

中国  
China

“十三五”  
Thirteen Five

Based on innovation driven strategy during the Thirteenth Five year Guideline in China, combining with the theoretical basis of human capital theory, innovation theory, institutional economic theory, ecological economic theory, etc.

创新驱动  
Innovation driven

This thesis is to analyze the environment, situation, successful experience and challenge of scientific and technological talents developing mechanism adapted to innovation driven.

科技人才  
Science and technology talents

Meanwhile, the research have studied growth patterns and management mechanism of scientific and technological talents with relevant theoretical methods and technical tools to determine the developing mechanism and implementation path adapted to innovation driven during the Thirteenth Five year Guideline in China.

发展机制  
Development mechanism

# 中国“十三五” 适应创新驱动的科技人才 发展机制研究

张向前◎著

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## 内容摘要

本研究立足于我国“十三五”时期国家创新驱动发展战略，结合人力资本理论、创新理论、制度经济学、生态经济学等理论，全面分析我国适应创新驱动科技人才发展的环境、现状、成功经验、不足与挑战，运用相关理论方法与技术工具研究适应创新驱动需要的科技人才的成长模式以及适应创新驱动发展的科技人才管理机制，进一步明确我国“十三五”实施创新驱动的科技人才发展机制与实施路径，主要研究工作如下：首先，通过界定我国“十三五”适应创新驱动需要的科技人才发展机制的内涵，分析我国“十三五”时期实施创新驱动战略与科技人才发展互动耦合，构建我国创新型科技人才竞争力的动态评价指标体系。其次，研究我国“十三五”时期适应创新驱动的科技人才机制。构建我国“十三五”时期适应创新驱动的科技人才动态评价机制模型，建立适应创新驱动的科技人才培养系统，构建我国“十三五”时期适应创新驱动的科技人才的使用机制、激励机制。建立由各级政府、科技企业、高等院校、科研机构以及全社会共同参与的科技人才协同保障机制。第三，我国“十三五”时期适应创新驱动的科技人才发展路径理论研究。构建基于生态管理理论的中国适应创新驱动的科技人才成长环境的模型、基于耗散结构科技人才发展机制的理论模型、政企科技人才发展机制改革动态博弈模型。第四，构建“十三五”时期适应创新驱动的科技人才发展框架模型，提出了以政府为指导，以企业为主体、以高校为支撑、以科研机构为载体的政产学研协调互动模式，设计我国“十三五”时期适应创新驱动的科技人才成长的技术类路径和管理类路径，提出政产学研协同构建适应创新驱动的科技人才发展机制的双三螺旋模型。第五，构建我国“十三五”时期适应创新驱动的科技人才可持续发展预警模型研究，对我国“十三五”时期适应创新驱动的科技人才发展进行预测。第六，比较美国日本在实施适应创新驱动的科技人才发展机制成功经验，提出中外合作培养适应创新驱动的科技人才机制、中美两国科技人才协同发展资源共享机制和人才协同培养的动力机制。第七，研究李约瑟之谜、钱学森之问与屠哟哟获诺奖对国家科技创新战略实施的启示。

关键词 “十三五” 适应创新驱动 科技人才发展机制

## Abstract

Based on innovation-driven strategy during the Thirteenth Five-year Guideline in China, combining with the theoretical basis of human capital theory, innovation theory, institutional economic theory, ecological economic theory, etc, this thesis is to analyze the environment, situation, successful experience and challenge of scientific and technological talents developing mechanism adapted to innovation-driven. Meanwhile, the research have studied growth patterns and management mechanism of scientific and technological talents with relevant theoretical methods and technical tools to determine the developing mechanism and implementation path adapted to innovation-driven during the Thirteenth Five-year Guideline in China. The main research work is as follows:

First, this thesis clears connotation of scientific and technological talents developing mechanism adapted to innovation-driven and analyzes coupling interaction between innovation-driven strategy and scientific and technological talents development. It builds a dynamic evaluating system of innovative scientific and technological talents' competitiveness.

Second, this thesis studies on scientific and technological talents mechanism adapted to innovation-driven during the Thirteenth Five-year Guideline. In the thesis, we construct the dynamic evaluation mechanism, personnel training system, use mechanism and incentive mechanism for scientific and technological talents developing mechanism adapted to innovation-driven strategy during the Thirteenth Five-year Guideline in China as well as build a collaborative scientific and technological personnel security mechanism in which government, technology companies, universities, research institutions and the whole society to participate.

Third, this thesis provides theory research on development path of scientific and technological talents mechanism adapted to innovation-driven, such as construction of scientific and technological personnel growth environment based on ecological management model, talents development mechanism based on a dissipative structure theoretical model and the government and enterprises scientific and technological talent development mechanism based on reform dynamic game model.

Fourth, this thesis researches a developing framework of scientific and technological talent, and puts forward coordination and interaction model which the government should be a guide, enterprises be the mainstay, with colleges and universities as a support, research institutions as the carrier. In this ‘politics-product-research’ collaborative model, we design management path, technology path and double -three triple helix model for scientific and technological talents mechanism adapted to innovation-driven.

Fifth, this thesis builds warning model of scientific and technological talents for sustainable development innovation-driven to predict development of scientific and technological talents adapted to innovation-driven during the Thirteenth Five-year Guideline.

Sixth, this thesis comparative studies relatively successful experience in implementing scientific and technological talent development mechanism adapted to innovation-driven from the United States and Japan, while proposed sino-foreign cooperative training talent mechanism, joint development of sino-US scientific and technological talents resource sharing mechanisms and personnel synergies training dynamic mechanism.

Seventh, The puzzle of Joseph Needham, The questions of Hseu-shen Tsien and Tu yo yo won a Nobel Prize——China National Science and technology innovation strategy

Research results are available to draw and reference for the governments, enterprises and theorists.

**Key words:** Thirteenth Five-Year Guideline; innovation-driven; scientific and technological talents development mechanism.

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