



KRIHS Policy Brief

KRIHS ISSUE PAPER

Publisher : KRIHS
www.krihs.re.kr

Measures to create an innovative ecosystem to overcome the crisis in manufacturing: Centering on the case of manufacturing innovation institutes in the USA

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Summary

(Current issue) Increasingly fierce global competition with emerging manufacturing powerhouses including China and declines in some of the manufacturing industries are undermining the competitive edge of manufacturing in Korea. The fall of manufacturing that has served as key regional industries has resulted in recessions in regional economies.

(Limitations in policy) Various policies have been implemented including a strategy named Manufacturing Innovation 3.0, smart industrial complexes and providing spaces for manufacturing start-ups, but these have not been very effective to create an innovative industrial ecosystem and reconstitute manufacturing due to the characteristics of the country's land.

(National manufacturing innovation network strategy) The USA established manufacturing innovation institutes as network hubs to narrow the gap between cutting-edge basic research and production and build an innovative ecosystem for industry, academia and research cooperation.

(Accomplishments of manufacturing innovation institutes) The federal government pro-actively invested in cutting edge technology-driven manufacturing innovation institutes not only in the Rust Belt area where the traditional manufacturing industries had deteriorated but also where universities, research institutes and other innovative capabilities were concentrated, thereby securing matching funds from state governments and the private sector and contributing to fostering professional human resources and creating new jobs.

(Introduction to Korea and orientations) To establish manufacturing innovation network organizations primarily in areas where manufacturing is at stake by using core technologies that can be interlinked with the regional base industries and to create an innovative ecosystem for manufacturing in connection with regional industry, academia and research.



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Policy proposals

1. Ensure active discussions among national committees and relevant government ministries to identify key future technologies to promote technology-convergent manufacturing and balanced national development and develop a national strategic roadmap.

2. Establish an organization (tentatively named) 'manufacturing innovation network' focusing on areas where manufacturing is at stake and redistribute similar organizations' functions to establish hubs for the manufacturing innovation network in the national land.

3. Build a control tower to continue pursuing 'manufacturing renaissance'1) and establish a system to evaluate actual outcomes such as commercialization using cutting-edge technologies.

*1) After the global financial crisis, major countries including Korea started recognizing the importance of manufacturing as an economic growth drive and have been implemented a variety of policies for the revitalization of manufacturing through innovation and reinforcement.