

Abstract

Public consumption spending in Sweden has increased tremendously since 1960. In order to analyze this increased spending a series of productivity studies have been undertaken. The first report was published in 1986 and covered the period 1960-1980. A second report was published in 1994, covering the period 1980-1992. These reports show that the spending increase not only is due to a decrease in productivity but also to an increase in the volume of output. A shift occurred in the 1980s. Productivity still declined but at a much slower rate. In the national government sector this shift was already apparent around 1975.

National defence was included in the first report, but not in the second. The present report corrects for this deficiency. In the first report productivity in national defence was studied under two large sub-headings: the army training of military conscripts and the air force training of pilots. These two sub-headings make up roughly 40 percent of the defence expenditure. Out of total defence expenditure aside from acquisition of new weapons and building of new structures, the two sub-headings account for roughly 70 percent.

The first report covered the July to June budget-periods 1972/73-1982/83. In relation to the number of conscripts trained, overall costs in fixed prices, excluding costs for purchasing new weapons and building new defence structures, increased slightly less, resulting in a small productivity increase. However, in relation to the number of days of training, productivity was unchanged.

The training of pilots likewise recorded a slight productivity increase. The measurement taken was the number of hours of flying in relation to costs in fixed prices, excluding purchases of planes and weapons and the building of structures. Flying time in more modern aircrafts was weighted more heavily than in older aircrafts, reflecting both a difference in unit costs and in combat efficiency. Counting flying hours alike there is a productivity decrease.

The present study, a replica of the previous study, at the same time goes a long way in refining the measurements, especially when it concerns costs. Also it explores two new ways of measuring productivity in the defence sector.

The new study shows decreased productivity for the period 1982/83-1992/93. Unit costs of training military conscripts increased from between 30 to 90 percent, depending on how large a portion of total costs are included. A very dramatic decrease in productivity occurred in 1991/92 when the number of conscripts called up was sharply reduced. However, even before that time unit costs had been rising steadily. Only a small

portion of the increase in the average unit cost can be attributed to a changed training mix in favour of more expensive training for tank combat units. Unit costs of training for all kinds of army forces have increased.

Unit costs of hours in the air have risen between 20 and 40 percent depending on costs included and the weighting of different kinds of airplanes. The weights take account of possible differences in the unit costs of different aircrafts and at the same time express the difference in combat efficiency. Viewed as a measure of combat efficiency the results indicate less potential combat effects in relation to costs than before.

One other way of measuring productivity in national defence is to calculate the cost of maintaining a combat force of a particular kind, for example a tank brigade. Unfortunately the researchers have not had access to such calculations made in the course of defence planning. Instead they have made such calculations themselves, which has meant that only training costs have been included. In calculating the cost of maintaining brigades of various types the researchers make use of the unit costs of training of soldiers for various types of combat forces. It has not been possible to calculate these costs for more than one year. The unit costs for various types of brigades calculated in this way indicate that tank brigades and other heavily motorized infantry brigades cost 30 to 50 percent more to maintain than a regular infantry brigade.

The final way to estimate productivity change in national defence is to relate the gross number of combat units to the total cost. This presents methodological problems of a similar nature to that of calculating the cost of maintaining a combat unit of a specific type: what is the long term cost of maintenance, is there a qualitative change, how to account for the purchase of new weapons that occurs sporadically? In addition there is the problem of aggregating the number of various combat units - submarines, infantry brigades, airplanes - into one single number of the size representing the national defence.

Comparisons are made both between two ten-year periods and over the last ten-year period. Over the two ten-year periods, that is 1972/73-1982/83 and 1982/83-1992/93, national defence was halved, in terms of the number of combat units. During the first ten year-period the number of combat aircraft was halved as was the number of navy vessels. During the second ten-year period the number of army brigades was halved.

The total of defence expenditure during the first ten-year period was however exactly the same as during the second ten-year period. A slight increase occurred in the purchase of new weapons (14 percent), whereas the rest of defence expenditures decreased slightly (5 percent). The running cost of maintaining a 50 percent sized national defence is approximately the same as before.

During the second ten-year period, when the army was halved and there was a slight decrease in both the air-force and the navy, there is no tendency apparent that running costs decreased.

Consequently the reduction of the national defence by half has not lowered running costs and has therefore not contributed to the financing of increased weapons acquisition.

Where does the money go? In the first place the lowering of productivity has caused unit costs to increase. In the second place costs not directly related to training have increased. Savings seems to have been limited by large fixed costs and any actual savings achieved seems to have been absorbed by other programs.

One may ask why this is so. Is this the mere expression of a loose budget constraint and an awkward system of financial control within the defence establishment. If so, there ought to be a potential for savings that could be sought with budgetary constraints.

It has been suggested that the explanation should be that just as the price of weapons systems increases so does the running cost of more sophisticated weapons systems. We have witnessed a fifty percent reduction in national defence in fifteen years. Is another fifty percent reduction within the next fifteen years the prospect facing the national defence?