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Globalization, Income Inequality and Deindustrialization: The Case of South Korea

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Outline of Presentation

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- Introduction
- Growth and inequality: a brief review
- Theoretical framework
- Empirical results
- Conclusions and policy implications

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Introduction

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- Income inequality is back on the agenda: Thomas Piketty's book, Occupy Wall Street, Post-2015 Development agenda.

- In recent years, income inequality has been increasing in OECD countries, as well as in China and India, but declining in Latin America.

- Our objective is to make sense of the evolution of inequality using South Korea as a case study, with data spanning the period 1965-2011.

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Introduction

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- An examination of the South Korean case is particularly timely since its distribution of income has worsened in recent years, leading to a shrinking of the middle class from 75.4% in 1990 to 67.5% in 2010 (OECD 2014).

- Several Korean news outlets, analysts and policy-makers have expressed concerns about the widening income gap and a shrinking middle class, and the lack of redistribution policies.

- Bank of Korea Governor Lee Yu-Geol has recently (June 2014) argued that narrowing income inequality is important in supporting the economy.

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Introduction

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- South Korea's growth performance since the 1960s has been very impressive.
  - Real GDP growth averaged 6.8% from 1961 to 2012.
  - Its GDP per capita went from 1/10 to 1/2 of the US over that period.

- Although we know a lot about the causes of growth, we know comparatively less about the recent increase in inequality in South Korea's case and elsewhere.
  - Several reasons have been mentioned but the results are not robust.

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Introduction

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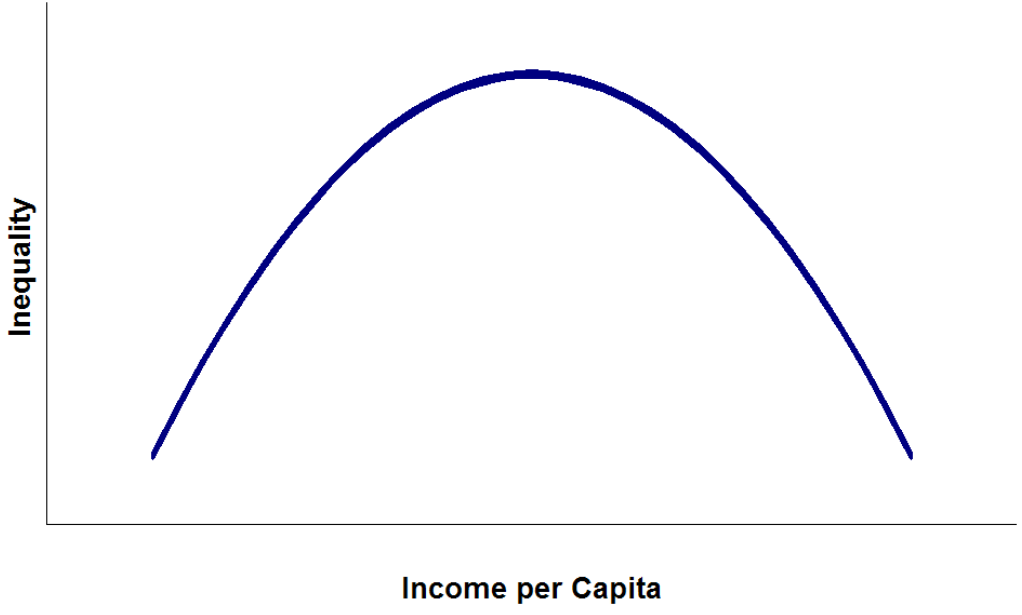
- Contributions of the current paper
  - Extends the seminal contribution by Simon Kuznets (1955).
    - Estimates an "extended" Kuznets-type equation and establishes the existence of two turning points using data from SWIID for the period 1965-2011.
  - Argues that structural changes play a key role in explaining patterns of income inequality.
    - In particular, industrialization and deindustrialization play a crucial role.

Growth and inequality: a brief review

- Kuznets (1955): inequality first worsens and then improves as a country develops.



