

an effect of variable C is removed. Running a partial correlation between government consumption and the number of inhabitants and controlling for GDP per capita shows that the relationship remains more or less unchanged, which clearly contradicts the above-mentioned notion. GDP per capita is not a control variable.

The inconsistency with Alesina and Wacziarg concerning per capita income is, nevertheless, astonishing, not only because of the difference in direction, but also because of the magnitude. As they report a mean of 7.871 for log per capita income⁶², which would be more than 74 million \$ US per capita, one is forced to be skeptical about the results. This skepticism also applies to the means of log population and log of total GDP in 1980 reported in the summary statistics⁶³, which are both much too high as well. It cannot be fully verified if the problem reappears in the regressions, but a replication of their statistics with Penn World Table data yields qualitatively similar results concerning the sign of the coefficients, but leads to obvious differences in the magnitude of the effects.

3.2.6 Country size represented by GNP

Alesina and Wacziarg state that their findings are not sensitive to the choice of representation for country size. Strictly speaking, they conclude that it makes no difference if log population or log GDP and/or GNP is employed in the regressions as independent variable:

All of the results in this paper are, in fact, qualitatively unchanged if we use the log of total GDP rather than the log of population as a measure of size.⁶⁴

Here contrasting evidence is provided, because the relationship between public expenditure and population and the relationship between public

⁶² See Alesina and Wacziarg (1998, p. 310).

⁶³ The reported means are: for log population 1980: 8.785 corresponding to about 61 million inhabitants (our calculation: 6.631 or 4.3 million inhabitants, respectively), for log total GDP 1980: 16.649 corresponding to about US \$ $44.6 \cdot 10^{15}$ (10,000 or US \$ 10 billion, respectively) and for log per capita income 1980: 7.871 corresponding to US \$ 74.3 million (\$ 3,220 or 1,660, respectively).

⁶⁴ Alesina and Wacziarg (1998, p. 311), footnote 5.