

# Appendix A

**Remark A.1:** Log-linearising equation 8 around the zero inflation steady state yields the following output (inflation equation):

$$\pi_t = \beta \mathbb{E}_t(\pi_{t+1}) - \omega \hat{\mu}_t^p$$

Where  $\hat{\mu}_t^p \equiv \log\left(\frac{\mathcal{M}_t^p}{\mathcal{M}^p}\right)$  and  $\omega \equiv \frac{\epsilon_p}{\xi \mathcal{M}^p}$ .

The deviations of the log-price markup from steady state can be written to show the markup-output schedule as:

$$\hat{\mu}_t^p = (1 + \psi)a_t - (\sigma + \psi)\hat{y}_t$$

By setting  $\hat{\mu}_t^p = 0$  we can solve for the natural level of output, which we denote by  $\hat{y}_t^n$  in log-deviations from the steady state:

$$\hat{y}_t^n = \left(\frac{1 + \psi}{\sigma + \psi}\right)a_t \equiv \varphi_a a_t$$

Independently of the number and nature of the shocks affecting  $y_t^n$ , it generally holds that  $\hat{\mu}_t^p = -(\sigma + \psi)\tilde{y}_t$  Where  $\tilde{y}_t = y_t - y_t^n$  is the output gap.

Substituting these into the above we obtain the equation for the New Keynesian Phillips curve:

$$\pi_t = \beta \mathbb{E}_t(\pi_{t+1}) + \kappa \tilde{y}_t$$

With  $\kappa \equiv \omega(\sigma + \psi)$ .

**Remark A.2:** The government fiscal policy rests in an endogenous redistribution rule. By applying a rate  $\tau^G$  to corporate profits, the government rebates the tax proceedings in the form of lump-sum transfers to the *Keynesian* households such that  $T_t^K = \frac{\tau^G}{\lambda} D_t$ .

Consider the log-linearized budget constraint of the *Keynesian* households:

$$c_t^H = w_t + n_t^H + \frac{\tau^G}{\lambda} d_t$$

Knowing that  $d_t = -w_t$  where  $w_t$  is the wage schedule such that  $w_t = (\varphi + \frac{1}{\sigma})c_t$  with  $\varphi \equiv \frac{U_{NNN}}{U_N}$  and  $\frac{1}{\sigma} \equiv \frac{U_{CC}}{U_C}$ , together with the *Keynesian* labor supply, we get:

$$c_t^H = y_t^H = \chi y_t$$

Where  $\chi \equiv 1 + \varphi \left(1 - \frac{\tau^G}{\lambda}\right)$ .

In the same vein, we consider the income for the *Ricardian* households as follows:

$$y_t^R = w_t + n_t^R + \frac{1 - \tau^G}{1 - \lambda} d_t$$

Replacing  $d_t = -w_t$  and the *Ricardian* labor supply, we obtain the following:

$$y_t^R = \frac{1 - \lambda\chi}{1 - \lambda} y_t$$

We then take the ratio of the former with the latter to retrieve the measure  $\mathcal{I}$  expressed before.

With  $\tau^G = 0$  and  $\chi > 1$ , if demand and real wage go up, *Keynesian* income increases as it is not hit by falling profits. In this setting, aggregate demand rises more than proportionally due to the *Ricardian's* decision to work more to offset the profits loss. The counter cyclical of inequality is soon evident and it is dampened only with  $\tau^G > 0$ , internalizing the negative income effect for hand-to-mouth agents.

