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Coevolutionary network analysis of teaching core stricto sensu: an exploratory study of the management area in Brazil

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Introdução

The teaching relations among teaching core at stricto sensu departments are a response of the community without studies in the academic literature in Brazil. The origin of organizations and institutions is the classic concern of institutional theory. A critical challenge is to explain the genesis of organizations and institutions, and particularly why and how specific elements combine to make new organizational arrangements possible at a certain point in time and space. The approach is to perform a longitudinal study in the stricto sensu domain, to follow its evolution from 1990 to 2020.

Problema de Pesquisa e Objetivo

The research question is how does the evolution of networks among teaching cores in the areas of management, and regulatory acts, reveal the constitution of organizational novelties in stricto sensu programs in Brazil? To answer this question, it is necessary to answer two secondary questions: 1 - What does the organizational genesis of the system tell us about its directions; and 2 - How the structure reacts to the emergence of organizational novelties in the system.

Fundamentação Teórica

In the coevolutionary theory of social networks, an organization is formed by a non-random set of skills. And, to make up this set, in addition to the strategy of verticalization of skills, another strategy is the horizontalization of skills, which and when integrate can form production and feedback hypercycles (Padgett, 1997). Padget and Powell (2012) explain how coevolutionary theory uses an analogy with chemistry for the microsocial definition of an organization and can be a reference for the meso-social constitution of an industry or sector (Ramström, 2018).

Metodologia

A problem gaining attention in network science is the genesis of networks. To fulfill the secondary objectives, the: 1 - Construction of the longitudinal digraph for extraction of longitudinal metrics that subsidizes (i) Extraction, on an annual basis, of the cyclic integrality, and (ii) Annual test of the plausibility of probabilistic distributions of the power law (preferential attachment) and exponential (homogeneity) to have access to deviations probabilistic models among models; and 2 - mapping of the relevant CAPES/MEC legal acts to access the system's reactions to novelties.

Análise dos Resultados

The network genesis tells us, that from 2004, the system began to organize itself into cycles among teaching cores. The cycles denote the system begins to be inserted into learning cycles. Over the years, the system intensifies the cycle composition, ranging from 2004 to 2020 from 10% to 25% of the teaching cores in this model (Padgett, 1997). In 2013, the teaching cores become increasingly intertwined, in this year there is the formation of the main component composed of 50% of the PPGs, by 2020 this component reach 70% PPGs, which favors network governance.

Conclusão

How does the evolution of networks among teaching cores in the areas of management, and regulatory acts, reveal the constitution of organizational novelties in stricto sensu programs in Brazil? So, the trajectory of the system shows that teacher sharing has existed in academia since the 1990s, and regulatory acts have boosted the system, giving validity to logic. However, the system never considered the possibility of transposition of the DL model into the context of stricto sensu

graduation programs in administration. The Open University of Brazil was instituted by decree of the MEC in 2006.

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