In The Name Of God

1

Calculation of Defense Services

and

Research & Development

Output In National Accounts Of

IRAN

2

Preparation and setting out the national accounts for Iran based on the system of national accounts 1993 has been performing since 1994 in the Office of Economic Accounts, statistical Centre of Iran. (Statistical Centre of Iran has been prepared national accounts since 1974)

The main activities in the Office of Economic Accounts, Statistical Centre of Iran are estimating annual and quarterly gross domestic product using product and expenditure approach in current and fixed prices and also calculating annual regional gross domestic product using product approach in current prices.

According to these activities, I explain the characteristic of defense services and research & development output calculation.

3

Defense Services

4

Defense services

Government units are unique kinds of legal entities established by political processes that have legislative, judicial or executive authority over other institutional units within a given area. Government is a supplier of some services which nobody can provide them and generally have no market. Defense services is one of them.

5

Coverage (Defense services)

Defense services include management, supervision and performance of the defense works and defense forces (army, marine, air, …) and is classified and defined in 7522 by the ISIC Rev. 3.1.

6

Resource (Defense services)

Considering that the annual budget has detailed information on government organizations and their activities; separating organizations' expenses and selecting defense expenses among them by using ISIC Rev. 3.1, 7522 code content.

7

Annual Budget

Book1.xlsx

8

Calculation Method (Defense services)

Due to having no market for the government services (like defense services) to define appropriate prices for them, government's output is valued by non-market output which is the sum of intermediate consumption, compensation of employees and consumption of fixed capital.

9

Intermediate Consumption and Compensation of Employees

(Defense services)

Using the share of intermediate consumption and compensation of employees in chosen government organizations related to defense services in 31 provinces of Iran which are calculated from agreement forms between these government organizations and management and planning organization. Using these shares (and checking them with coefficient of input – output tables 2000) on expenses of defense services give the intermediate consumption and compensation of employees of this sector in national accounts.

10

Agreement Form

Book1.xlsx

11

Consumption of Fixed Capital
(Defense services)

Consumption of fixed capital of defense services (divided into construction and machinery) is a proportion of government's consumption of fixed capital. This proportion is equal to relative share of capital assets of defense services in the total of these assets in government sector.

Government consumption of fixed capital (divided into construction and machinery) is calculated by the computer software with a time series of capital assets acquisition data and depreciation coefficients.

12

Research and Development

Research and Development

Research and Development is an activity undertaken for the purpose of discovering or developing new products, including improved versions or qualities of existing products, or discovering or developing new or more efficient processes of production.

This definition of research and development is accepted in Iran's national accounts which is divided into two parts: government research and development and private research and development.

Government
Research & Development

Coverage (Government R&D)

Creative work of natural, medical, agricultural, engineering, social science and humanities fields in the government organizations are related to research and development sector. The aim of these activities is to increase human knowledge and introduce the new usage.

In Iran according to international standard industrial classification (ISIC) Rev. 3.1, this sector is classified in 7310 and 7320.

Resource (Government R&D)

Considering that the national budget has detailed information about government organizations; so by using ISIC Rev. 3.1 separating research and development expenses among others.

17

Annual Budget

Book1.xlsx

18

Calculation Method (Government R&D)

Like other government activities, the output of research and development is calculated for non-market.

The steps of calculation is exactly like defense services for calculating intermediate consumption, compensation of employees and estimation of consumption of fixed capital.

Private
Research & Development

Coverage (Private R&D)

Creative work of natural, medical, agricultural, engineering, social science and humanities fields in the private sector are related to research and development sector. The aim of these activities is to increase human knowledge and introduce the new usage.

In Iran according to international standard industrial classification (ISIC) Rev. 3.1, this sector is classified in 7310 and 7320.

21

Resource (Private R&D)

A survey which has been performed in 2006 and annual CPI data are used for estimating the value added of private research and development sector.

22

Calculation Method (Private R&D)

Unlike government research and development's output which is calculated for non-market, private research and development's output is calculated for market. By using CPI index that is related to this industry and also the data of the mentioned survey, input and output of this sector is estimated.

Challenges

- Lack or inadequacy of statistical data;

- Secrecy or inaccessibility of statistics and the necessity of their estimation;

- Indistinctiveness of Research and development activities in the firms and the difficulties of activities assigned to that;

- Inevitability of using indirect, approximate or in some cases old and out of date data;

Challenges

- Insufficient attention to create data and revision of estimation method due to high expenses of collecting and processing data;

- The lack of registered data in all activities;

- The lack of suitable surveys;

- Limitations on the activities which just have research and development unit;

- Lack of coverage of research and development

25

Thank you

26