# Appendix B

Figure B.1: Impulse Response Functions (IRF) for a 1% monetary contraction

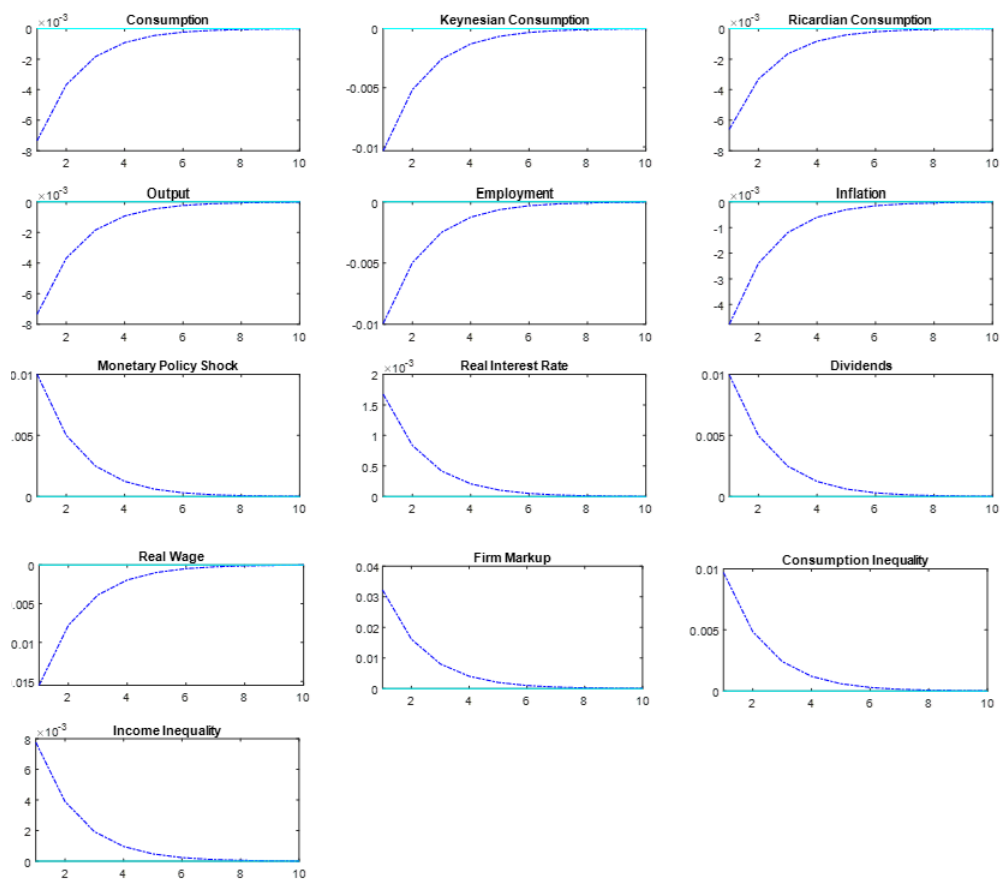
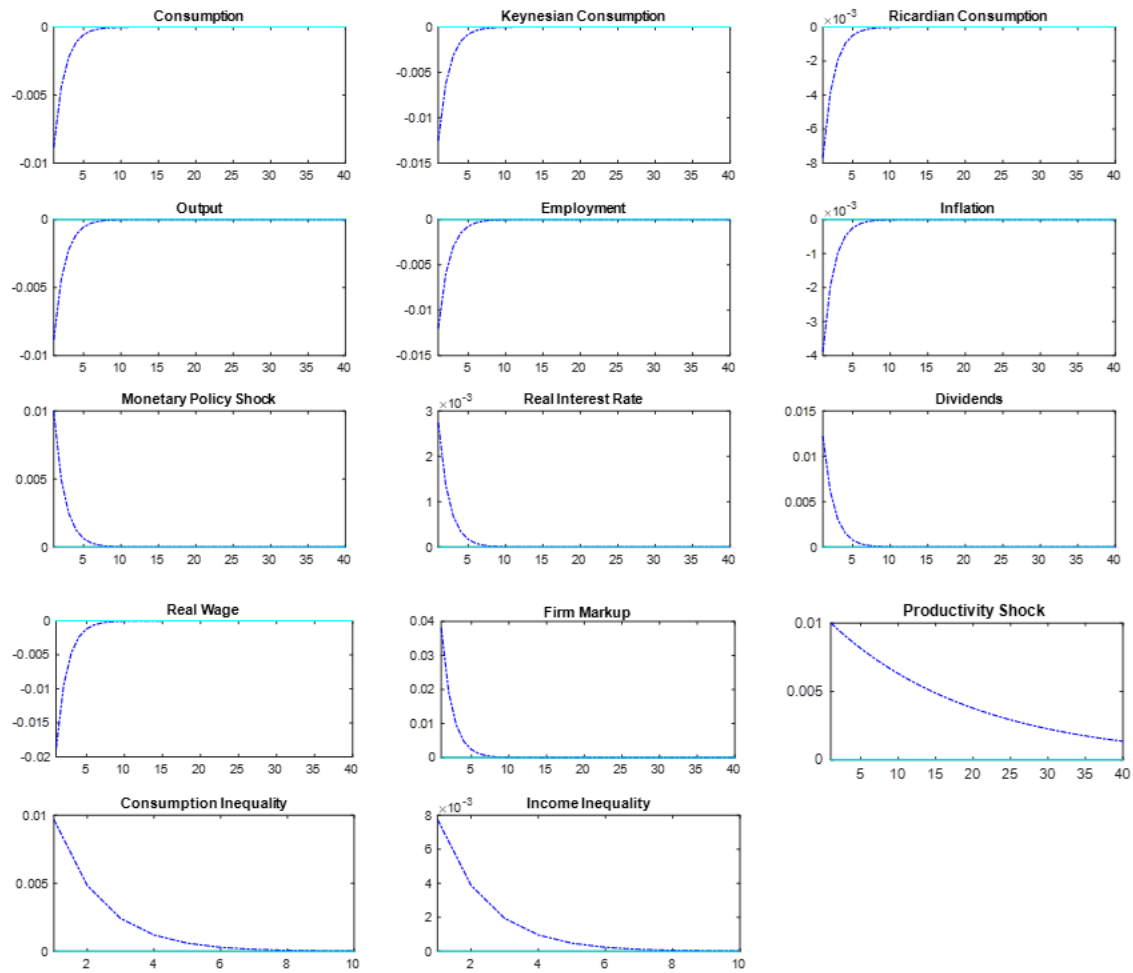


