THE INTERNATIONAL MOBILITY OF TALENT AND INNOVATION

The international mobility of talented individuals is a key part of globalization. In the quest to promote innovation and entrepreneurship, many governments have sought to attract skilled migrants from abroad, inciting both a global competition for talent and concerns about the displacement of domestic workers. This important new work investigates why skilled individuals migrate and how they shape innovation around the world. Using patent data from the World Intellectual Property Organization (WIPO), it charts patterns of high-skilled migration worldwide. In addition, contributions by leading migration scholars review the latest research insights, discuss new approaches to studying high-skilled migration, and present fresh evidence on the causes and consequences of greater talent mobility. This book will prove invaluable to policymakers seeking to understand how migration policy choices affect innovation outcomes as well as academic researchers interested in the migration-innovation nexus.

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PREFACE AND ACKNOWLEDGMENTS

In 2007, Member States of the World Intellectual Property Organization (WIPO) adopted forty-five recommendations under the organization's development agenda. Recommendation 39 highlighted the brain drain faced by many developing economies. In consequence, WIPO's Economics and Statistics Division was eventually tasked with studying the linkages between skilled migration, innovation, and intellectual property (IP).

This was a difficult brief. Economists have long recognized that migration influences the level and composition of workers' skills in the economy. The prominence of foreign-born scientists and engineers in fast-growing technology companies – especially in the United States – has also drawn significant attention. Clearly, these relationships raise important questions. How damaging is the brain drain for sending economies – both in the short and long run? Is skilled migration a straightforward win for receiving economies, or might it inhibit skills development and depress wages among domestic workers? Yet, generating systematic evidence on how skilled migration affects innovation and knowledge diffusion runs into numerous methodological and data-related limitations. Introducing IP as an additional element to consider makes the analytical challenge even greater.

However, after some exploration, it turned out that WIPO was sitting on a treasure trove of unexploited data on migrant inventors – namely, inventors listed in close to five million patent applications filed under WIPO's Patent Cooperation Treaty System. This discovery turned what initially seemed like a daunting mandate into an exciting and rewarding research project.

Our investigations into the causes and consequences of inventor mobility coincided with heightened interest by policymakers seeking to attract educated workers as a way of easing domestic skills shortages and fostering innovation and entrepreneurship. Academic literature on the topic was also burgeoning, spurred in part by new migration databases

becoming available to researchers. As part of its study mandate, WIPO organized a workshop in 2013 bringing together some of the most prominent academic scholars studying skilled migration and representatives from various international organizations that conduct research in this area. Drawing on state-of-the-art data, the workshop reviewed the main trends and patterns of skilled-worker mobility. It also explored how migration outcomes affect innovation in host countries and the diffusion of knowledge back to migrants' home countries. In so doing, it tried to distill key lessons for policymaking.

As migration continues to be heavily debated in numerous policy circles and WIPO's research foray in this area has resulted in a new perspective on how migration matters for innovation, we thought it would be useful to present the results of our research efforts and the papers presented at the 2013 workshop in book form for wider dissemination. We hope that both policymakers and researchers will find much food for thought among the contributions.

While our research has led us to believe that skilled-worker mobility can render national innovation systems more vibrant and help diffuse knowledge across economies, we also realize that such worker mobility may have adverse consequences and pose significant challenges. The development of migration and related policies can only benefit from empirical evidence that sheds light on the multifaceted and often long-term linkages between skilled-worker mobility, knowledge creation, and knowledge diffusion. We do not pretend to have settled the many intricate questions that have arisen with regard to these linkages – especially those relating to cause and effect. As always, any knowledge gain comes with the recognition that important knowledge gaps remain. Our introductory chapter discusses what we believe would be fruitful directions for future research.

We are most grateful to the volume's contributors for their inspiring papers and for having devoted time to transform their initial workshop submissions into (largely) nontechnical book chapters. We would also like to thank the workshop commentators whose perspectives greatly enriched the workshop discussions – Michel Beine, Chiara Franzoni, Bronwyn Hall, Bela Hovy, Michael Kahn, Jinyoung Kim, Christiane Kuptsch, Igor Paunovic, Roberta Piermartini, Hillel Rapoport, and Theodora Xenogiani. Various WIPO colleagues offered advice and assistance in the development of the PCT-based inventor migration database and the investigations relying on it, including Kyle Bergquist, Matthew Bryan, Bruno Le Feuvre, Intan Hamdan-Livramento, Mosahid Khan,

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Carsten Fink and Ernest Miguelez