

What's Triple Helix Innovation Model?

Triple Helix Innovation model was invented by Henry Etzkowitz and Loet Leydesdorff, in 1995, to describe the dynamic of interactions between three actors: university, industry and government for innovation and economic development. According to university-industry-government relations, three models were proposed by Etzkowitz and Leydesdorff and were named Mode I (static), Mode II (laissez-faire) and Mode III (triple helix). To put it briefly, Triple Helix is a concept based in the Neo-Schumpeterian school of economic thinking because it deals with innovation dynamics and also in the Neo-Institutionalism tradition, which involves the interaction among the three institutional spheres –university, industry and government.

The base of Triple Helix thinking is the concept of second academic revolution developed by Etzkowitz. The first academic revolution added a new research mission to University, making it become both knowledge production and dissemination institution. The second is expanding university's missions to contributing to economic and social development. The University has upgraded itself to a primary social institution same as government and industry, which leads to knowledge-based economy and society. Therefore, triple helix study highlights entrepreneurial university development and its contributions to economic growth and social development in the regions. Some universities, not only as knowledge producer, but also as its user, have become collective entrepreneurs, serving for regions through science parks, spin-offs and technology/knowledge transfer.

Besides entrepreneurial university, triple helix research refers to government's roles in innovation, university-industry-government interactions (cooperation for innovation and innovation dynamic formation), industrial firms in university-industry-government interactions, venture capital, science and technology parks, high-tech enterprises, incubators, **social innovation and entrepreneurship, etc.**

Nowadays, it expands to orient to creativity cultivation and sustainable development goals.