



KRIHS Policy Brief

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Measures to promote tech startups in manufacturing for innovative growth

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1. Core industries facing crisis and followed by emerging countries pose a red light for the nation's manufacturing.

- At the same time, there is an increasing fever for tech manufacturers in many new industries following technology-driven changes amid the Fourth Industrial Revolution, including the Internet of Things, robots, and drones.

2. The recent changes in manufacturing pose new opportunities for manufacturing startups.

- Technical changes such as 3D printing, open source hardware platforms and crowd funding have significantly lowered the financial and technical entry barrier for manufacturing startups, encouraging young makers to enter the market.

- Accordingly, the hardware startup ecosystem of individual makers and platforms is becoming increasingly important.

3. There are 2,905 tech startups in manufacturing across the country, and 64% of them are in the capital region.

- Among the tech manufacturing startups, 29% and 18% are residents in industrial complexes and startup incubators, respectively, and 15% in knowledge industrial centers and techno parks.

- Industrial complexes housing many startups are usually located near major cities or have anchor institutions such as research centers.

- Incubators are normally connected with universities, serving as cradles for highly innovative tech startups.

4. Different locational factors are observed depending on the types and growth stages of tech manufacturing startups, which calls for policies in response thereto.

- Startups specializing in manufacturing processes value scalability of space, supply of components, concentration of relevant businesses, rents and other production-related aspects.

- On the other hand, non-process-centered manufacturing startups that focus on software, services and brands value settlement environments and accessibility to talent pools.



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Policy proposals

1. (Build a manufacturing startup ecosystem) Develop support measures tailored to the types and growth stages of startups and build an ecosystem where various players are organically interconnected.
2. (Offer startup infrastructure in industrial complexes) Use idle land in industrial complexes to increase infrastructure supply for startups including maker spaces, prototyping facilities, startup support centers, and co-working spaces.
3. (Increase small startup spaces in urban areas) Make mini industrial complexes using idle land in urban areas for non-process-centered manufacturers and innovative startups producing items related to daily living.