Figure B.2: Impulse Response Functions (IRF) for a 1% positive productivity shock



# Appendix C

Figure C.1: Annual interest rate between 1980-2008 (USA)

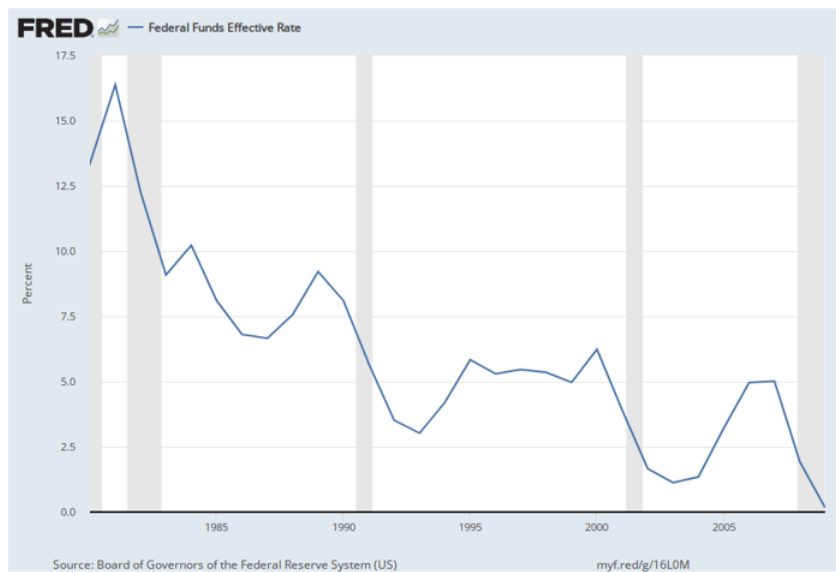


Figure C.2: Ratio between the richest and the poorest 20% (USA)

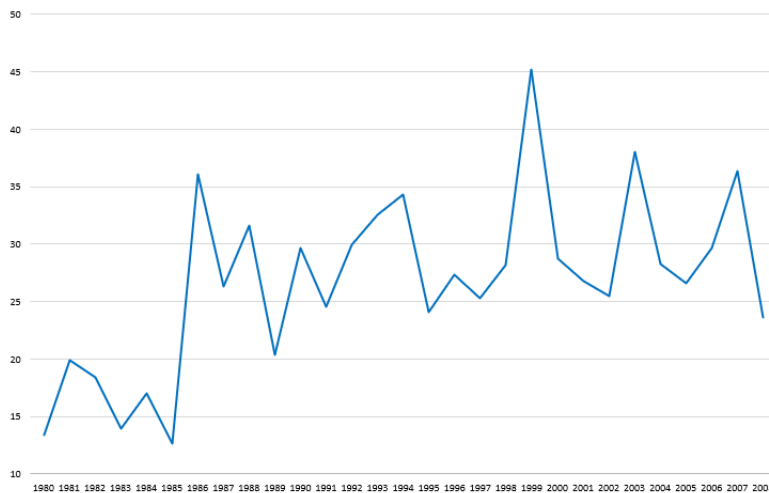


Figure C.3: Average share of income for the top 10% of the population (USA)