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Growth and inequality: a brief review

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- Subsequent theoretical explanations have all focused on the nature of structural change (Robinson 1976; Greenwood and Jovanovic 1990).

- Empirical studies, using both cross-sectional and time-series data, have been very controversial.

- Kanbur (1998) describes the Kuznets framework as "a straightjacket which inhibits fresh thinking" because researchers are constantly looking for an inverted-U pattern in the data.

Theoretical framework

- Hypothesis: we need to incorporate two structural transitions into the analysis when examining high-income countries.
  - Transition from agriculture to manufacturing.
  - Transition from manufacturing to services.

- $INEQ_t = \beta_0 + \beta_1 lnY_t + \beta_2 (lnY_t)^2 + \beta_3 (lnY_t)^3 + \varepsilon_t$

  We expect $\beta_1 > 0$, $\beta_2 < 0$ and $\beta_3 > 0$.

Theoretical framework

- Hypothesis (cont'd):
  - When growth and industrialization are positively correlated, the Kuznets relationship is obtained.
  - When growth is accompanied by deindustrialization, the Kuznets relationship flips: inequality declines initially and then increases again after a minimum point is reached.

- Intuition for this result comes from an examination of the Brazilian case (Samy and Daudelin 2013)…

Theoretical framework

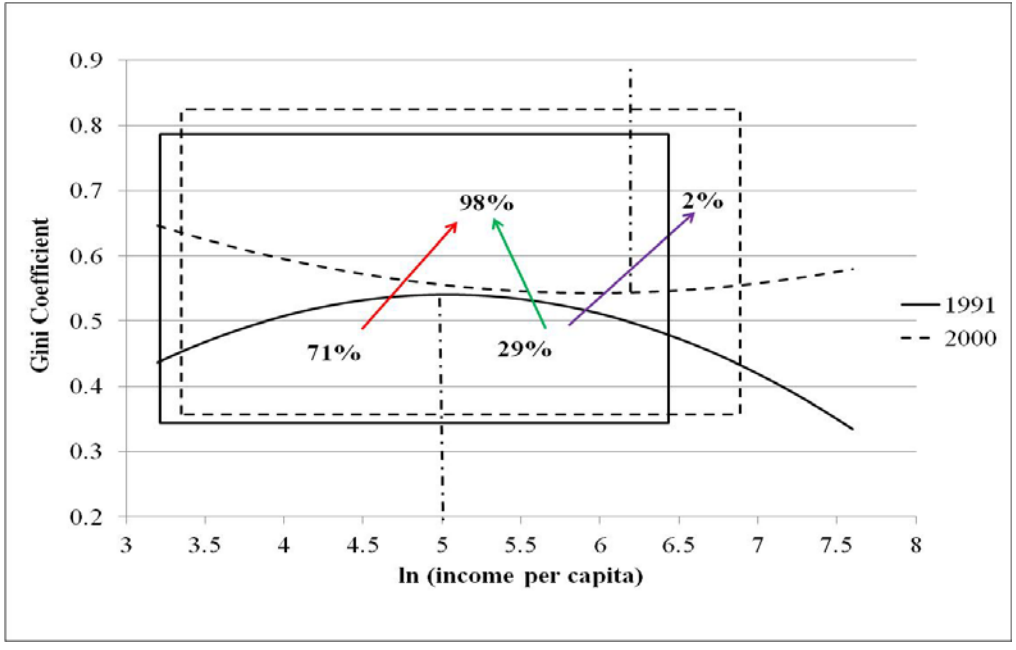
- In Samy and Daudelin (2013), we use census data for more than 5000 municipalities in Brazil in each of 1991 and 2000.

- We uncover the existence of an inverted-U that flipped into a straight-U relationship from 1991 to 2000.

    - Deindustrialization (in part due to liberalization shock) is brutal: industrial value added fell from about 45% in the mid 1980s to 25% in 2013.

