

YIBO (Cheryl) ZHANG
“ESSAYS ON HUMAN CAPITAL”
DISSERTATION ABSTRACTS

First Chapter (Job Market Paper):
Endogenous Skill Acquisition and Taxation
(with James Bullard)

This paper studies dynamic Mirrleesian-style taxation in a lifecycle economy. In contrast to the recent Mirrleesian dynamic optimal taxation literature, in which individual skills are subject to shocks but are otherwise fixed over time, agents in our model make a conscious decision about human capital acquisition (as well as when to retire) given their own aptitude for learning. This aptitude is private information. Human capital accumulation is the engine of growth in our model. We find that there will be no human capital accumulation, and hence no growth, in the economy when there is no taxation of any sort. We suggest a taxation scheme which will induce human capital accumulation and hence economic growth in this stylized environment. The key feature of the tax scheme is to provide incentives for human capital accumulation for those that have high aptitude by credibly transferring resources to them later in life, after they have revealed their aptitude. We show that only a moderate transfer is called for to induce growth in our calibrated economy. We also find that the timing of the tax-transfer may or may not matter for the income distribution depending on the exact form in which the taxation is levied (labor or capital income tax), but in general the tax-transfer scheme is highly non-linear.

Second Chapter:
Brain Drain and Brain Drain Reversal

Departing from the previous theoretical studies on Brain Drain, which mainly focus on the welfare impact of the migration of skilled workers on the home country and on the foreign country, I build a theoretical model to study a somewhat different twin phenomena “brain drain” and “brain drain reversal”. The brain drain and brain drain reversal of interest here is the trend that people from developing countries (most prominently from East Asian countries) who have studied in developed countries such as the U.S. go back to their home country sooner or later for good. I study these two phenomena in a two-period lifecycle economy where home country agents choose not only education location but also work location possibly multiple times in their lifetime. The model captures the crucial factors in agents' location choice decision including work-place premium, education-location premium, market opportunity gap (between home and foreign countries) as well as adaptability of skills. I solve the model analytically and conduct comparative statics analysis followed by calibration exercises based on data from Mainland China (1985-2006). I also explore policy implications on various issues such as higher education subsidies and immigration controls.

Third Chapter:
Human Capital Intensity, Education and Growth
(with Jiaren Pang and Haibin Wu)

Using the methodology of Rajan and Zingales (1998), we revisit the issue of human capital and economic growth by examining whether industries with higher human capital intensity tend to grow faster in countries with higher human capital stock. Not only are we able to avoid the many problems that have plagued the conventional cross-country growth regressions but the results are no longer mixed. We do not find that education improvement has a differential effect on industries with different human capital intensities. However, we have discovered that in countries with higher education levels and quality, high human capital intensity industries grow faster than low human capital intensity ones.