

## Chapter 4

# Crowdsourcing in Innovation Activity of Enterprises on an Example of Pharmaceutical Industry

**Elżbieta Pohulak-Żołędowska**  
*Wrocław University of Economics, Poland*

### **ABSTRACT**

*The chapter considers issues connected with innovation creation in open innovation model. The knowledge flow in open innovation has been presented. The main “product” of knowledge economy—innovations (as a concept)—are symbolic goods, founded in symbols – not in atoms. This notion causes some consequences typical for information goods, like ease of replication or exchange, zero-marginal replication costs, and cheap storage. On the other hand, there are growing innovation production costs, and uncertainty and risk of innovation activity that discourage companies from being innovative. The idea of open innovation is being used in pharmaceutical industry more and more often in order to cut innovation costs and shorten the new drugs pipelines. One of the most “open” dimensions of innovation activity in pharmaceutical industry is crowdsourcing: a specific sourcing model, an internet-enabled business model that harnesses the creative ability of agents external to organization.*

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## **INTRODUCTION**

Contemporary economies and industries have become more and more dependent on knowledge and information. It is noteworthy that modern economies are the knowledge-based economies. Modern industries, often being the result of laboratory discovery, are the vital evidence of the pure knowledge influence on economy. This new knowledge phenomenon broadens the definition of traditional economy – based on the physical goods exchange - with symbolic goods, embodying the knowledge itself. Basing the economy on a foundation of knowledge had to have consequences for the goods' production process. The symbolic character of knowledge, the ease of its exchange, replication and flow are features differing this resource from physical ones.

The term Open Innovation was coined by Professor Henry Chesbrough, referring to the need for firms to adapt to a fast-changing environment, increasing competition and specialization of firms. Open Innovation is defined as “a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology” (Chesbrough, 2003). Crowdsourcing is one of the most “open” dimensions of sourcing for appropriate knowledge used in open innovation model.

Innovative pharmaceutical industry is an example of the industry strongly depending on new knowledge. New drugs serving unmet medical needs are one of the key value drivers of research-based pharmaceutical companies. Companies made diverse steps to increase their innovation potential by opening innovation with the use of open source, innovation centres, or crowdsourcing.

The goal of the article is to analyse the knowledge flow in open innovation platform with respect to the use of crowdsourcing.

### **Open Innovation Paradigm**

The open innovation paradigm consists of four elements (1) the knowledge cloud, (2) marketable innovations, (3) undeveloped innovations, and (4) open knowledge platform (Chesbrough et al., 2006, pp. 1-14; Bianchi, 2011, pp.23-24).

The first one - the knowledge cloud, is determined by the rule of importance of both internally and externally established knowledge. Internally established knowledge is similar to the public domain scientific output (e.g. publications). Externally originated one comes from companies' failed or stuck projects – unfinished, of undisclosed market potential, unmarketable according to present conditions.

The second element of this paradigm are innovations (successfully commercialized scientific research results). Such an attitude to the innovation process does cause its discontinuity. Opposite to the closed (traditional) model of innovation, open

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