Chen & Zhang(2018) HUMAN CAPITAL, TECHNOLOGY ADOPTION AND FIRM

PERFORMANCE: IMPACTS OF CHINA’S HIGHER EDUCATION EXPANSION IN THE LATE 1990S, the Economics Journal, 128 (September), 2282–2320

Research Question:

Exploit a policy-induced exogenous surge in China’s college-educated workforce that started in 2003 to identify the impact of human capital on productivity

Policy and background:

1. 大跃进和文革
2. higher education expansion since 1999:

During the 1997 Asian financial crisis the Chinese government maintained the value of

the renminbi, causing a substantial contraction in exports. The resulting economic

downturn and increase in unemployment were compounded by the reforms of the

state-owned enterprises (SOEs) that generate a large number of laid-off workers.

In January 1999 the Ministry of Education (MOE) announced an admission plan of

1.3 million for three and four-year college programmes, a 20% increase over 1998. The

following June it revised the admission plan to 1.56 million, an unprecedented

increase of 44% over the previous year.

Annual college admission growth averaged 4.7% between 1995 and 1998;

In sharp contrast, college admissions grew annually by more than 40% in both 1999 and 2000,

and by about 20% over the next five years, before tapering off in 2006

The gross college enrolment rate among 18–22 year-olds increased from 9.8% in 1998 to 24.2%

in 2009.

Method:

DID

Data:

Panel Data: We estimate this impact using a unique panel dataset of privately-owned manufacturing firms for 1998–2007

Level: firm-level databases

Data Source:

1. 1998-2007 Annual Survey of Industrial Firms(By National Bureau of Statistics of China)

**Empirical Strategy:**

**DID:**



Result:

1. We find a significantly larger increase in productivity (measured by total factor productivity, TFP) of firms in more human-capital intensive industries in the post2003 years relative to 1998–2002. Dynamic analysis shows that, prior to 2003, TFP of firms in all industries followed the same trend but between 2002 and 2003 there was a much larger increase in TFP of firms in more human-capital-intensive industries
2. Significant differences between the productivity growth trends of domestic private firms and foreign-owned firms.

Conclusion

Limitation

New idea: Positive impact是否能提高收入，从而减轻生育孩子的负担，因而会提高生育意愿。另一方面，受教育女性增多，更追求自己的事业，因而不愿过早生育孩子，或者选择少生？