

Discussion: Skill-Biased Structural Change

Roberto M. Samaniego¹

October 22, 2015

Summary

- ▶ Well known education and development are positively related.

Summary

- ▶ Well known education and development are positively related.
- ▶ Q: to what extent due to structural change among industries with different skill requirements?

Summary

- ▶ Well known education and development are positively related.
 - ▶ Q: to what extent due to structural change among industries with different skill requirements?
1. Document a link between GDP pc and the share of value added in sectors that use high skilled labor.

Summary

- ▶ Well known education and development are positively related.
 - ▶ Q: to what extent due to structural change among industries with different skill requirements?
1. Document a link between GDP pc and the share of value added in sectors that use high skilled labor.
 2. Develop a model to see how much this might account for observed increases in the skill premium (with price and income effects, also documented).

My thoughts

1. Interesting question: understanding the sources of the skill premium is important (could be policy implications, not explored, that's fine, not a policy model).

My thoughts

1. Interesting question: understanding the sources of the skill premium is important (could be policy implications, not explored, that's fine, not a policy model).
2. I think the data/model would be better off with more than 2 skill groups/industries.

My thoughts

1. Interesting question: understanding the sources of the skill premium is important (could be policy implications, not explored, that's fine, not a policy model).
2. I think the data/model would be better off with more than 2 skill groups/industries.
3. Model very simple, what do we lose with this parsimony?

Why more than 2?

1. Important to know this isn't just 1 or 2 industries that drive everything.

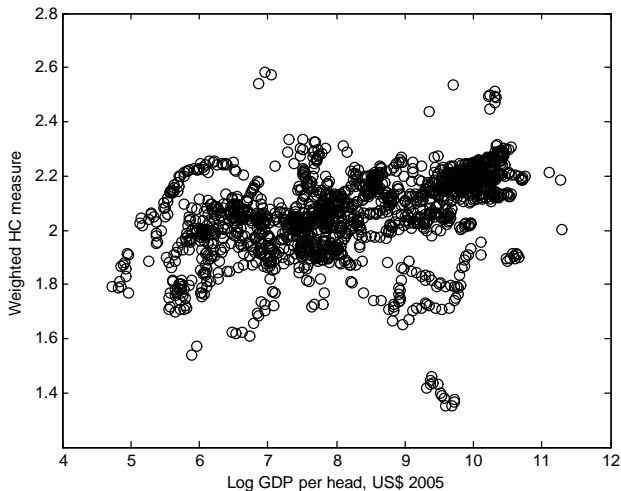
Why more than 2?

1. Important to know this isn't just 1 or 2 industries that drive everything.
2. How do we know there isn't a switch over time in the ordering of industry skill requirements?

Why more than 2?

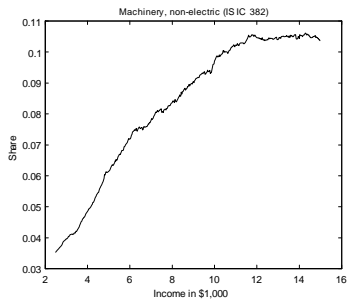
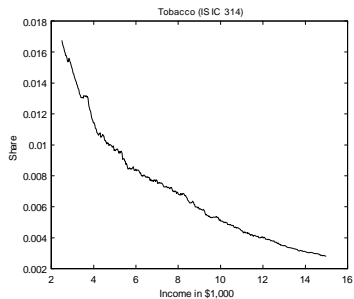
1. Important to know this isn't just 1 or 2 industries that drive everything.
2. How do we know there isn't a switch over time in the ordering of industry skill requirements?
3. Could be some very messy things happening under the hood: price effects different within vs. across sectors. Could be accounting for a lot more (or less?) of the skill premium if you address of this.

More countries/industries:



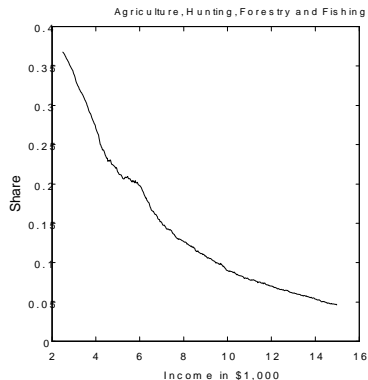
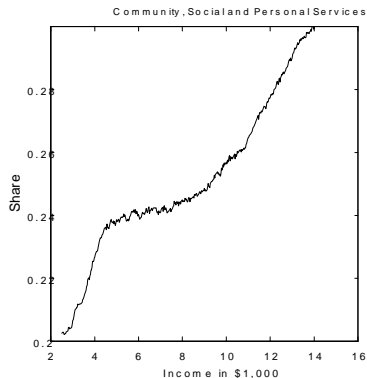
Manufacturing weighted HC, 104 countries, 1960-2003. Industry HC=wages & salaries per employee in the US, 1970-2000 in INDSTAT 3. 1702 obs, t-stat is 18.63.

Price effects: Manuf.



