

Study on the Effects and Mechanisms of Young Innovation and Entrepreneurship Talent Agglomeration in Boosting New-Quality Productivity Development

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Abstract: New-type productivity is a technology-driven economic form, and the aggregation of young innovative and entrepreneurial talent plays a key role in its development. Through literature analysis, this paper extracts six major effects of talent aggregation: synergy, demonstration, clustering, siphoning, spillover, and multiplier effects, and analyzes their driving mechanisms. The study finds that: (1) Synergy effect constructs an efficient system through university-enterprise collaboration and strategy coordination; (2) Demonstration effect leads innovation through leading talents and high-level platforms; (3) Clustering effect forms talent hubs and industrial clusters; (4) Siphoning effect drives the aggregation of regional and industrial advantages; (5) Spillover effect accelerates knowledge sharing and the cultivation of high-end industries; (6) Multiplier effect strengthens leading enterprises and innovation capabilities. The research provides theoretical support for optimizing talent strategies.

Keywords: Young Innovative and Entrepreneurial Talent; Aggregation; New-Type Productivity; Effects; Mechanisms

1. Introduction

The new type of productivity, with technological innovation at its core, is the engine for high-quality development. The gathering of young talent promotes its development by releasing effects such as collaboration and demonstration, but the mechanism is not yet clear. In practice, there are issues such as insufficient talent quantity and structural imbalances, which urgently require systematic research. This paper focuses on the effects and mechanisms of young talent aggregation, providing a basis for strategy formulation.

2. Literature Review

2.1 Talent Agglomeration in the Development of New-Quality Productivity

Ren [1] underscores that innovative talents serve as the linchpin for attaining technological self-reliance and robustness. Li et al. [2] posit that it is imperative to fortify the construction of the talent cohort and propel the profound integration of the talent chain, innovation chain, and industrial chain, thereby forging a seamless and dynamic ecosystem. Yuan [3] highlights that the scale and caliber of talent conglomeration in a region are pivotal determinants of its economic and social development potential, acting as the bedrock upon which future prosperity is built.

2.2 Multiple Effects of Talent Agglomeration

Wu and Feng [4] advocate that during the phase of team amalgamation, actions such as sharing talent-related technologies and fostering enhanced collaboration can act as catalysts, propelling the realization of synergistic effects that amplify the collective capabilities of the group. Xu and Guo [5] propose the establishment of incentive mechanisms, which they believe can serve as beacons, generating demonstration effects that kindle the latent vitality of diverse production factors and set them ablaze with productivity. Sun et al. [6] contend that the emergence of talent hubs is a boon, as it facilitates the manifestation of agglomeration effects. These effects act as a magnetic force, drawing together resources and expertise to expedite the formation of collective synergy, creating a powerful engine for growth. Yang et al. [7] have unearthed a pressing concern: the current landscape of digital talent distribution across industries is marred by unevenness, like a lopsided canvas that detracts from the harmonious whole. Wang [8] opines

that it is of paramount importance to amplify the spillover effects of talent - driven innovation achievements on industrial guidance. These effects, when harnessed effectively, can act as guiding stars, steering industries towards new frontiers of development. Huang and Chen [9] have discovered that production factors dominated by technological innovation wield a multiplier effect on the overall efficiency of the productivity system. They are like the alchemist's touch, transforming raw inputs into golden outputs of productivity.

In summary, previous studies have confirmed the importance of talent agglomeration for regional new-quality productivity development and highlighted that talent agglomeration can release multiple effects. However, there is a lack of systematic research on the relationship between young innovation and entrepreneurship talent agglomeration and new-quality productivity.

3. Analysis of the Effects of Young Innovation and Entrepreneurship Talent Agglomeration on Boosting New-Quality Productivity

3.1 Synergy Effect of Young Innovation and Entrepreneurship Talent Agglomeration

The synergistic phenomenon arising from the congregation of young innovative and entrepreneurial talents manifests as a dynamic where, once these bright minds coalesce into a cluster, diverse entities within the ecosystem amplify their collaborative efforts. This collective synergy acts as a catalyst, fully harnessing and liberating the latent potential of the group.

3.1.1 Collaboration in innovation and entrepreneurship among youth

The aggregation of young innovative and entrepreneurial talents leads to their geographical concentration, which facilitates the rapid transformation of scientific and technological achievements. Young innovative and entrepreneurial talents with diverse backgrounds and expertise find it easier to share resources and engage in collaborative endeavors.

3.1.2 University-enterprise collaborative innovation

This aggregation also strengthens the ties between universities and enterprises. The two sectors complement each other's strengths and share technologies, ensuring a match between development needs and talent supply.

3.1.3 Strategy coordination for innovation and entrepreneurship

The practical implementation of the aggregation of young innovative and entrepreneurial talents is inseparable from the synergy of relevant policies, which provide precise research and development support for these talents.

