

Bounded rationality in Open Innovation Dynamics; Individual Rationality

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Abstract: At the start of modern capitalism, the rationality was the base of the chose of economic behavior, and it is becoming the standard until now in the new classical economy. But, Marx, Schumpeter, and Keynesian economics found out that capitalist economy is not rational nor equilibrium because of the dynamics change of the economy system. From the non-equilibrium characteristics of capitalism, Herbert Simon arrived at the bounded rationality of economic behavior of human(Herbert Alexander Simon, 1997). Open innovation which means innovation over the boundary of firms, sector, region, or innovation systems is becoming dominant paradigm in innovation and market(Chesbrough, 2003, p. 43). Right now, with the appearance of 4th industrial revolution, open innovation dynamics is becoming new standard of capitalist economy with the spreading of IT to all industries with the populating of artificial intelligence, and second IT revolution(Lee et al., 2018; J. Yun, Won, & Park, 2016; J. J. Yun, Won, & Park, 2018). The open innovation dynamics is not just firm innovation issue but also economical system issue(Witt, 2017; J. J. Yun, 2015; J. J. Yun & Liu, 2019).

In this study, we want to answer to as following questions.

What is the standard of selection or decision in the open innovation dynamics?

How could the artificial intelligence in the open innovation dynamics should pursue the rationality of open innovation dynamics?

This study will set up the rationality concept model which can be used when any firm or agent select at open innovation dynamic situation. Second, we will develop the rationality model of open innovation dynamics as mathematical model to find out additional meaning of the model. Third, we will simulate with this model and apply in real open innovation dynamics to find out additional real implications or value of this models.

We choose literature review method to build concept model at first. And then, we try a lot of thinking experiment to fascinate this concept model altogether. Third, we use simulation method to find out additional value of this model.