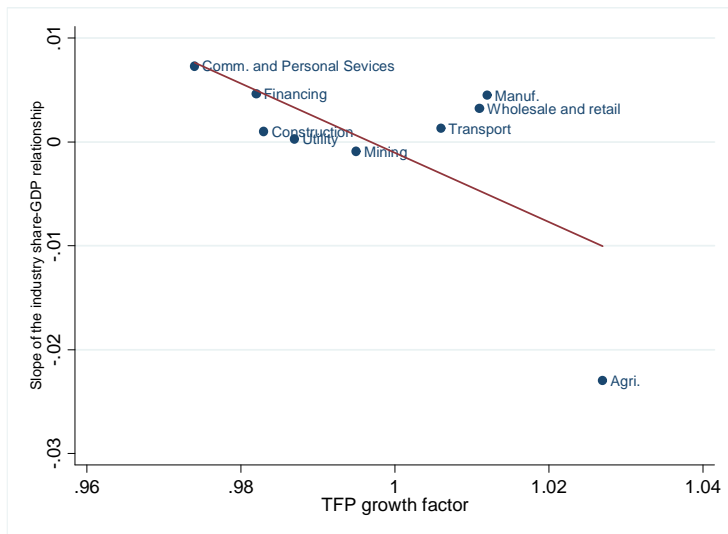
Industry shares and GDPpc for the highest- and lowest-TFP growth manuf industries

Price effects: Broad sectors



Sector shares and GDP_{pc} for the highest- and lowest-TFP growth sectors (prices)

Price effects: Broad sectors



Industry shares and GDPpc for the highest- and lowest-TFP growth manuf industries

Calibration/measurement

- ▶ if I measure skill supply f in their way, we get one thing: $f_H \in \{0.22, 0.34\}$. (1.55)

Calibration/measurement

- ▶ if I measure skill supply f in their way, we get one thing: $f_H \in \{0.22, 0.34\}$. (1.55)
- ▶ If I measure skill supply using hours, we get another: $f_H \in \{0.18, 0.31\}$. (1.7222)

Calibration/measurement

- ▶ if I measure skill supply f in their way, we get one thing: $f_H \in \{0.22, 0.34\}$. (1.55)
- ▶ If I measure skill supply using hours, we get another: $f_H \in \{0.18, 0.31\}$. (1.7222)
- ▶ Begg's question:

Calibration/measurement

- ▶ if I measure skill supply f in their way, we get one thing: $f_H \in \{0.22, 0.34\}$. (1.55)
- ▶ If I measure skill supply using hours, we get another: $f_H \in \{0.18, 0.31\}$. (1.7222)
- ▶ Begg's question:
 - ▶ Might the relative skill content of an hour changed? (information technology? KOR²V)

Calibration/measurement

- ▶ if I measure skill supply f in their way, we get one thing: $f_H \in \{0.22, 0.34\}$. (1.55)
- ▶ If I measure skill supply using hours, we get another: $f_H \in \{0.18, 0.31\}$. (1.7222)
- ▶ Begg's question:
 - ▶ Might the relative skill content of an hour changed? (information technology? KOR²V)
 - ▶ Focus on α_j rather than ρ may be misplaced (information technology? KOR²V)

Simple model: what do we lose?

- ▶ The "raw" skill premium may not be skill – Fang (2006).

Simple model: what do we lose?

- ▶ The "raw" skill premium may not be skill – Fang (2006).
- ▶ No dynamic capital accumulation: implications for measurement and channels e.g. K-L substitution.

Simple model: what do we lose?

- ▶ The "raw" skill premium may not be skill – Fang (2006).
- ▶ No dynamic capital accumulation: implications for measurement and channels e.g. K-L substitution.
- ▶ Won't having capital affect the measurement? (Any capital dynamics are probably "productivity" here).

Simple model: what do we lose?

- ▶ The "raw" skill premium may not be skill – Fang (2006).
- ▶ No dynamic capital accumulation: implications for measurement and channels e.g. K-L substitution.
- ▶ Won't having capital affect the measurement? (Any capital dynamics are probably "productivity" here).
- ▶ No dynamic skill decisions → endogenous response of skill supply is ignored in the accounting exercise.

Simple model: what do we lose?

- ▶ The "raw" skill premium may not be skill – Fang (2006).
- ▶ No dynamic capital accumulation: implications for measurement and channels e.g. K-L substitution.
- ▶ Won't having capital affect the measurement? (Any capital dynamics are probably "productivity" here).
- ▶ No dynamic skill decisions → endogenous response of skill supply is ignored in the accounting exercise.
- ▶ It should be doable!

Conclusion

1. Useful to know the sources of the skill premium change *in general equilibrium*

Conclusion

1. Useful to know the sources of the skill premium change *in general equilibrium*
2. Test the idea much more strongly with more than 2 industries/sectors

Conclusion

1. Useful to know the sources of the skill premium change *in general equilibrium*
2. Test the idea much more strongly with more than 2 industries/sectors
3. Some identification concerns (measures of the premium and of supply)

Conclusion

1. Useful to know the sources of the skill premium change *in general equilibrium*
2. Test the idea much more strongly with more than 2 industries/sectors
3. Some identification concerns (measures of the premium and of supply)
4. Dynamic model? Supply and demand effects likely entangled and only a general equilibrium model with endogenous labor/skill supply can disentangle them.