Chapter 11
A Triple Helix Model Based on Open Collaborative Innovation in Colombia: A Proposal for Higher Education Institutions

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ABSTRACT

The open collaborative innovation model based on a triple helix proposes a way by which collaborative processes and innovation networks create value. It contains seven components: (1) innovation challenges, (2) internal-external knowledge, (3) paradigm change, (4) leadership, (5) interinstitutional and transdisciplinary teams, (6) communication, and (7) creative solutions; and six principles: (1) identity, (2) agreements, (3) flexibility, (4) commitment, (5) recognition, and (6) trust. This research emphasizes on the importance of Component 5 for programs of open collaborative innovation, since the joint work among the academy, the government, and the industry to create a triple helix consolidates systems of regional innovation that are necessary to improve national competitiveness and productivity.

INTRODUCTION

To begin, it is necessary to define the concepts that compose the Model of Open Collaborative Innovation. [1] Model from Latin-Modello, means a reference to be imitated or reproduced. [2] Innovate from Latin-Innovare, means to change something by introducing new features. [3] Open from Latin-Apertus, means said from an unsolved matter or business. [4] Collaborate from Latin-Collaborare, implies work

with others towards the realization of a task. Therefore, an open, collaborative innovation model refers to many people or organizations that modify, change or introduce new features into an unsolved matter or business of an organization, which becomes a reference for others (May 2018; Vandervelde, 2018).


When interpreting and putting these definitions together, it is possible to deduct that a collaborative process integrates a number of actions in consecutive stages to advance towards the completion of work. While an innovation network appears when many interconnected people or teams interact among themselves to create something (Leue-Bensch, 2017; Podmetina, Hafkesbrink, Petraite, Teplov and Dąbrowska, 2015).

Regarding innovation networks, this chapter shows the classification of networks, the meaning of networks of value, the gaps that affect such systems, the architecture of a business network, the systems in the relation Academy-Industry-Government, the types of collaborative networks and the move from an innovation network towards online platforms.

Finally, the chapter presents the methodology used to validate the hypothesis related to interinstitutional and transdisciplinary teams and their correlation with the recognition to contribute to creative solutions to innovation challenges. Such information was obtained from people who participated in Catedra Bancoldex, a program taught since 2015 at various Colombian universities, coordinated by Universidad EAN, and that promotes the relation Academy-Industry-Government. Innovation challenges presented in Catedra Bancoldex 2016 have been structured by the Program of Productive Transformation, an autonomous Bancoldex unit.

LITERATURE REVIEW

Collaboration, Co-Creation, and Cooperation

The difference among collaboration, co-creation, and cooperation is not clear. However, their definitions can clarify their differences.

Co-creation refers to the joint creation of a product by the enterprise and its customers. It is the real contribution from customers to the product, considering their needs (Prahalad & Ramaswamy, 2004; Ramaswamy, 2011; Vargo & Lusch, 2008; Fuller, Hutter & Faullant. 2011; Roberts, Baker & Walker, 2005). The Nysveen & Pedersen (2014) Model of Co-creation proposes the customer interaction with the product, considering the sensorial, cognitive, relational, affective and behavioral dimensions. Cooperation refers to the communication between independent enterprises that have a specific purpose, allowing them to exchange resources to get a mutual benefit (Araiza & Velarde, 2008). There are four types of cooperation:

1. In production, by which enterprises benefit from scale economies and cost reduction (Strauss, 2017)