

Towards a methodology for identifying path dependence in the evolution of human resources practices

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Abstract: The path dependence approach seems to be well suited for analyzing certain decisions in human resources management. Within this paper, we will try to establish a framework for the application of an evolution model in human resources practices by using cladistics.

Keywords: path dependence; human resources management; evolution of organization; collaborative teams.

1. Introduction

Over the last years, aspects such as the globalization of business markets, stronger pressures to achieve efficiency gains as well as quality, and shorter production and products life cycles are forcing firms to maximize the adaptability of their production systems (Adamides y Pomonis, 2009). In this context of globalization, re-engineering business processes, improving efficiency, improving quality, customization, etc.. we see that the evolution of organizations is particularly relevant (ElMaraghy et al., 2008).

There are different methodologies to study transformations in firms. Recently, the biological concept of co-evolution has been adopted by some researchers in organization studies, they particularly use cladistics to classify the different stages of evolution of firms. However it has been found incremental and discontinuous trajectories in transformation processes. In this context, it is argued that path dependence approach helps understanding those discontinuous transformations. Particularly, it explains how some organizational decisions are influenced by decisions taken in the past.

Transformations in production system are often coupled with changes in human resource management policies and practices. One of the key transformations in work practices over the years has been the introduction of teams as a mechanism to deliver enhanced productivity and quality.

This paper aims to join these two lines of investigation opened by the scientific community. I will try to establish a framework for using cladistics in order to identify an evolution model in human resources practices.

2. Theoretical context

Some authors start using, in a still incipient way, the biological concept of evolution, extrapolated to the evolution of organizations, products and production systems (Adamides y Pomonis, 2009; AlGeddawy y ElMaraghy, 2010; Lee y Jo, 2007).

This new evolutionary perspective for analyzing organizations and their production systems takes into account its history and identifying their likely future evolution (Baldwin et al., 2005). This theory is based on the diversity of organizations and changes in their processes are governed by evolutionary mechanisms.

In this context, some author have began using cladistics in their researches (Baldwin et al., 2005; ElMaraghy et al., 2008; Leseure, 2002; McCarthy et al., 2000; Tsinopoulos y McCarthy, 2000). Cladistic studies can provide organizations with a map of the ecosystem in which they exist.

Subsequently, by phylogenetic analysis, it can be determine which action should be implemented to bring about change (McCarthy et al., 2000).

It has been found that faced with the same actions carried out in different firms, the results can be very varied. The Path Dependence Theory argues that decisions we take now are strongly conditioned by decisions taken in the past. This is the reason why, to the same action, or decision, not all the processes progress to a unique and predetermined equilibrium point. The final situation depends, in part, on the path taken to reach it. This evolution vision of the processes is substantially different from the 'universalist' vision. 'Universalist' vision, in a simplistic way, assumes that the results of deployment operation management practices are the same, regardless the initial conditions, or stages through which is passed (Galan y Sanchez-Bueno, 2009; Schroeder et al., 2002; Tzafirir, 2006).

The path dependence approach is relatively recent. The first researches in the area of economy were performed by evolutionary economist in 1982. It seems that the application to the operation management is still a novel way (van Driel y Dolfsma, 2009) and, therefore, it needs to be developed.

For mathematicians, a random process is path dependent if the probabilities of transition to alternative states depend, not only on the present state, but also on the previous states that it had reached before (Puffert, 2008). For the business organization researchers, we are interested, not only in identifying changes of the probabilities of implementation of states (practices), but also, changes on the probabilities of different result which can be reached in the future due to the implementation of the different practices in a determinate order. This concept is called, by mathematicians, not ergodic random process (Puffert, 2008). By definition, a stochastic process is one in which the averages calculated from past observations cannot differ consistently from the time average of the future events. Not ergonomic processes have some relation to chaotic systems. Chaotic systems are those in which an apparently insignificant incremental change results in large effects, and therefore it makes that the system evolves in a completely different way (Levy, 1994).

Path dependence consists of two, separate elements: lock-in mechanism and sensitivity to initial conditions (van Driel y Dolfsma, 2009). Once an initial decision has been taken, the decision-maker is averse to make radical changes. This explains why the effect of initial decisions tend to persist, even when circumstances that led to make these initial decisions have lost relevance or validity. As time passes and decisions are concatenated to each other, it becomes increasingly costly to change the direction that was traced perhaps without considering the long-term consequences (van Driel y Dolfsma, 2009).

3. Future Research

At this point it has been found that Path dependence approach and cladistics, although are not very extended at the moment in social science, they have been used mainly in management operations and supply chain management. However, they have not been broadly used in human resource management neither in collaborative teams. Therefore, a future research line is been opened: explaining path dependence in human resources and showing how to implement it.

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