sub to

$$U(w^e - t^e) = U(w^n + t^n)$$

$$t^e h \geq (1 - s)t^n + (a + \frac{b}{2}s)s$$

The Autarky solutions[13] is

$$s = \frac{w^e - w^n}{b} - \frac{a}{b} \tag{2}$$

where

$$w^e + w^n = t^e + t^n \tag{3}$$

According to economic intuition, an increase in the education costs through either a or b implies a decrease in the optimal provision of education places, while an increase in the difference of productivities makes s rise. The lump-sum tax and transfer are chosen so as to equate the available incomes of educated and non-educated people and satisfy the government's budget constraint.

Mobility solutions

Let us analyse the case in which only educated people can migrate. In this case each government must take in account that the taxation policies of the other regions influence the number of educated workers resident in his region.

Variable $\hat{n}$, which characterizes the effect of these policies on the decision to migrate, defines the educated worker who is indifferent between remaining in his region or migrating in the other region.

$$\hat{n} = k\left[U(w^e - t_1^e) - U(w^e - t_2^e)\right] \tag{4}$$

where $\hat{n}$ changes in response to difference in the taxations in the two regions.

According to economic intuition, we have: $\hat{n}\left(\underset{-}{t_1^e}, \underset{+}{t_2^e}\right)$

$$\text{since } \frac{\partial \hat{n}}{\partial t_1^e} = -kU'(w^e - t_1^e) < 0 \tag{5}$$

$$\text{and } \frac{\partial \hat{n}}{\partial t_2^e} = kU'(w^e - t_2^e) > 0 \tag{6}$$

[13] See the appendix for all the computation.