

Agricultural Productivity and Growth in Turkey

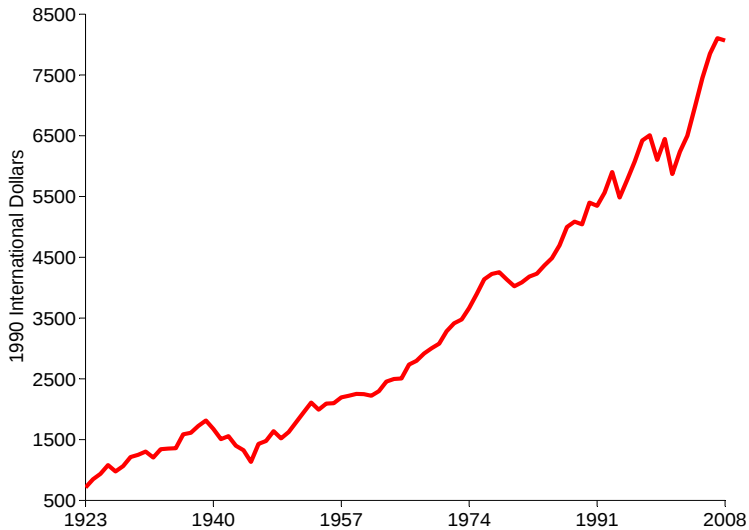
Ayşe İmrohoroğlu¹, Selahattin İmrohoroğlu¹, Murat Üngör²

¹Department of Finance and Business Economics
Marshall School of Business
University of Southern California

²Research and Monetary Policy Department
Central Bank of the Republic of Turkey

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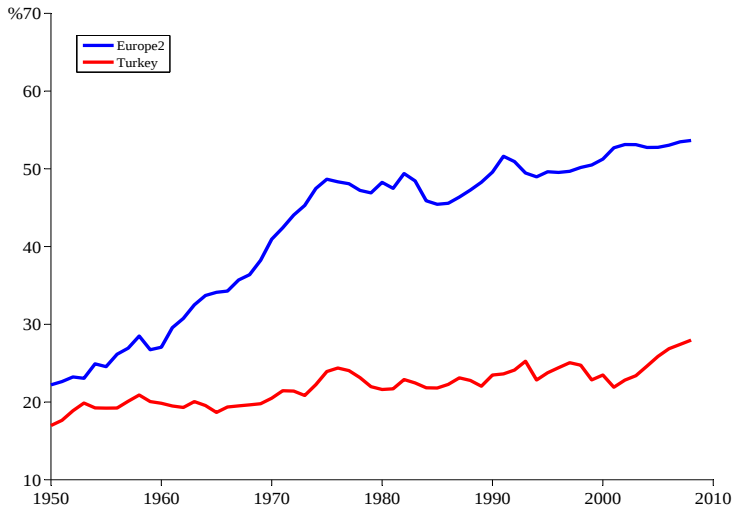
Per Capita GDP Levels, Turkey 1923-2008



Different periods

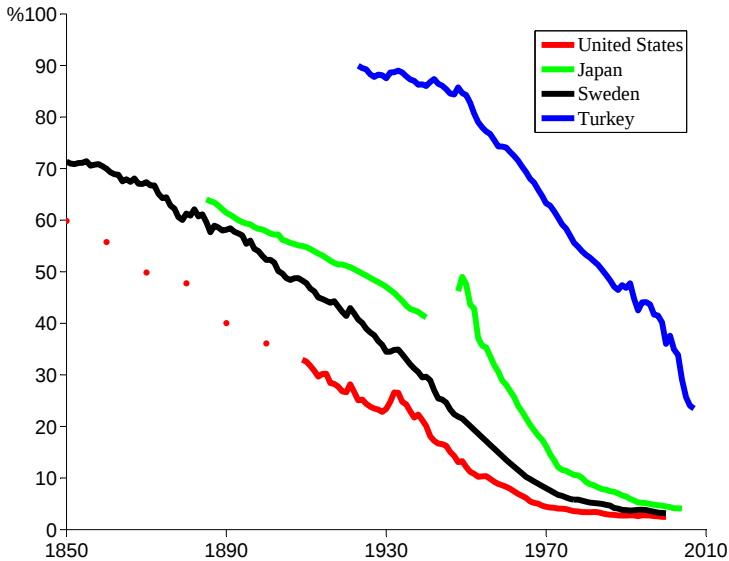
Growth rate of real GDP per capita (%)				
1923-2008	1923-1950	1950-1977	1977-2001	2001-2008
2.9	3.1	3.6	1.4	4.6

GDP per Capita Relative to the U.S.