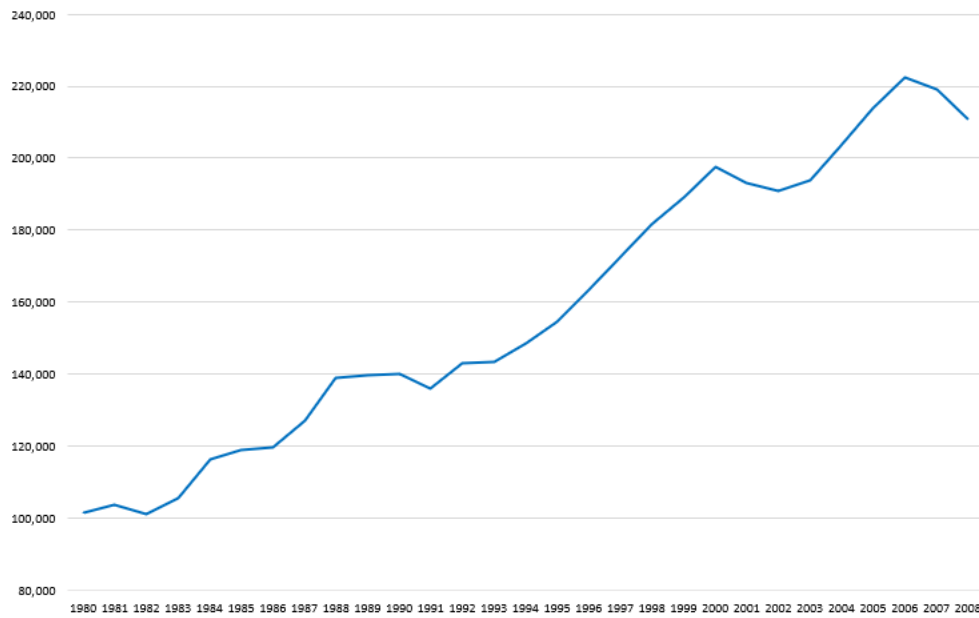


Figure C.4: Average share of income for the top 1% of the population (USA)

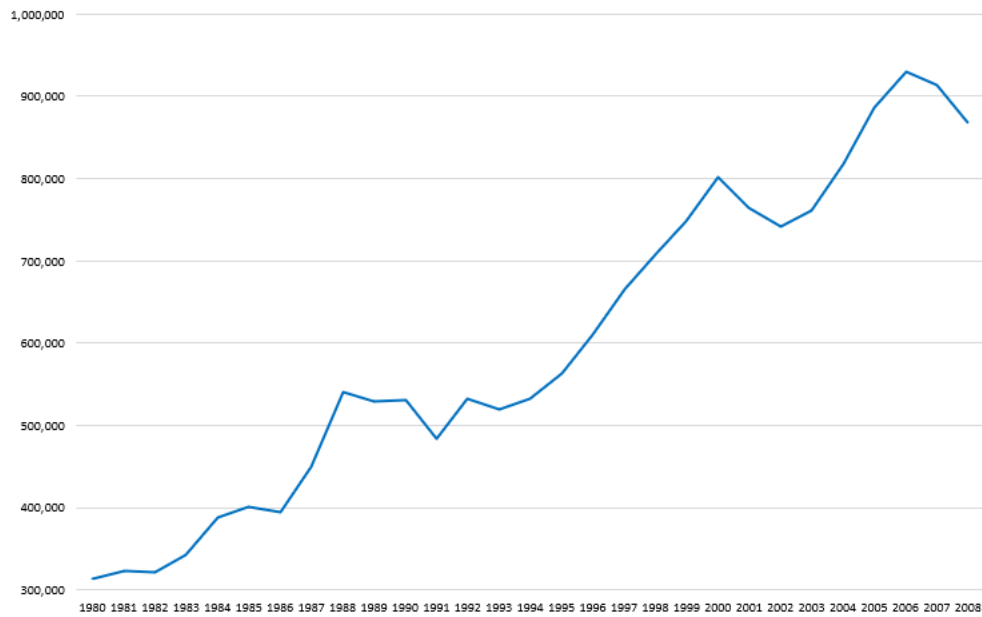


Figure C.5: Income percentile ratios (USA)

