

Thesis Plan

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1 Abstract

I would like to study the trend in market structures through the productivity improvements and my research question is "How the production function is different in an industry/sector or across countries, what boosts the productivity and how has the Third Industrial Revolution changed the economy and how will the Fourth define the significance of people's existence?" The approaches I plan to take are to estimate the production function with various production factors, using individual company data and industry/sector data to the first question; to clarify the source of productivity boosts using causal analysis and/or the way mentioned in Nakamura(2018) to the second question; and to analyze the relative labor share, meaning the ratio of labor share in production to its distribution, and to analyze the shift of human resource inputs using input-output analysis to the last question. In the first phase, I think the production factors labor force, tangible/intangible capitals, human capitals, unemployment/reemployment rate, the number of companies entering/leaving, foreign workers and so forth.

2 Paper reference

- [Nakamura\[2018\]](#)
- [Jesus Felipe, John McCombie, Aashish Mehta and Donna Faye Bajaro\[2021\]](#)
- [トランスログ型生産関数による代替の弾力性の計測](#)
- [中西泰夫 \(2015\)](#)
- [Gon, Hukao, Kim\[2007\]](#)
- [Okinawa prefecture's paper](#)
- [Ministry of International Affairs and Communications's paper](#)
- [Prof. Nomura's paper](#)
- [BOJ\[2010\]](#)

3 Database

- [Bloomberg Professional](#)
- [JIP database](#)