TITLE: INDUSTRIAL CLUSTERING AND SECTORAL GROWTH: A NETWORK DYNAMICS APPROACH

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COUNTRY: PORTUGAL

KEYWORDS: INPUT-OUTPUT ANALYSIS ; NETWORK DYNAMICS ; INDUSTRY CLUSTERING ; PORTUGAL ; SECTORAL GROWTH

PAPER CONFERENCE CODE: 60

FULL PAPER IN CD?: YES

ABSTRACT:

Cluster analysis has been widely used in an Input-Output framework, with the main objective of uncover the structure of production, in order to better identify which sectors are strongly connected with each other and choose the key sectors of a national or regional economy. There are many empirical studies determining potential clusters from interindustry flows directly, or from their corresponding technical (demand) or market (supply) coefficients, most of them applying multivariate statistical techniques. In this paper we follow a different strategy. Since it is expected that strongly (interindustry) connected sectors share a similar growth and development path, we will try to uncover clusters from sectoral dynamics, by applying a moving average time window network measure based on sectoral distances, quantified using the correlation coefficients between industry annual gross output and value added growth rates. An application is made, comparing these growth based cluster templates with interindustry based ones, using Portuguese input-output data.