2.2.3 Smallness due to economies of scale considerations

In the above-mentioned definitions, economies of scale considerations are absent. Clearly, this poses no problem in the case of individual size. However, when the size of a country or state is at stake, as it is in this study, a definition of size regarding economies of scales seems intuitively most fruitful. We will show that a concept of costs employing scale economies considerations in the production and provision of public goods and relying primarily on the number of consumers or users of public goods may be very helpful in addressing the problems of VSC. Arguing along the lines of costs, optimal jurisdiction size has two determinants. First, optimal jurisdiction size depends on the goods which are publicly provided for the population of this jurisdiction. Second, optimal jurisdiction size hinges critically on the openness of the jurisdiction.

2.3 Applied definition of country smallness

2.3.1 Jurisdiction size and publicly provided goods

The cost of producing a *private* good generally depends on the number of units produced, hence on the number of consumers. There are very few goods for which the proposition holds that the first unit produced costs the same as, say, the ten-thousandth.

> *Definition 1:* When the input quantities of all input factors are increased/decreased according to a given multiplication factor $\lambda \in R^+$ (level variation) and the output is increased/decreased by the factor λ^r, where $r > 1$, then this is denoted as «increasing returns to scale» or, equivalently, just «economies of scale» or «scale economies».

For most goods, scale economies do not prevail over the whole range of production. As the number of produced units increases, scale economies typically decrease to the point where (cost-)optimal production is reached.

The concept of scale economies generally plays a prominent role in the determination of market structures and trade patterns of private goods. However, it is also applicable and usable for an analysis of *pu-*