

## 「博士人材追跡調査」第4次報告書 要旨

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### 要旨

現在の世界は、感染症の拡大や甚大な災害など想定を超えた事象が起きる不確実性の高い社会となっている。こうした社会の激しい情勢変化に対応するためには、「知」の源泉となる研究力等の強化が不可欠であり、博士人材に期待される役割の重要性は、かつてないほど高まっている。

しかしながら、我が国の博士課程入学者数は、2003年度の18,232人をピークに2019年度には14,976人まで減少した。その理由として、博士課程在籍時の経済支援等の不足に加え、博士課程修了者のキャリアパスの不透明さ、不安定な雇用環境等が挙げられている。また、修士課程等から博士課程へ進学する者の割合も長期間に亘って減少傾向が続いており、2001年までは15%を上回る水準で推移していたが、2019年には9.2%にまで減少した。特に深刻な問題として、優秀な修士学生が博士課程への進学を忌避しているとの指摘もある。

こうした我が国の博士人材を巡る問題を打破すべく、国は、2020年1月に策定した「研究力強化・若手研究者支援総合パッケージ」に基づき、抜本的な対策を進めている。さらに、2021年3月に閣議決定された第6期科学技術・イノベーション基本計画では、「優秀な若者が将来の活躍の展望を描ける状況の下で「知」の担い手として博士後期課程に進学するキャリアパスを充実させる」ことや「将来的には、希望する全ての優秀な博士人材が、アカデミア、産業界、行政等の様々な分野において正規の職を得て、リーダーとして活躍する展望が描ける環境を整備する」ことを目標に掲げ、上記パッケージの取組をはじめ、必要な対策を着実に実行に移していくことが急務であるとしている。

科学技術・学術政策研究所（NISTEP）では、国の政策立案等に必要なエビデンスを提供するための様々な調査研究を行っている。中でも2014年から実施している「博士人材追跡調査」（JD-Pro: Japan Doctoral Human Resource Profiling）については、博士人材を巡る政策立案やその政策効果の評価検証等に不可欠なデータとして、博士課程進学前の状況、在籍中の経験、博士課程修了後の就業状況、研究状況等を把握し、客観的根拠に立脚した政策策定に貢献することを目的として、博士課程修了者のキャリアパスを継続的に追跡している。これまで、平成24年度（2012年度）に日本の大学の博士課程を修了した者、平成27年度（2015年度）に日本の大学の博士課程を修了した者、平成30年度（2018年度）に日本の大学の博士課程を修了した者（以下「2018年コホート」という。）を対象に、3つのコホート調査を実施してきた。このうち、本報告書は、令和2年（2020年）に実施した2018年コホートの博士課程修了者を対象に1.5年後の状況について調査したものである。

本報告書では以下の点が明らかになった。

- ・博士課程に在籍する前に社会人経験があると回答した者が初めて5割を超え、博士課程学生の年齢構成が30歳代を中心とするものへと変化した

- ・ 社会人経験のない学生で全額または一部の学費免除がなかったのは約5割、退職した社会人学生では約7割で全額または一部の学費免除がなかった
- ・ 修了後の雇用先は、全体で大学等が約5割、民間企業が約3割であった。大学等に就職した割合が高い分野は人文や社会、民間企業に就職した割合が高いのは工学分野であった
- ・ 今後のキャリア展望は、社会人経験の無い学生で多様化しており、アカデミア（大学や公的研究機関の研究者）で研究者としてポジションを得たいと回答した者約3割いる一方、雇用先や研究者にこだわらない、研究以外の仕事でも良いと回答した者、それぞれ約2割となった
- ・ 政府に望む博士課程学生への支援政策としては、研究者の研究環境改善、博士後期課程での給与支給を望む回答が最も多くそれぞれ2割を超えていた

## The Fourth Report of the Japan Doctoral Human Resource Profiling Project

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### Abstract

The world has entered a period of great uncertainty in which events beyond expectations, such as the spread of infectious diseases and catastrophic disasters, occur. To cope with the rapid changes in social conditions, strengthening humankind's research capabilities, which are the source of our collective "intellect," is indispensable. The importance of the role expected of doctoral-level graduates has become greater than ever before.

Despite the above conditions, the number of students beginning doctoral coursework reached a peak in 2003, at 18,232, before decreasing to 14,976 in 2019. The reasons for this decrease are, among others, insufficient financial support and similar considerations during doctoral studies, the unclear career path of those who have completed doctoral coursework, and Japan's unstable employment situation. Moreover, the ratio of students who enter a doctoral course immediately after completing a master's course has decreased steadily over time. The rate of those moving from master's to doctoral courses had exceeded 15% until 2001 but decreased to as low as 9.2% in 2019. This is a particularly serious problem, as many brilliant master's students seem to be avoiding doctoral studies.

To solve the problem of declining numbers doctoral-level students, the Japanese government has taken drastic measures based on the Comprehensive Package to Strengthen Research Capability and Support Young Researchers, which was established in January 2020. The Sixth Science, Technology, and Innovation Basic Plan, adopted at a Cabinet meeting in March 2021, set the goals that, "in the situation in which brilliant youths can anticipate the prospect of future success, the career path system for students to enter a doctoral course as bearers of 'intellect' shall be enhanced" and that "the environment, in which all brilliant doctoral human resources can anticipate the prospect of getting regular jobs in various fields, such as academia, industry, and administration, if they want and flourishing as leaders, shall be provided in the future." The Basic Plan also states that the government must take all urgently required measures, including the above-mentioned package, to address the issue.

The National Institute of Science and Technology Policy has conducted various research studies to provide the evidence necessary for the Japanese government's

policymaking efforts. The Japan Doctoral Human Resource Profiling project has continuously followed the career paths of doctoral degree holders since 2014, in hopes of understanding the situations of students before they enter doctoral courses, the experiences they have while pursuing a doctoral degree, their employment status after completing the doctoral degree, and their status as researchers after graduation. These data are essential for policymaking concerning doctoral students and the valuation and verification of the effects of the policy; they also contribute to the policy's development by providing objective evidence. Three cohort studies have been conducted to date. The subjects were people who had completed a doctoral course at a Japanese university in 2012, 2015, or 2018. Those who completed their doctoral coursework in 2018 are referred to as the "2018 cohort" in this report. This report investigated the situation of the 2018 cohort in 2020 (1.5 years after subjects completed their degrees). The results of the investigation are as follows:

- The ratio of participants reporting that they had work experience before beginning their doctoral studies exceeded 50% for the first time, and the mode of the ages of doctoral students rose to the 30s.
- Approximately 50% of participants who did not have work experience before beginning their doctoral studies did not qualify for full or partial financial aid. Some 70% of participants who had quit jobs did not qualify for full or partial financial aid.
- After completing their doctoral studies, around half the participants were employed by universities, and about 30% were employed by private firms. Those most likely to be employed by a university were graduates of humanities and social sciences programs, while those most likely to be employed at a private firm were engineering graduates.
- The future career prospects for participants who did not have work experience before beginning their doctoral studies varied. Approximately 30% reported that they wanted to work as a researcher in academia. In contrast, around 20% of respondents replied that they were not especially concerned about their place of employment and the need to conduct research. Another some 20% replied that they would accept jobs that were not tied to research.
- In terms of the Japanese government's support for doctoral students, the most common responses were that it should improve the research environment for researchers and provide doctoral students with salaries (each with more than 20% of respondents).