

**Discussion of**

**“Agricultural Productivity and Long-Run Development:  
Evidence from Mussolini’s Battle for Grain”**

**by**

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## **Brief Overview of the Paper:**

Mario studies the long term effects of the so-called Battle for Grain, a policy that Mussolini enacted in 1925 seeking to boost productivity in grain production.

The agricultural data compares the yield (tons of wheat per hectare) in 1929 to the average yield for 1923–28 at the municipal level. Wheat yield is found to correlate with population density and industrialization in later years.

Since actual yield is likely endogenous, he constructs a potential revenue index (pot. revenue in wheat over pot. revenue across crops), and uses the change in this index due to switching from low to medium tech in wheat production.

## Overview continued:

Estimating  $Y_{it} = \alpha_i + \alpha_{ct} + \beta \Delta \ln PRI_i \times Post_t + \theta_t \mathbf{X} + \epsilon_{it}$ , he finds highly significant coefficients on  $\Delta \ln PRI$  for both population density as well as for the share of population working in manufacturing as dependent variables on the LHS.

Suspecting that the policy works via human capital acquisition, he distinguishes cohorts and finds that  $\Delta \ln PRI$  correlates positively with educational attainment indicators for the population in 1951 and 1971.

Trying to distinguish price and productivity effects on human capital, it is found that productivity was the main driver, with the coefficient on price close to insignificant.

## Points to discuss:

- Disentangle price and quantity (productivity) effects, as revenue is the product of both. Can one split up the index? The two factors seem to vary on different dimensions.
- The price effect is found to be less important. Yet there was not only protection for wheat or grain. The thirties saw an important increase of protection also for manufactures.
- What about the increase in land use? You normalize per hectare, but marginal/less suitable land will come online, lowering average yield.

## Points to discuss:

- The potential to grow wheat seems a pre-condition for sustaining the population even w/o any policy. Have you checked/controlled for such level effects (ie  $PRI_0$  and  $PRI_1$  separately instead of  $\Delta PRI$ )
- After WWII the EU (or precursors) has conducted agricultural policy (CAP) with similar objectives/methods. Could long-lasting effects be due to this on-going policy intervention?
- The Battle for grain was not the only policy, fascist regimes also invested heavily in armament. To what extent is the shift towards manufacturing due to such additional policies.

## Points do discuss:

- Political regimes (of any stripe) tend to favor their constituency. Have you tried controlling for PNF vote shares?
- Causality between human capital and technology adoption could run both ways.
- Enlarge the maps of Italy please — it's a great country.