Three Key Points for Building a World-Class City (Postprint)

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Abstract

[Purpose/Significance] The development of world-class cities and national central cities constitutes a vital component of China' s new-type urbanization initiative. [Methods/Process] International comparative analysis and modeling. Based on historical experience of global modernization, world-class cities should be innovation-driven cities with international influence. [Results/Conclusion] Drawing upon international experience, this paper proposes three key points and objectives for developing world-class and national central cities: adhering to an innovation-driven development strategy, upholding the dual-engine drive of technological innovation and institutional innovation, maintaining the guiding role of innovation culture and innovation talent, and establishing innovation cities and highlands with global influence.

Full Text

Preamble

Three Keys to Building World Cities

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Abstract

[**Purpose/Significance**] Building world cities and national central cities constitutes an important component of China' s new urbanization drive. [**Method/Process**] International comparison and model analysis. Based on historical experience of global modernization, world cities should be innovation-driven cities with international influence. [**Result/Conclusion**] Drawing on international experience, this paper proposes three key points and a goal for developing world and national central cities: adhering to an innovation-driven

development strategy, maintaining dual-engine drive of scientific/technological innovation and institutional innovation, and upholding the guiding role of innovative culture and talent, with the aim of building innovative cities and highlands with global influence.

Keywords: world city; innovation-driven; dual-engine drive; urbanization; China
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Cities serve as carriers of civilization and microcosms of history, functioning as cultural centers and innovation frontiers. The quality and level of urban development fundamentally influence and determine a nation' s modernization trajectory. Constructing world cities and national central cities requires steadfast commitment to an innovation-driven development strategy to seize strategic opportunities arising from new technological and industrial revolutions. It demands adherence to the "dual-engine drive" of scientific/technological innovation and institutional innovation, focusing on perfecting core mechanisms for achievement transformation and power transmission. Furthermore, it necessitates upholding the guiding role of innovative culture and talent to foster an advanced cultural and open environment conducive to scientific and technological innovation, thereby transforming these cities into innovation hubs.

1. Innovation-Driven Development as a Model

International experience in world modernization demonstrates a close relationship between innovation and economic growth [**?**]. Since the 1950s, developing countries have generally followed three development patterns. First, **resource-dependent** models, exemplified by oil-exporting nations that rely on abundant natural resources. Second, **capital-dependent** models, illustrated by Latin American countries that depend on capital and technology from developed nations. Third, **innovation-driven** models, represented by East Asian nations and regions that harness scientific and technological innovation to generate powerful development momentum. Among these, resource-dependent countries experience rapid economic growth but slow social progress; capital-dependent nations suffer from significant economic volatility and social contradictions; while innovation-driven countries have achieved remarkable success, with Japan, Singapore, and South Korea ascending to developed status [**?**].

From a historical perspective, since the 18th-century Industrial Revolution, nations that embraced innovation-driven strategies and seized opportunities from new technologies and industrial revolutions have prospered—such as 18th-century Britain, 19th-century America and Germany, and 20th-century Japan and Finland. Conversely, many countries that failed to adopt innovation-driven approaches and missed these opportunities declined, including Portugal and Spain in the 18th–19th centuries and Argentina and the Soviet Union in the 20th century [**?**]. Innovation-driven development is not merely a development

model but a proven pathway to national modernization. World cities and national central cities should adopt innovation-driven models rather than resource-dependent or capital-dependent approaches. Currently, the information revolution has entered its intelligent stage (the final phase), while the new biological and regeneration revolution is approaching. We face dual opportunities in intelligent and new bio-economies, though these favor the prepared.

2. Innovation-Driven Development Requires Two Engines

As a new development model, innovation-driven growth necessitates new working frameworks. The innovation-driven model proposed in *China Modernization Report 2006* offers such a framework [**?**]. This model posits that innovation serves as the primary driver of national modernization, wherein knowledge innovation and institutional innovation combine to generate new technologies, which then integrate with technological innovation to create new industries, leading to new economies, new societies, and ultimately new modernization. Each stage from innovation to modernization features information feedback, forming a positive feedback loop [**?**] (Figure 1). Higher innovation capacity and efficiency yield higher national development levels.