3.2 Demonstration Effect of Young Innovation and Entrepreneurship Talent Agglomeration

The demonstration effect of the aggregation of young innovative and entrepreneurial talents denotes an effect wherein, as the aggregation of such talents takes shape and develops, advanced exemplary figures and regions that excel in innovative and entrepreneurial activities exert a powerful and positive external influence.

3.2.1 Demonstration by leading innovation and entrepreneurship talents

Young leading talents and high-end innovative and entrepreneurial talents are capable of exerting a significant industry influence, thereby igniting the innovative fervor and driving force of others.

3.2.2 Demonstration by high-level innovation platforms

High-energy innovation platforms can steer the research and development of key technologies in relevant fields, setting a new trend for industrial transformation and upgrading. They act as vanguards, fostering the emergence of more innovative and entrepreneurial platforms as well as the generation of novel technologies.

3.2.3 Demonstration zones for innovation and entrepreneurship talent agglomeration

Demonstration zones for the aggregation of innovative and entrepreneurial talents are characterized by a high proportion of innovative and entrepreneurial talents, a high degree of industrial concentration, and substantial industrial output value. These zones exert a substantial radiating effect on the innovative and entrepreneurial activities in other regions.

3.3 Clustering Effect of Young Innovation and Entrepreneurship Talent Agglomeration

The agglomeration effect of young innovative and entrepreneurial talents refers to a positive feedback effect on the talent ecosystem and industrial ecosystem. This effect is achieved through innovative and entrepreneurial activities that attract and gather a group of young talents with similar characteristics and innovative

capabilities.

3.3.1 Highlands of young innovation and entrepreneurship talents

The aggregation of young innovative and entrepreneurial talents draws in and accumulates a cohort of young individuals with an innovative and entrepreneurial spirit. By doing so, it enhances the regional talent pool and establishes a hub for young innovative and entrepreneurial talents [10].

3.3.2 Innovation and entrepreneurship ecosystem

Against the backdrop of continuously optimized strategy support, resource investment, entrepreneurial culture, and market openness, the aggregation of young innovative and entrepreneurial talents cultivates a favorable ecological environment for innovation and entrepreneurship.

3.3.3 Innovative industrial clusters

The leading industries within the context of the aggregation of young innovative and entrepreneurial talents are equipped with advanced ancillary resources and services, forming a relatively complete industrial chain. This, in turn, gives rise to innovative industrial clusters.

3.4 Siphon Effect of Young Innovation and Entrepreneurship Talent Agglomeration

The siphon effect of the aggregation of young innovative and entrepreneurial talents denotes a phenomenon where, during the process of their clustering, these talents gravitate towards regions or industries with more vibrant innovative and entrepreneurial activities.

3.4.1 Superior innovation and entrepreneurship regions

Efforts should be made to propel the concentration of young innovative and entrepreneurial talents in regions boasting advantageous geographical locations, abundant talent resources, and a robust innovative atmosphere, thereby fostering the formation of dominant innovative and entrepreneurial hubs.

3.4.2 Dominant industries

The aggregation of young innovative and entrepreneurial talents drives these talents to converge in advantageous industries such as strategic emerging industries and future-oriented sectors. These industries possess strong competitiveness both domestically and internationally, along with substantial market prospects.

3.4.3 Talent flow and incentive mechanisms

The successful aggregation of young innovative and entrepreneurial talents is inseparable from the unimpeded flow of talents and the effective functioning of incentive mechanisms. These two elements work in tandem to facilitate the free movement of talents and promote their holistic development.

3.5 Spillover Effect of Young Innovation and Entrepreneurship Talent Agglomeration

The spillover effect of the aggregation of young innovative and entrepreneurial talents refers to an impact wherein, in the course of innovative and entrepreneurial activities, young talents leverage their innovative thinking and capabilities to spearhead technological advancements, subsequently driving industrial upgrading.

3.5.1 Knowledge spillover from innovation and entrepreneurship talents

Young talents, through their participation in innovative and entrepreneurial endeavors, accumulate knowledge and experience. Armed with open - minded and flexible innovative thinking, as well as keen insights, they play a pivotal role in the process of technological diffusion.

3.5.2 Enterprise technological innovation

Enterprises proactively engage in technological innovation. By means of research and development, introduction, absorption, and transformation, they optimize and upgrade their products, processes, and services.

3.5.3 Cultivation of high-tech industries

The aggregation of young innovative and entrepreneurial talents serves as a catalyst for propelling the industrial chain to ascend to higher - end segments. It facilitates the development of high - value - added products or services, gives rise to knowledge - intensive industries, and nurtures high - tech industries.

3.6 Multiplier Effect of Young Innovation and Entrepreneurship Talent Agglomeration

The multiplier effect of the aggregation of young innovative and entrepreneurial talents refers to a phenomenon where the congregation of young talents drives the concentration of innovative elements. This, in turn, unleashes a formidable vitality in innovative and entrepreneurial activities.

