

# Economic clusters in the Russian Empire\*

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## Abstract

In this paper I study the location of manufacturing industries in the Russian Empire. The study is based on a novel geo-coded dataset including data on the 1908 manufacturing survey of plants augmented with province-level and district-level socio-demographic indicators.

First, I reveal so-called “cluster zones” of plants of different sectors, see Figure 1 for 30-km and 50-km cluster zones for chemical plants. I find that the clusters highly depended on sector and on the spatial distribution of raw sources of an industry.

Second, I argue that plants located in a cluster zone benefited from being close to plants of the same industry. Estimates of total factor productivity functions with spatial dependences reveal significant differences for plants belonging to a cluster in comparison with plants which were not in a cluster zone. I find that members of clusters were more efficient, they displayed higher technological level, and the plants were more productive.

Third, I study spatial distribution of plants across transportation networks of the Russian Empire (railroads, post roads, and waterways). I find that proximity to transportation networks depended on industry.

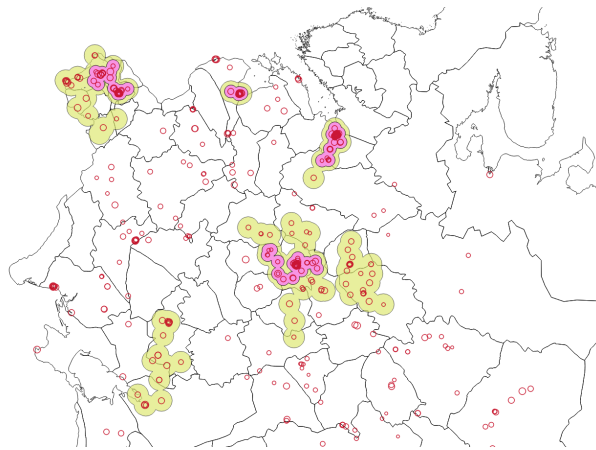


Figure 1: Chemical plants of the European Russia, 1908.

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\*The study has been funded by the Russian Academic Excellence Project ‘5-100’.

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