[Figure 1: see original paper]

According to this innovation-driven model, the approach features two engines. The **hard engine** comprises hard innovation, including knowledge innovation and technological innovation, covering technical inventions, product innovation, service innovation, and business model innovation. The **soft engine** comprises soft innovation, encompassing institutional innovation across the entire process, including policy innovation, systemic innovation, and cultural innovation.

Implementing an innovation-driven strategy requires simultaneously activating both engines. Activating the hard engine substantially enhances innovation capacity and efficiency. Activating the soft engine opens transmission channels from innovation to new industries, economies, and societies, establishing efficient and smooth innovation-driven transmission mechanisms. In essence, innovation-driven development demands a two-pronged approach: grasping hard innovation to develop new products while seizing soft innovation to establish new institutions, with both hands working in coordination—namely, collaborative innovation. To a large extent, product innovation is the responsibility of enterprises, institutional innovation is the function of government, and research institutions and universities serve as facilitators and participants, requiring concerted cooperation across all sectors.

3. Innovation-Driven Development Requires Three Supporting Pillars

Innovation constitutes the power source of innovation-driven development, and strengthening this impetus requires three supporting pillars. First, **cultivate**

an innovation culture. Austrian economist Joseph Schumpeter argued that "innovation is a creative destruction" [**?**]. In plain terms, "without destruction, there is no innovation."This concept represents a core tenet of innovation culture, which clearly differs significantly from our familiar administrative culture and daily life. Yet without an innovation culture, no one will support or engage in innovation, and innovation-driven development will remain impossible. The presence or absence of innovation culture determines the presence or absence of innovation itself.

Second, **attract innovative talent**. Innovation is a human activity; without innovative talent, there can be no innovation. Innovative talent differs from conventional talent. Conventional talent exhibits standard styles—speaking cautiously, working methodically, and behaving impeccably. Innovative talent embraces innovative philosophies—speaking truthfully, pursuing novelty and change, acting unconventionally, and striving for excellence while maintaining independent views. Implementing an innovation-driven strategy requires both conventional and innovative talent, with the quantity and quality of innovative talent determining the returns and success of innovation-driven development.

Third, **protect intellectual property rights**. Innovation represents a form of creative labor and, moreover, a high-risk endeavor. Economic research has revealed significant industry variations in innovation success rates, with some sectors experiencing "nine failures out of ten innovations," such as the extremely low success rate in new drug development. Inadequate protection of innovative labor 成果 and intellectual property rights would deter participation in innovation. Innovation demands substantial investment of money and effort while carrying significant risks. Success yields returns that recover costs and generate profits, while failure brings losses in money and time. However, if successful innovations have their intellectual property plagiarized or imitated, cost recovery and profitability become difficult, potentially resulting in losses. Weak intellectual property protection creates the paradox of "losing money whether innovation succeeds or fails," inevitably leading to declining innovation.

4. Conclusion

Numerous factors influence the construction of world cities and national central cities, but innovation and innovation-driven development are undoubtedly decisive. Adhering to an innovation-driven development strategy, maintaining dual-engine drive of scientific/technological and institutional innovation, and upholding the guiding role of innovative culture and talent constitute three critical points for China to build world and national central cities. Seizing innovative opportunities from new technological and industrial revolutions and accelerating the establishment of an innovation-driven development model represents the sacred mission our era has entrusted to us. Let us unite with one voice to champion innovation, let ten thousand enterprises focus on innovation, let innovators flourish across the land, and let the fruits of innovation blanket the earth. Let innovation highlands become city calling cards and innovation-driven

development become a city characteristic. Let China' s world and national central cities become innovation-driven, environmentally friendly, and modernized cities—true innovative highlands with global influence.

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Note: Figure translations are in progress. See original paper for figures.