3.6.1 Multiplication of leading enterprises

The aggregation of young innovative and entrepreneurial talents fosters a multiplicative

increase in the number of leading enterprises. Under the auspices of science and technology - leading enterprises, specialized, sophisticated, unique, and new - type tech - based small and medium - sized enterprises thrive. This collective effort achieves technological empowerment and spearheads technological breakthroughs.

3.6.2 Multiplication of industrial concentration

The aggregation of young innovative and entrepreneurial talents propels a multiplicative rise in the concentration of strategic emerging industries and future - oriented sectors. It expands the scale of industrial innovation, strengthens innovative industrial clusters and parks, and gradually highlights the leading function of high - end industries.

3.6.3 Comprehensive enhancement of scientific and technological innovation capability

The aggregation of young innovative and entrepreneurial talents acts as a catalyst for the exponential growth of scientific and technological innovation capabilities. By

establishing entrepreneurial platforms and constructing entrepreneurship centers, these talents, leveraging their robust research and development (R&D) innovation capabilities, break through the bottlenecks of original technologies.

4. Analysis of the Mechanisms by Which Young Innovation and Entrepreneurship Talent Agglomeration Boosts New-Quality Productivity

In terms of spatial distribution, when the resources of young innovative and entrepreneurial talents concentrate in a specific region, over time, a central and dominant area with the advantage of resource agglomeration takes shape. Within this region, a series of positive effects are generated, which ultimately transform into the driving force for the development of New Quality Productive Forces. The specific impact mechanism is illustrated in Figure 1.

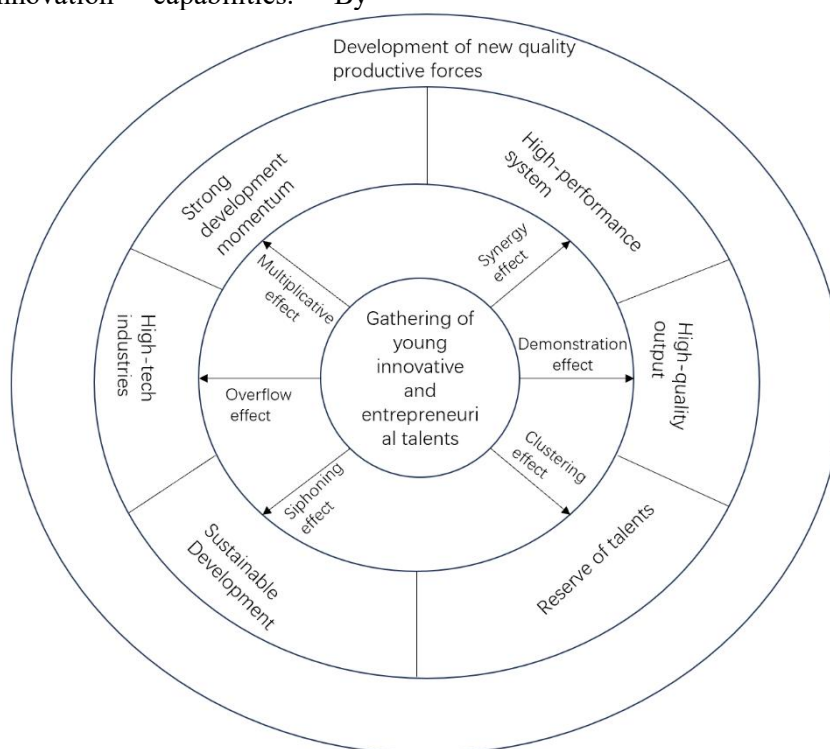


Figure 1. Development Mechanisms of Young Innovation and Entrepreneurship Talent Agglomeration Boosting New-Quality Productivity

4.1 Synergy Effect: Building an Efficient System for New-Quality Productivity

4.1.1 New technology sharing

The exchange among young innovative and entrepreneurial talents facilitates in - depth communication and the alignment of new

technologies. This interaction provides strong support for scientific and technological R&D activities, thereby enhancing innovation efficiency [11].

4.1.2 Full chain of scientific and technological innovation

The collaboration between universities and

enterprises is instrumental in cultivating innovative talents who meet the development requirements of New Quality Productive Forces. It accelerates scientific research endeavors and the transformation of scientific and technological achievements, forging an integrated chain of scientific and technological innovation.

4.1.3 Effective implementation of strategy decisions

The synergy of innovation and entrepreneurship policies is conducive to promoting the integrated allocation of innovative elements. It expedites the implementation and effectiveness of relevant strategy measures, fostering a strategy - enabled environment for the development of New Quality Productive Forces.

