

The development of collaborative localized networks under the COVID-19

Preliminary draft



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OBJETIVOS / OBJECTIVES

The access to a social network of relationships between collocated firms, business associations and research institutes have been proved as a key element in explaining regions development, competitiveness or advantages or overcome contexts of emergency. This research examines how this social network is reconfigured under the Covid-19 crisis to provide collective assistance to the disaster. More precisely, the objectives of this research are:

- To build on theory about social network analysis and emergency management literature to explain the main drivers to create collaborative localized networks (CLN).
- To measure the effect of agglomeration in the development of CLN.
- To evaluate the role that geographical and cognitive proximity between firms play in creating these CLN.
- To understand how relationships from outside the location affect the evolution of CLN.

METODOLOGÍA / METHODOLOGY

We used secondary data from thorough analysis of news reported by regional and local digital media. The list of 123 active media firms (35.8% Alicante, 12.1% Castellon and 52% Valencia) was obtained by merging information from the regional associations of business media, journalist associations, and specialized web pages. 41 of these firms published news involving 307 collaborations (34.9% Alicante, 10.4% Castellon and 52.4% Valencia) from March 16, 2020–April 27, 2020, starting one day after the declaration of the State of Alarm in Spain on March 15. This period essentially covered the emerging response operations that were taken by regional organizations such as firms, associations, knowledge agents (university, research centers, hospitals), local governments and regional government. We consider that a CLN emerge when a new indicates that two or more agents are collectively undertaking an initiative to provide support to the covid-19.

GRÁFICOS Y TABLAS / GRAPHS AND TEXT

	B	S.E.
Edges	***-5.100	.511
Transitivity	***.551	.100
Popularity	***3.502	.537
Geographical distance	***-3.176	.259
Cognitive proximity	.001	.000
Agglomeration	*.001	.000
Non-local relationships	***.265	.018
Population movility	***.033	.010
Rural	***.403	.125
Contagion rate	***.021	.007

***p-value<.01; **p-value<.05; *p-value<.1
 AIC: 3186. BIC: 3271

RESULTADOS / RESULTS

We undertook an ERGM. Results show that the development of CLNs under the Covid-19 emergency has a clear location advantage. Geographical distance between partners had a negative impact on CLN development while local agglomeration, measured by density of firms in each location, was positively related to CLN. Nevertheless, having partners from outside the location had a positive effect.

Also, we observed that local labour force mobility had a positive effect and also, in rural areas firms have more propensity to develop these CLN. Although barely, cognitive proximity had on significant effect.

CONCLUSIONES / CONCLUSIONS

Networks have been the most utilized tool as they can provide an adaptative and flexible response in uncertain contexts as Covid-19. In this research we aim to understand how these CLN may emerge. Results confirm the relevance that location and agglomeration advantages provide, while also indicates that partners from outside the location are relevant. Surprisingly, cognitive proximity between partners of the CLN is no significant for this kind of networks while being in rural areas makes the CLN more probable to be developed.

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