Theoretical framework

A Tale of Two U's (Samy and Daudelin 2013)



Empirical results

- In the current paper, we use data on income inequality from the Standardized World Income Inequality Database (SWIID) by Frederick Solt.

- Other variables are from the World Development Indicators database (World Bank).

Empirical results

Table 2: Estimation Results

Explanatory Variables	(1)	(2)	(3)	(4)	(5)
Constant	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.003** (0.002)	-0.002 (0.002)
ln GDP per capita	0.804*** (0.274)	11.735** (3.875)	9.614** (3.694)	8.216*** (2.462)	15.254*** (3.030)
(ln GDP per capita)^2	-0.043** (0.016)	-1.299*** (0.439)	-1.061** (0.416)	-0.919*** (0.274)	-1.702*** (0.349)
(ln GDP per capita)^3	-	0.048*** (0.016)	0.039** (0.016)	0.034*** (0.010)	0.063*** (0.013)
Trade openness	-	-	0.0001 (0.000)	-	-
FDI	-	-	-	0.004*** (0.001)	-
KOF Index	-	-	-	-	0.001 (0.000)
Adjusted R^2	0.35	0.45	0.45	0.22	0.55
No. of observations	41	41	41	35	38
DW	2.38	2.86	2.81	2.02	2.18
F-Stat.	8.097	9.043	7.653	2.881	12.291
(p-value)	(0.000)	(0.000)	(0.000)	(0.031)	(0.000)

Note: Except where otherwise indicated, figures in parentheses are robust standard errors. *, **, *** indicate 10, 5 and 1 percent level of significance respectively; data covers 1965-2011 period but a few years in the 1960s and 1970s had to be omitted due to a lack of data.

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Empirical results

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- The estimated β's are significant at the 1% level and with the right signs.
- The estimated equation has a better fit (higher adjusted R^2 and F-statistic) than a standard Kuznets relationship.
- Results are robust to inclusion of trade, FDI, and demographic variables.

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Empirical results

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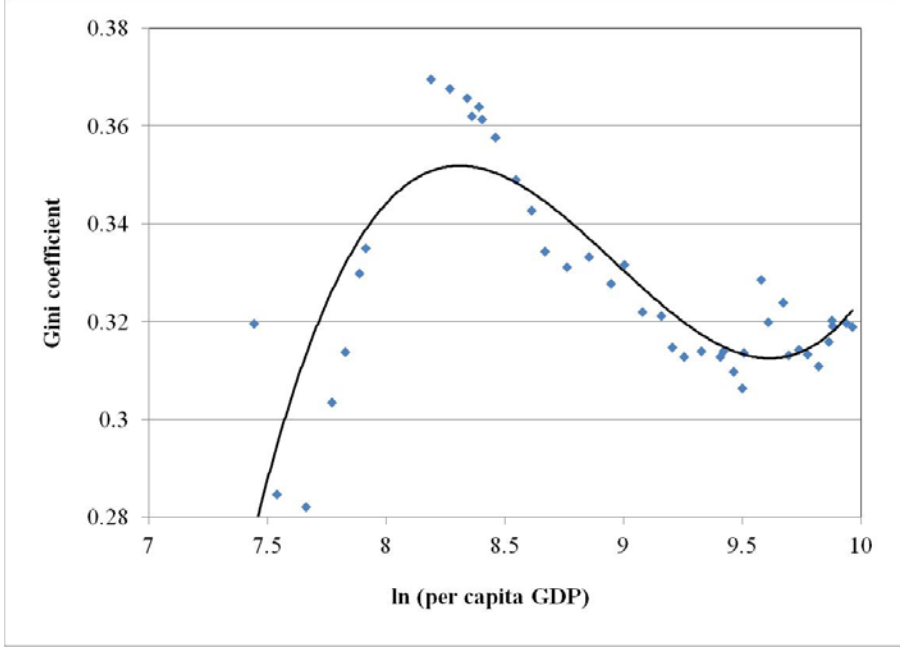
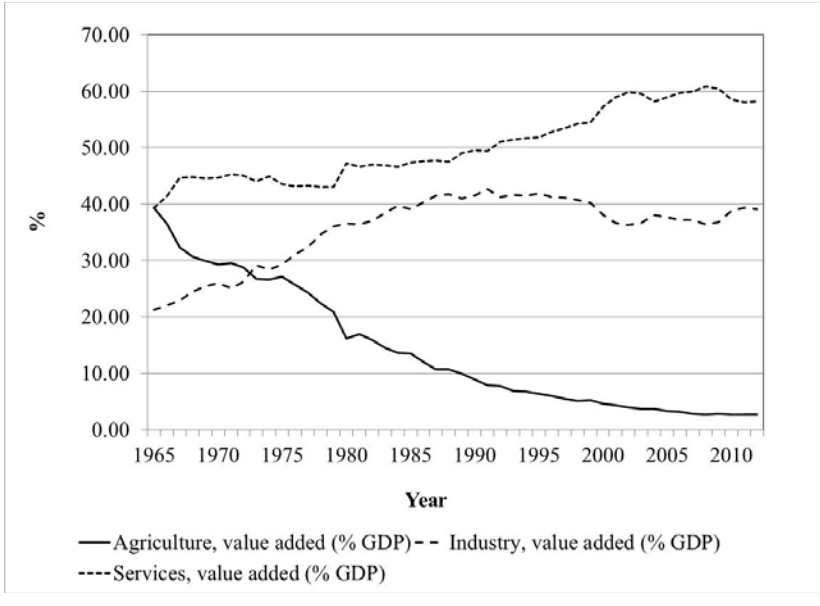
An Augmented Kuznets Relationship, South Korea, 1965-2011