4.2 Demonstration Effect: Achieving High-Quality Output for New-Quality Productivity

4.2.1 Nurturing new-type talents

The demonstration effect of leading innovative and entrepreneurial talents is instrumental in nurturing a workforce capable of generating New Quality Productive Forces, better equipping them to meet the demands of the digital era.

4.2.2 Cultivating new-type entrepreneurship platforms

The exemplary role of high - energy innovation platforms contributes to the cultivation of novel entrepreneurial platforms. These platforms, with a primary focus on technological innovation as their service orientation, incubate entrepreneurial entities and expedite the development of New Quality Productive Forces.

4.2.3 Fertile ground for talent innovation

Demonstration zones for the aggregation of innovative and entrepreneurial talents serve as fertile grounds for fostering talent innovation. They attract talents to engage in higher - level innovative activities, allowing the potential of young talents to fully blossom in the practice of New Quality Productive Forces development.

4.3 Clustering Effect: Increasing Talent Reserves for New-Quality Productivity

4.3.1 Cultivating talents

The hub of young innovative and entrepreneurial talents plays a pivotal role in talent cultivation, particularly in nurturing highly skilled, sophisticated, and scarce talents. It elevates the proportion of new - quality talents within the overall talent pool [12].

4.3.2 Attracting talents

A favorable ecological environment for innovation and entrepreneurship is conducive to attracting talents. It constructs a powerful talent magnet, leveraging the environment's core competitiveness in talent agglomeration.

4.3.3 Maximizing talent potential

Innovative industrial clusters enable talents to fully utilize their capabilities, giving full play to the role of young people as the main force and driving power in innovation and entrepreneurship. These clusters lead industry transformations in key areas of New Quality Productive Forces and promote the integrated development of industries and talents.

4.4 Siphon Effect: Promoting Sustainable Development of New-Quality Productivity

4.4.1 Building characteristic regional development patterns

The formation of advantageous innovative and entrepreneurial regions facilitates the localized development of New Quality Productive Forces. By capitalizing on the strengths and mitigating the weaknesses of different regions based on their varying resource endowments and industrial foundations, it achieves coordinated regional development.

4.4.2 Building competitive advantages

Dominant industries are instrumental in promoting the deep integration of technological innovation and industrial innovation. They realize in - depth industrial transformation and upgrading, resulting in a more rational industrial structure, appropriate proportioning, enhanced vitality, and improved quality and efficiency.

4.4.3 Deepening talent mechanism reform

Promoting the reform of talent mobility and incentive mechanisms is crucial for dismantling the bottlenecks that constrain the development of New Quality Productive Forces. It fosters a fair, smooth, and orderly flow of talents, unleashing and enhancing innovative vitality.

4.5 Spillover Effect: Developing High-End Industries for New-Quality Productivity

4.5.1 High-quality talent supply

The knowledge spillover of innovation and entrepreneurship talents empowers high - level innovative and entrepreneurial talents to take on leading roles at the forefront of scientific research. They immerse themselves in key areas of New Quality Productive Forces, making significant contributions to industrial development.

4.5.2 New-quality development of enterprises

It is imperative to drive enterprise transformation, enabling enterprises to grasp the overarching trends of the industry. By applying digital and modern technologies and relying on core capabilities for continuous innovation, enterprises can empower their products with scientific and technological advancements.

4.5.3 Expanding new fields and tracks

Cultivating high - tech industries is conducive to seizing opportunities. By closely following the trends of the scientific and technological revolution and industrial transformation, it helps forge innovation hubs for emerging industries and gain a first - mover advantage in the development of future industries.

4.6 Multiplier Effect: Enhancing Development Momentum for New-Quality Productivity

4.6.1 Strengthening the dominant role of enterprises in technological innovation

A collaborative model for tackling key and core technologies should be established, led by leading enterprises, with the participation of upstream and downstream enterprises in the industrial chain, as well as universities and research institutes.

4.6.2 Constructing a modern industrial system

A multiplicative increase in industrial concentration is instrumental in leading profound changes in the quality, efficiency, and driving forces of the industrial system. It continuously enhances the industrial capacity for innovation and upgrading, shapes new competitive advantages in industries, and constructs a modernized industrial system.

4.6.3 Original and disruptive technological innovation

A comprehensive enhancement of scientific and technological innovation capabilities is conducive to fully harnessing the power of innovation, particularly original and disruptive innovations. This, in turn, facilitates the conquering of key and core technologies in fields pertinent to New Quality Productive Forces.

5. Conclusion

The aggregation of young talents systematically propels the development of New Quality Productive Forces through six major effects. These effects include collaborative system - building, demonstration - led output,

agglomeration - based reserve enhancement, siphon - driven sustainability promotion, spillover - fostered industry cultivation, and multiplier - reinforced kinetic energy strengthening. The synergistic interplay of these effects provides a sustained impetus for regional development.

Fund Project

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