

論文の内容の要旨

論文題目 **Skill Distribution, Firm Organization, and Comparative Advantage:
From a Production Linkage Perspective**
(スキル分布・企業組織・比較優位：生産リンケージの視点から)

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This dissertation consists of three empirical research papers ([Chapters 2, 3, and 4](#)) and chapters for introduction ([Chapter 1](#)) and concluding remarks ([Chapter 5](#)). All three chapters empirically show that the impact of human/social capitals on a certain outcome (wages, export, and delegation to workers) depends on the technological characteristics of a given industry, which is primarily characterized by the scope of production linkages. Such different impacts across industries, in turn, shape the patterns of economic development, such as skill allocation across sectors and a country's comparative advantage. These empirical results contribute to the literature by shedding light on new nexuses among human/social capitals, industry technology, and economic development. The content of each chapter is summarized as follows.

Chapter 1: Introduction

This chapter overviews the dissertation, identifies the common features of the three empirical chapters, and describes the contributions of the dissertation.

Chapter 2: Skill Sorting and Production Chains: Evidence from India

Contrary to the theoretical prediction of most studies, [Chapter 2](#) empirically shows that high-skilled workers are sorted into industries with shorter production chains in India. I hypothesize that such a reverse sorting pattern, which I call “negative sorting,”

occurs, because the returns to skill become lower in industries with longer production chains as a result of substantial quality deterioration. Such substantial quality deterioration along the production chains is likely to occur in developing countries such as India, which is characterized by a large pool of low-skilled labor, poor infrastructure, and less-advanced technology.

Using both individual and industry-level data from the National Sample Surveys and India's input-output tables of 1999 and 2009, I find consistent evidence in favor of this hypothesized mechanism: High-skilled individuals are sorted into industries with shorter production chains, where returns to skill are higher. In addition, returns to skill are higher when the quality of intermediate inputs is better. The results remain robust even when correcting for possible selection bias and controlling for alternative reasons. The proposed mechanism provides one answer to the service-led growth of India, and makes a general contribution to the studies on inter-sector skill allocation.

Chapter 3: Skill Distribution and Comparative Advantage

[Chapter 3](#) empirically examines different comparative advantages across countries in relation to their different skill distribution patterns. Based on the skill-sorting mechanism outlined in [Chapter 2](#), [Chapter 3](#) hypothesizes that in countries with greater skill dispersion, the degree of quality deterioration along production chains is more substantial. As a result, negative sorting is more likely to occur and the skill-intensity gap between sectors increases. Provided that *ceteris paribus*, industry productivity is determined by its skill-intensity, greater skill dispersion leads to a comparative advantage in industries with shorter production chains.

By utilizing industry export and skill distribution data on 58 economies around the world in 2000, I find consistent evidence: a country with a greater dispersion of skills exports relatively more in industries with shorter production chains, while a

country with a more equal dispersion of skills has relatively higher exports in industries with longer production chains. The causal relationship is fairly robust against selection and endogeneity biases, and controlling for a country's average skill, infrastructure, and contract enforcement institutions.

Chapter 4: Delegation to Workers across Countries and Industries: Social Capital and Coordination Needs Matter

The degree of delegating authority to non-managerial and non-supervisory workers substantially varies across countries and industries. By examining worker-level data from 14 countries, [Chapter 4](#) empirically explain this variation by region-specific social capital that proxies workers' degree of self-centeredness and the industry-specific need for coordination. The empirical results of this study confirm the theoretical predictions by [Alonso *et al.* \(2008\)](#)¹ for the first time: the negative association between coordination needs and decentralization is mitigated in regions with lower self-centeredness of workers. In particular, when self-centeredness of workers (respectively, need for coordination) is very low, the degree of delegation is always high regardless of the level of the need for coordination (self-centeredness of workers). Positive associations between delegation and its benefits, including job satisfaction, wages (proxy for higher productivity), and skill upgrading of workers, are also found. These results imply that people's degree of self-centeredness affects a country's economic development patterns by changing the degree of decentralization and its benefits.

Chapter 5: Concluding Remarks

[Chapter 5](#) addresses several areas for future research.

¹ Alonso, Ricardo, Wouter Dessein, and Niko Matouschek. 2008. "When Does Coordination Require Centralization?" *American Economic Review*, 98(1): 145-179.