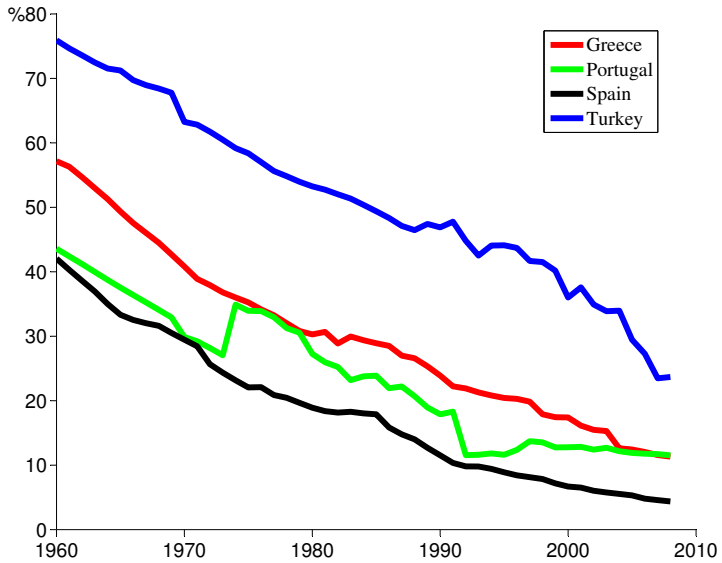


Europe 2: Greece, Portugal, and Spain.

De-agriculturalization



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Driving Forces of De-agriculturalization

- ▶ **Labor Push:**

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Improvements in agricultural technology combined with Engel's law release resources from agriculture

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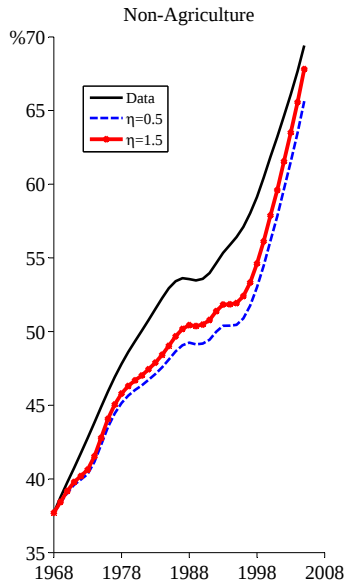
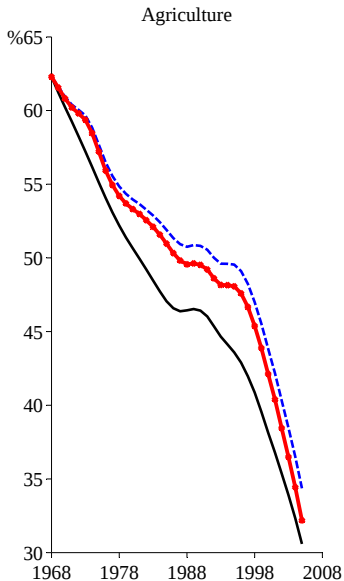
- ▶ **Labor Pull:**

Improvements in industrial technology attract labor out of agriculture

- ▶ We investigate if it is low productivity in agriculture or industry (or both) that is responsible for the slow de-agriculturalization and the low overall productivity in Turkey

Results

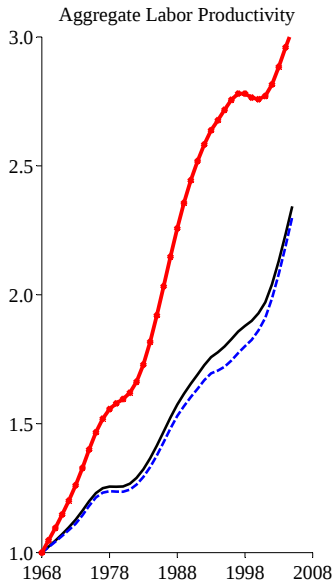
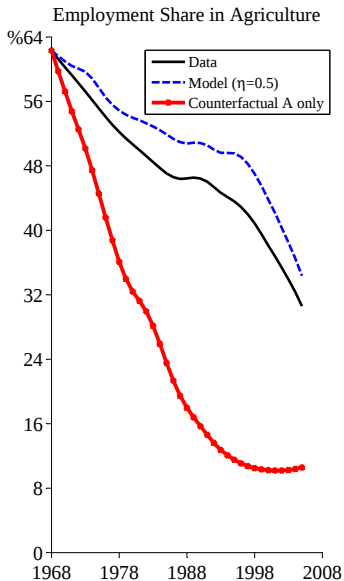
Benchmark



