

Summary

Productivity measurement in the field of justice: an exploration of the possibilities

The aim of this research is to explore the possibilities of an unambiguous measure of productivity change for various judicial organizations under the responsibility of the Dutch ministry of Justice and Security. Many of these organizations calculate some form of (labor) productivity, but the method of calculation is not always clear and certainly not uniform. At this stage of the research there is no intention of comparing organizations. Above all, it is an inventory of the possibilities to implement a uniform measure of productivity change for each organization. The main questions of the investigation are:

Is it possible to calculate the (labor) productivity change of the judicial organizations under the responsibility of the Dutch ministry of Justice and Security in the period 2013-2017? Are enough data available and which data are ideally needed?

A productivity index measures the growth in the outputs that can not be explained by the growth in inputs. The literature proposes several different indicators of productivity change. The most suitable indicator is the Fisher total factor productivity growth (TFPG), because of its relative ease of calculation and because of the symmetry. Symmetry means that you get the same results, if you consider period t with respect to period s or vice versa. The Fisher TFPG is the geometric mean of the Paasche and Laspeyres TFPG, two indices that are also often used to measure productivity change, but both have the disadvantage that they are not symmetrical.

Because the Fisher TFPG looks at the relationship between inputs and outputs, data is needed on both inputs and outputs. For outputs, the production volumes per product (group) with associated cost prices or workload indications are required. The most important inputs in an administrative production process are labor and information and communication technology (ICT). Therefore, data are also needed on the deployment of personnel (in full time equivalents) and on administration costs, with a breakdown by personnel and material costs. Preferably, the personnel costs are broken down by own staff and external staff and the material costs are broken down by investments in ICT, ICT maintenance and other material costs. Only the period 2013-2017 is considered here, because since 2013 the national budget better distinguishes between program costs, administrative expenditures, expenditure on own staff, expenditure on external staff and expenditure on ICT. Most judicial organizations must comply with these budget regulations of the Ministry of Finance. The data of the organizations that do not have to comply have been brought in line with these regulations as much as possible.

Initially, seventeen judicial organizations were selected for an first attempt to calculate productivity changes in a uniform way. The Netherlands Bureau for Economic Policy Analysis (CPB) formulated four requirements for productivity research, with regard to measurability, availability, accountability, uniformity and accessibility. In practice, the data required often prove to be unavailable and sometimes even not measurable. Published data sometimes represents something different than one

would expect on the basis of the explanatory notes. For example, some annual reports mention cohort analyses instead of production figures. Definition changes in products are often not reported. Cost prices sometimes contain improper elements, such as financial transfers from one party to another. Sometimes the product definitions do not match the cost prices: production volumes are measured in numbers, while the cost price is calculated per hour or per euro collected. Sometimes there is discussion about the counting unit of the production volume. Some organizations are financed entirely or partially in lump sum. For some organizations, the administrative costs are included in the administrative costs of the core department and can therefore not easily be distinguished separately. Not all organizations use a cost price model. The alternative, some form of workload measurement per product, was not always available.

The expenditures on ICT turned out to fluctuate sharply in the period under review, presumably because not all ICT expenditure is booked on the ICT budget item and because no distinction is made between incidental large-scale investments in ICT and regular ICT maintenance. That is why ICT is currently not usable as a production factor.

Of the seventeen organizations, seven organizations were dropped due to the lack of availability or non-measurability of the most important data. Of the remaining ten organizations, it was only possible for three organizations to calculate productivity change solely on the basis of data from public sources. For the other seven organizations, to a limited extent additional internal data was needed. Nevertheless, with some additional assumptions and some additional internal information, it is possible to calculate the Fisher TFPG in a uniform manner for ten organizations. For many organizations, however, this was the first time that people looked at their productivity change in this way. Thus, clarification of the results proved to be difficult. The period that is measured is quite short. And sometimes there are many different developments at the same time. Annual reports, both from the ministry of Justice and Security and from the organizations themselves, usually offer too few leads for any explanations. In general, the organizations appear to be react somewhat slow to changes in production volume, which is not unusual and is also a common phenomena in commercial companies. Specifically, the case where production falls and labor is not adjusted accordingly, is known as "labor hoarding".

The financial department of ministry of Justice and Security is considering adding the Fisher TFPG to its instruments. This research shows that this is certainly possible, but that much work is still needed in terms of data definition and collection. The ministry of Justice and Security and its adjoining organizations will have to look at how product definitions and registrations can be improved in this respect. Products must be well-defined and well measurable. And there must be some indication of the workload and/or expenditure per product (group). Cost prices need to include all expenditures for the relevant product as much as possible. On the input side, more attention should be paid to the distinction between different production factors, such as own staff and external staff, and in particular the distinction between occasional large-scale investments in ICT and expenditure on regular ICT maintenance.