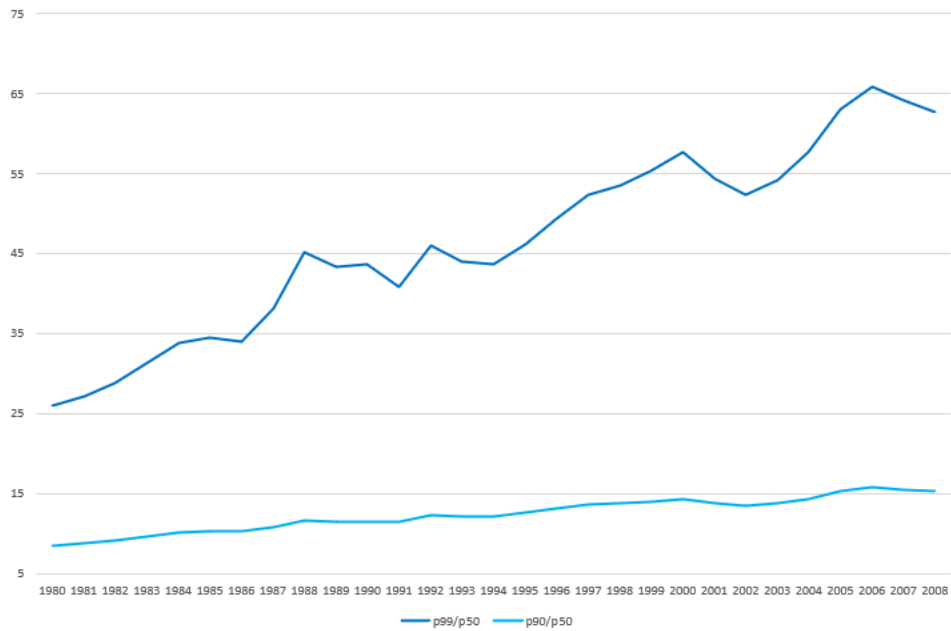


Figure C.6: Annual interest rate between 1980-2008 (Italy)

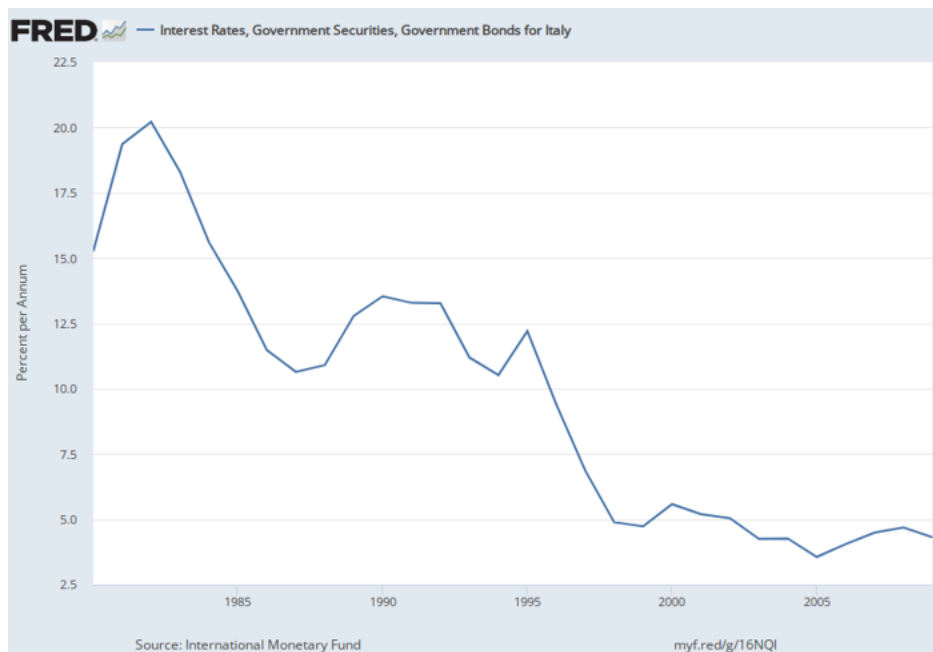


Figure C.7: Ratio between the richest and the poorest 20% (Italy)