Counterfactual

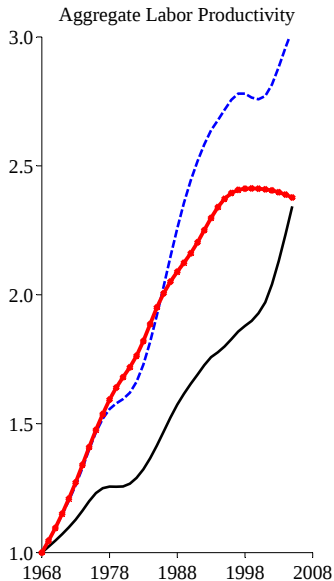
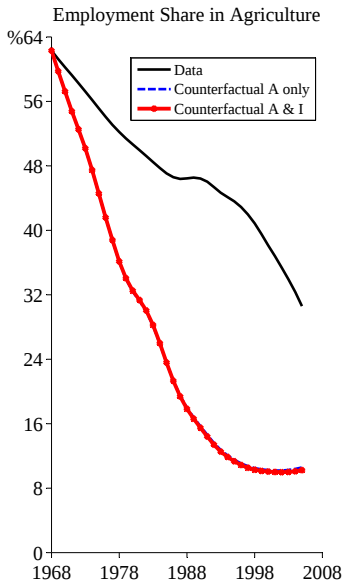
- ▶ Use productivity series from Spain
- ▶ See what would have happened to employment share and output per worker in Turkey
- ▶ First just feed in the Spanish agricultural productivity

Role of Agriculture



Now feed in both agricultural and non-agricultural productivity series

Role of Agriculture versus Non-agriculture



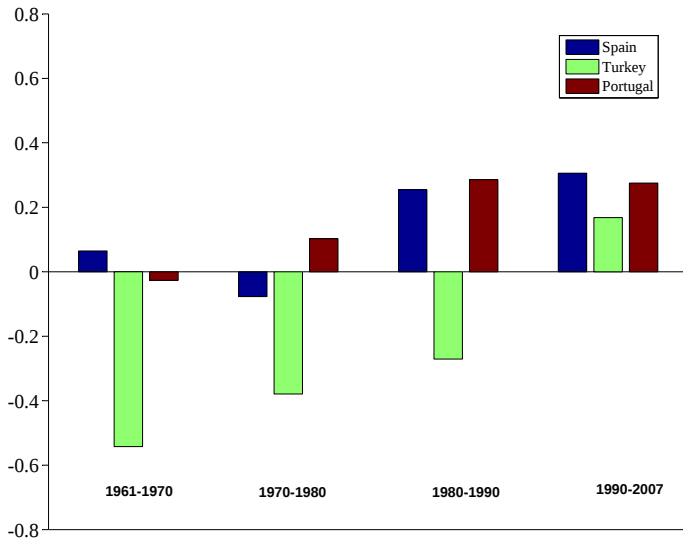
An Extension

Direct and Indirect Protection of Agriculture

<i>Period averages in percentages</i>					
Country	Period	Indirect protection	Tax due to industrial protection	Direct protection	Total protection
Argentina	1960-84	-21.3	-39.5	-17.8	-39.1
Brazil	1969-83	-18.4	-21.4	10.1	-8.3
Chile	1960-83	-20.4	-37.4	-1.2	-21.6
Colombia	1960-83	-25.2	-37.8	-4.8	-30.0
Cote d'Ivoire	1960-82	-23.3	-23.2	-25.7	-49.0
Dominican Republic	1966-85	-21.3	-20.8	-18.6	-39.9
Egypt	1964-84	-19.6	-27.5	-24.8	-44.4
Ghana	1958-76	-32.6	-32.4	-26.9	-59.5
Korea	1960-84	-25.8	-26.7	39.0	13.2
Malaysia	1960-83	-8.2	-9.9	-9.4	-17.6
Morocco	1963-84	-17.4	-13.4	-15.0	-32.4
Pakistan	1960-86	-33.1	-44.9	-6.4	-39.5
Philippines	1960-86	-23.3	-33.0	-4.1	-27.4
Portugal	1960-84	-1.3	-1.0	9.0	7.7
Sri Lanka	1960-85	-31.1	-40.1	-9.0	-40.1
Thailand	1962-84	-15.0	-13.9	-25.1	-40.1
Turkey	1961-83	-37.1	-57.4	5.3	-31.8
Zambia	1966-84	-29.9	-21.4	-16.4	-46.3
Sample Average		-22.5	-27.9	-7.9	-30.4

Source: Schiff and Valdes 1992, Table 2.1.

Relative Distortion





The existence of a 36% distortion on the use of intermediate inputs results in a 16% higher share of employment and 14% lower productivity in agriculture

Conclusion

- ▶ Low agricultural productivity in Turkey accounts for the increased income gap between Turkey and its peers in the 1960s and 1970s
- ▶ If Turkey could have experienced the Spanish productivity growth in agriculture the share of employment in agriculture would have declined much more rapidly and the overall per capita GDP would have increased more dramatically
- ▶ Policies that discriminated against agriculture deserve special attention for understanding the lack of convergence in the Turkish economy
- ▶ Our results may help refocus the attention to policies that have different effects across sectors and across time