

# Chapter 15

## Collaborative Research (CR): To Reduce Transaction Cost in Open Innovation

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### ABSTRACT

*As a conceptual study this chapter takes open innovation as a tool that has been considered from the point of view of collaboration between the Industry and the Academy. However, if considered under the framework of the Resource Based Theory, specifically regarding Transaction Cost, it can be revealed that the two parties (Industry and Academy) are in fact compatible. Main focus of the discussion is on the Transaction Cost in the aspect of the management resources that are available for managing core activities and the cost incurred compared to other alternative management activities. It has been observed that small and medium enterprises (SMEs) are faced with the ever increasing stress of intensive competition and limited by their resources (for example, managerial capabilities, financial, and others) in their abilities to deal with the transaction cost, and thus effectively turn to collaboration as a solution. The study synthesizes aspects of open innovation based on a theoretical model and a case study of the User Association of Advanced Technologies program in Israel, and emphasizes on collaboration as an open innovation activity within the Resource Based Theory. Thereafter, it concludes that collaborative research reduced the transaction cost in terms of utilizing open innovation in entrepreneurship, especially in case of SMEs, before providing a few research hints. The research piggybacks on the acquired knowledge on open innovation and thus strengthens further the concept of reduction of transaction cost through collaborative research based on the specific case study.*

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## **INTRODUCTION**

Collaborative research<sup>1</sup> can be seen as any sort of research in which two or more researchers work in a team towards achieving a common goal and in which all of the members of the team are supposed to contribute equally, importantly and substantially (Pimple, 2005). In recent years, this form of collaboration has been accepted as success regarding specific goals, such as cost reduction, knowledge acquisition or value addition (Rahman & Ramos, 2012), and globally many organizations are collaborating successfully, including large corporate houses, research institutes and academics (EU, 2006).

While open innovation, as a newly coined term, includes collaboration as a main element of its strategies to promote product, process, service or organizational augmentation (Chesbrough, 2003; Rahman & Ramos, 2010). This paper synthesizes on utilizing collaborative research as a means of open innovation in applying to the specific business sector of the entrepreneurs, such as the small and medium enterprises (SMEs), and through a government sponsored program, namely User Association of Advanced Technologies in Israel, and from now on will be termed as User's Association (UA).

As mentioned, it is a conceptual paper that is based on two recently published book chapters (Porath, 2012a; Porath, 2012b), focusing a governmental instrument for encouraging Open Innovation via Collaboration between Industry and Academy; one as a case study and the other one as a model of this study that discusses the effect of transaction costs in entrepreneurs as a means of open innovation. The instrument namely, the User's Association (UA) is an association supported financially by the government; which surveys, selects and helps SMEs, assimilate technologies or technological solutions to solve problems identified for specific sectors. The UA recruits an academy to do the screening identification, and selection of the solutions, and later

to assist in the integration of the solutions by the SMEs, including managing of the funds and the activity relevant to this collaborative research on behalf of the SMEs.

The UA is an ad-hoc activity defined by quantified goals, term and funds. It has been found to be very successful and helps a large variety of SMEs, ranging from sectors with little or no research and development (R&D) to high-tech sectors. In the next sections the paper provides the background focusing on three main themes (Open innovation, Economic theory and resource based theory, and scarce resources). Next the methodology is being put forwarded as per the discussion regarding the main finding following the mentioned methodology, and towards proceeding to summarize it gives a few research hints.

## **BACKGROUND**

The theoretical background focuses on three main themes:

- Firstly it discusses about the Open Innovation – describing the development in research in specific field such as, with recent developments regarding the SME relevance within Open Innovation. Further, a brief discussion on collaboration as a source of innovation has been given;
- Secondly it covers the Economic Theory and Resource Based Theory – focusing on the transaction cost, and the impact of the limitation of resources on the selection of activities in entrepreneurs. However, before discussing the resource based theory, it discusses the Economic theory behind the collaboration; and
- Thirdly and finally, it discusses about the scarce resources of SMEs and their impact on collaborative research in terms of transaction cost.

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