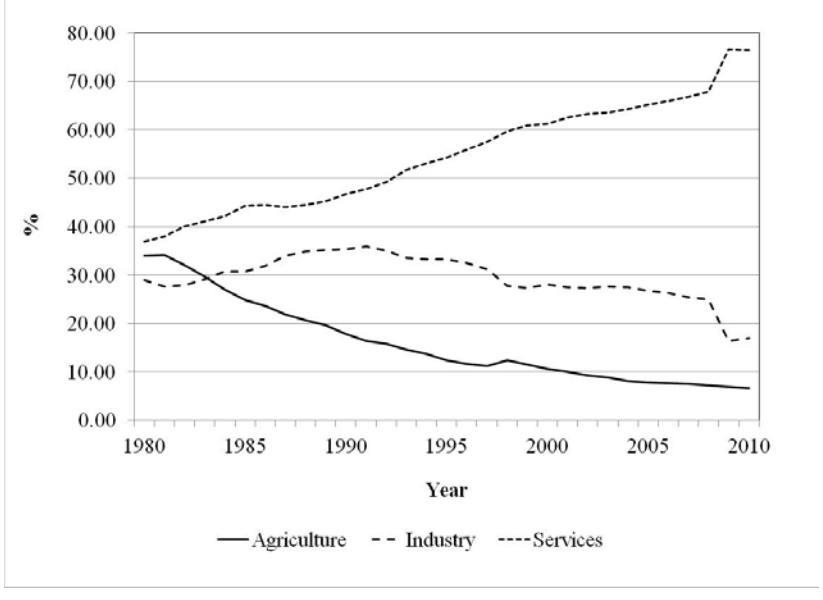


Empirical results

Structural Change, South Korea, 1965-2011



Sectoral Employment Share, South Korea, 1980-2010



Empirical results

- The general relationship between growth and inequality is not given but conditional.

- The association of growth with industrialization is what gives the “Kuznets” relationship its shape.
  - The relative importance of the industrial sector has implications for the skill premium and returns to education.

Conclusions and policy implications

- The evolution of income inequality can be better understood by extending Kuznets' (1955) original argument, namely the transitioning to a service-oriented economy.

- Managing structural pressures is thus paramount in dealing with increasing income inequality.
  - Redistribution, even if challenging, clearly has a role to play.
  - Dynamism and productivity of the service sector needs to be examined.