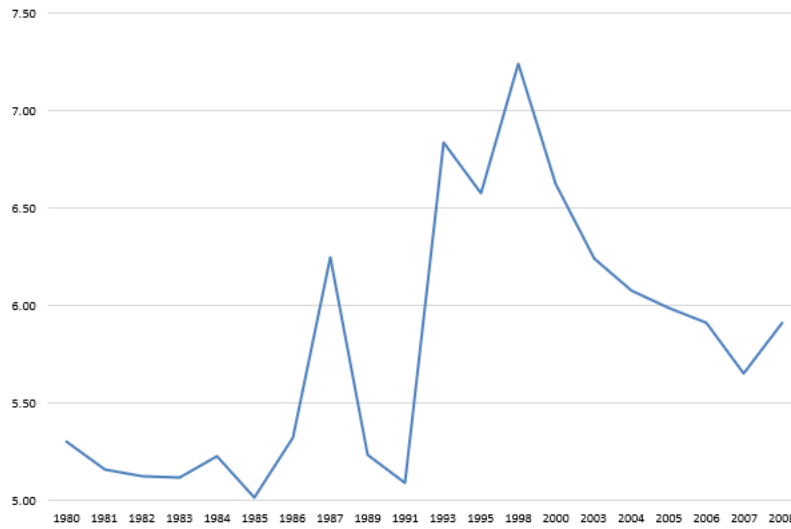


Figure C.8: Average share of income for the top 10% of the population (Italy)

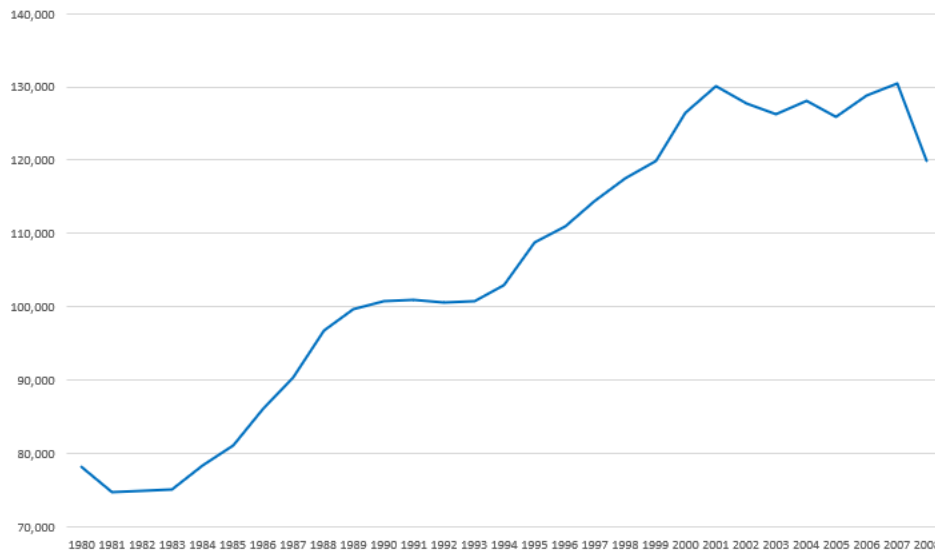


Figure C.9: Average share of income for the top 1% of the population (Italy)

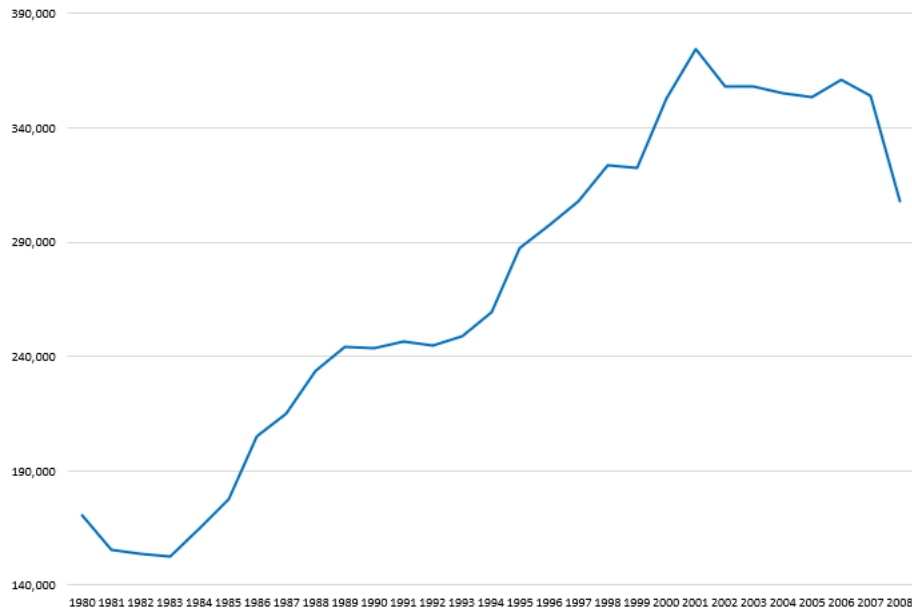


Figure C.10: Income percentile ratios (Italy)

