# Conceptual Framework for Collaborative Open Innovation With a Startup Ecosystem

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#### **ABSTRACT**

Collaboration and the startup ecosystem have become key elements within the discourse pertaining to open innovation processes in big corporations and startups alike. Even though the practice and academic use of such terms to describe these forms of collaboration with startup ecosystems has increased over the last five years, little research has been done to precisely define their meaning and characteristics within the context of open innovation. The purpose of this article is to investigate these terms, as well as to examine how they differ from related and often-interchanged concepts. By means of a systematic literature review, these definitions are derived, and a foundation for theoretical knowledge is provided. These definitions are expected to facilitate a consensus in the understanding and usage of these terms among academics and professionals.

#### **KEYWORDS**

Co-Innovation, Collaboration, Corporate Innovation, Entrepreneurship, Innovation, Literature Review, Open Innovation, Startup Ecosystem, Startups

#### INTRODUCTION

In recent years, the terms collaboration and startup ecosystem have been frequently used by business executives, organizations and academics within the context of open innovation. The last decade has seen the rapid growth of digitalization and the use of open innovation practices within the startup community. This is owing to the utility offered by technology in the successful exploitation of new opportunities and in dealing with the accompanying challenges brought about by the rapidly changing technological landscape (Chesbrough & Brunswicker, 2014). Hence, these terms have gained considerable importance and the usage of such terms has become frequent (Borissenko & Boschma, 2016).

Digitalization is a fast-moving megatrend, leading to rapidly changing circumstances for entire industries, and thus, it is widely believed to create both opportunities and challenges for businesses of all sizes. It is expected that digitalization will most affect large corporations, who face these challenges through collaborative open innovation (Chesbrough & Brunswicker, 2014). Opening up the innovation process to external partners has been recognized by both researchers and managers

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as a key factor in successful innovation (Gassmann & Enkel, 2004). In particular, collaborative open innovation practices between large corporations and startups has gained momentum over the last few years (Chesbrough & Brunswicker, 2014; Mocker, Bielli, & Haley, 2015; Hathaway, 2016; Waters-Lynch & Potts, 2017). The term startup ecosystem is closely associated with open innovation. Silicon Valley, for example, is often referred to as a startup ecosystem (Engel & del Palacio, 2009; Oxford Dictionaries, 2017; Pauwels, Clarysse, Wright, & Van Hove, 2016), wherein open innovation considered a key element in fostering entrepreneurship (Smorodinskaya, Russell, Katukov, & Still, 2017) and the ability to harness the newest ideas and concepts (Borissenko & Boschma, 2016; Durst & Poutanen, 2013; Mason & Brown, 2014).

Even though the practice of, as well as the academic interest in, collaborative forms of innovation with startup ecosystems has increased over the last five years, little research has been done on understanding precisely what these terms - open innovation and startup ecosystem - actually mean, and how one can comprehensively define their characteristics. One of the main challenges of investigating collaboration and startup ecosystems is that these terms are, in many cases, used by different researchers and practitioners to mean different things (used discordantly), or that they are used interchangeably with other terms for similar concepts (Barratt, 2004; Dominguez, 2011; Suominen, Seppänen, & Dedehayir, 2016). For instance, the term collaboration is often used interchangeably with concepts such as cooperation and coordination. The concept of an ecosystem is rooted in the natural sciences (Willis, 1994), and has not only been adopted within the field of innovation, regardless of the associated business context, but has also been misapplied, for instance, when the term community was intended (Suominen, Seppänen, & Dedehayir, 2016). Since collaborative open innovation with startup ecosystems is gaining importance, both in practice and theory (Borissenko & Boschma, 2016; Chesbrough & Brunswicker, 2014), it is appropriate to propose precise definitions for these terms in order to allow a clear understanding of the practice of open innovation, and in doing so, to better facilitate communication between and within the professional and academic communities.

In this article, definitions and usages of the terms collaboration and startup ecosystem within the context of open innovation are first explored. The article discusses the differences between these terms and terms used for similar concepts such as coordination and cooperation. Thereafter, the article provides a precise definition of collaborative open innovation within the context of a startup ecosystem.

During the work leading to this paper, an exploratory approach to a systematic, rule-guided, qualitative literature review (Mayring, 2000) was followed. A review of contemporary literature (in keeping with VomBrocke, Simons, Niehaves, Reimer, Plattfaud, & Cleven, 2009) on core keywords related to collaborative open innovation with startup ecosystems was carried out. This was followed by research into explanatory concepts towards understanding how these terms are structured within the context of open innovation. By comparing prior and related research on those terms, clear definitions and graphical illustrations for these terms and the links between their characteristics are developed and explained. To limit its scope, this paper will focus on open collaborative innovation between large companies and startups. The approach of this paper is original because it is the first attempt (to the knowledge of the authors) to propose a specific understanding of these terms. The resulting definitions are expected to lay the groundwork for a common understanding and use within both academia and practice.

The paper is structured as follows: In the following section, we outline the importance of collaboration and startup ecosystems within the context of open innovation between corporations and startups. We then describe our methodology before detailing our results. We next discuss these outcomes and provide conclusions while describing the limitations of this study. Finally we outline recommendations for further research.

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