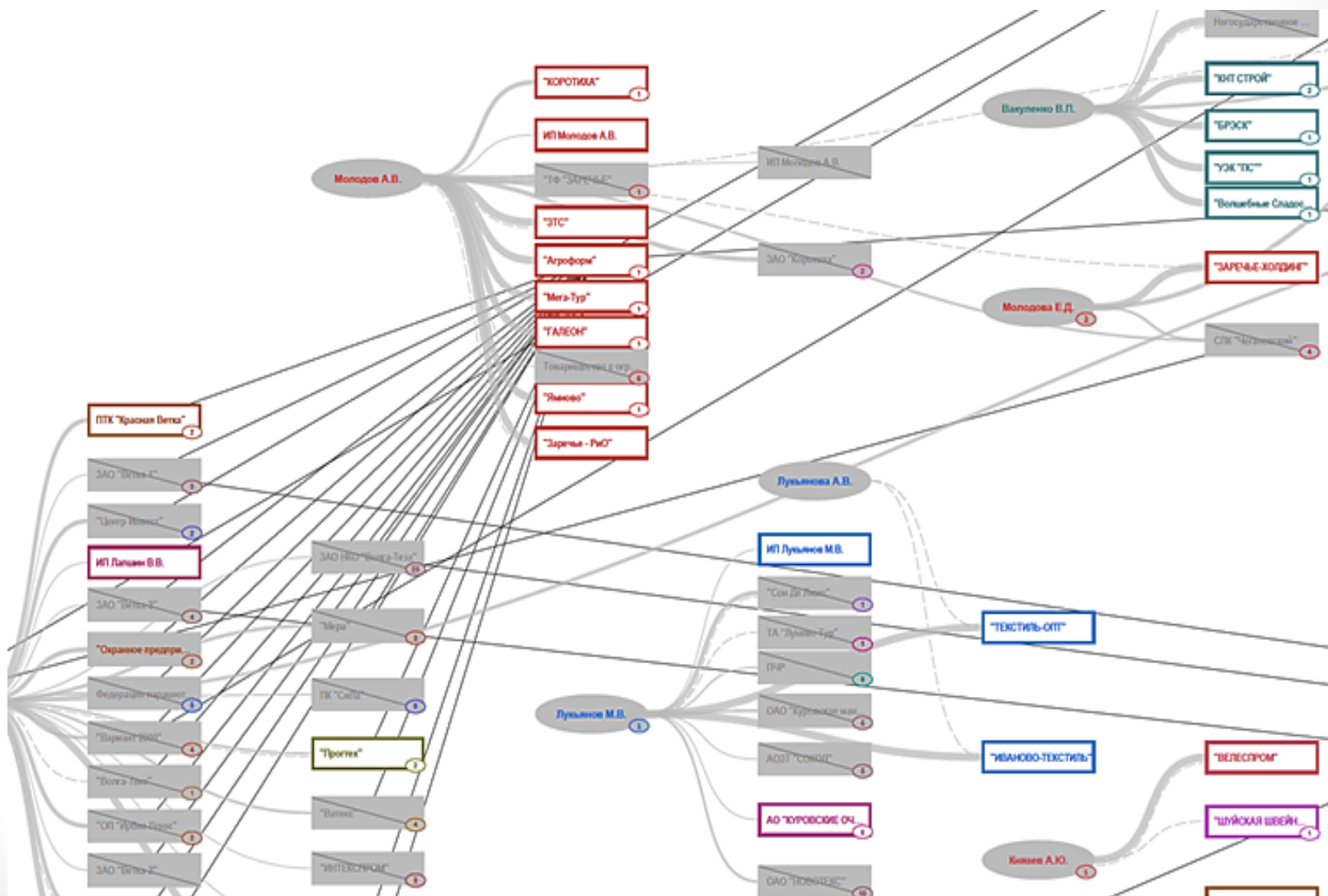
Visualization of distant and historical ties between textile industry enterprises in the Ivanovo region



Visualization of TDL Textile LLC distant and historical ties (Ivanovo Region)



Visualization of residual ties between textile industry enterprises in the Ivanovo region (fragment)



Summing up the brief results

- 1) historically, there were groups of textile enterprises in the Ivanovo region, whose participants had links with scientific organizations, with the administration of the region, with associations of light industry enterprises, and with large regional companies. Historical ties formed a complete vertical "fiber production — fabric production" — "tailoring" — "sewing colleges" — "trading houses" — "business";
- 2) over the past 10 years (2011-2021), almost 80% of large textile industry enterprises in the Ivanovo region have ceased their activities without subsequent reorganization. They are liquidated or are in the process of bankruptcy (at the time of evaluation, 24 operating groups of textile enterprises account for 19.5% of the total number of 123 groups that previously existed in the region, united by fairly close mutual ties).
- 3) information about binary relationships between companies in the textile industry makes it possible to build a common network of interacting firms and to quantify the role of each firm from the methodology of network analysis point of view – based on network metrics.