

## A GENERALISED MONETARY THEORY OF PRODUCTION

Bernard VALLAGEAS  
Faculté Jean Monnet  
Université Paris-Sud  
54 boul. Desgranges  
92331 Sceaux Cedex  
France

The circuit theory, which is a branch of the monetary theory of production, explains the economy by the circulation of money and goods between three great types of agents : banks, producers and households. *A priori* there is no place for the economic function of government, but if we think about the concept of production we see that government produces goods and services. The only difference between government and firm production is that the former is not sold. So the government is a producer and the productive function of the government is integrated in the circuit theory. Although the general structure of the national accounts (N.A.) is very different from a circular conception, the national accountants have very well understood that government is a producer, and economists may and should use their figures.

First I will recall the basic concepts of the circuit theory, secondly I will think about what is production and will see that, in a circuit, government is a producer beside firms.

Thirdly I will show that the structure of the N.A. is not circular, and I will show fourthly that however the national accountants have very well understood that government is a producer and that economists, and among them post-keynesians, should use N.A.

### I. PRODUCTION IN A GENERALISED THEORY OF CIRCUIT

What is a product? It is every thing, tangible or intangible that is produced. So in fact every things, since e.g. mountains and seas have been produced by geological processes, and even planets by astrophysical processes. So every thing that exists since the big bang has been produced.

But what is an economic product? Maybe we can say it is everything produced by Man, but we know that there are a lot of human activities which are not qualified as economic, and that *a contrario* there are a lot of economic objects in which there is less and less human labour, or more exactly less and less direct human labour.

In fact an economic object is anything, tangible or intangible, whose production needs a payment of an amount of money, called by definition monetary revenue. That explains why we must build a theory of monetary production. Besides the economic production needs always a man, since money is paid to men not to nature. The one who gives the revenue is called the producer, and the one who receives it brings a factor of production. The process of production produces heterogeneous goods and services, but as it is concomitant to the payment of the monetary revenue, these goods and services receive a first evaluation which may be called revenue-value or more simply value. Due to the fact that there are crossed exchanges between producers (to make iron one needs corn and vice-versa) the value of a peculiar good is not immediate and must be calculated.

After the production of goods and services, comes distribution. Households who have born the factors of production and who have globally received the monetary revenue  $R'$ , have the right to get the goods and services produced. In fact they get only a part of them, the consumption goods and services, whose global value is  $C'$ , the other part called the investment or capital goods, of global value  $I' = R' - C'$ , being kept by the producers. To get the consumption goods the households must pay  $C$ . So the producers make a profit  $\Pi = C - C'$ . By definition the part of the monetary revenue that the households do not consume at the end of the accounting period is their saving  $S_h = R' - C$ , so  $\Pi = I' - S_h$ .

To pay the monetary revenue it is necessary that someone borrows the monetary revenue to banks. A part of it is borrowed by the producers. An other part is borrowed by the households. For that part the households pay in advance their consumption so that the producers may have money to pay the revenue. At the end, when money has come back to its borrower, it may be reimbursed to banks, but very often it happens that money, instead of being reimbursed, go directly in a new production process.

To resume, it appears that an economic circuit is compound of four successive phases : 1° the creation of money by borrowing to banks ; 2° the production during which monetary revenue is paid ; 3° the distribution during which monetary revenue is spent ; 4° not always, the destruction of money by reimbursement to banks.

## II. WHO ARE THE PRODUCERS?

For the moment I have not said who are the producers. It is evident that firms are producers since they pay monetary revenues to households and receive money back from them. They get their money back by selling goods and services to households or other firms. In general any one, firm or household, who receives a good or a service from a firm must pay, but there are numerous exceptions : a lot of private firms (e.g. in broadcasting or on the “web”) serve households freely and make money only by selling advertising services to other households or firms. So every production of a firm is not sold, it may be financed by an other mean : the one who pays is not necessarily the one who receives the good or the service. Thus the distinctive quality of economic production, even for a firm, is not that it is sold but that it needs the payment of a monetary revenue.

Now let us examine the economic function of the government. Government pays revenues and offers free services and goods. So these services and goods are economic and the government is a producer. That does not prevent it to have political and legal characteristics (to make law, to keep pace and order...). But from an economic point of view it is a producer. Thus the revenues it pays to households are included in  $R'$ . As the other producers it keeps part of the goods produced for itself, so the value of these capital goods is included in  $I'$  and the value of the goods and services it gives to households is included in  $C'$ . The government receives money from the households namely under the name of taxes, so theses taxes are included in  $C$ . It comes from all of this that the government may make a profit like the other producers and that this profit is included in  $\Pi = I' - S_h = C - C'$ .

I think that all of that is perfectly well understood by the N.A. despite of the fact that N. A. have not a circular structure.

### III. THE NATIONAL ACCOUNTS HAVE NOT A CIRCULAR STRUCTURE

The European system of accounts or the United Nations system of national accounts (N.A.) compounds a sequence of accounts supposed to describe the economic cycle. The first seven accounts are : production, generation of income, allocation of primary income, secondary distribution of income, use of disposable income, capital and financial accounts. But this sequence does not correspond at all to the sequence of the four phases described by the circuit theory.

1. Production is separated of the distribution of income while they are concomitant in the real world and, for its major part, production is evaluated at its sales price ( $R = C + I$  instead of  $R' = C' + I'$ ), which is a non-sense since the selling prices are not effective, but only anticipated, during the production period.

2. In the capital account, it appears that the revenue not consumed, i.e. saving, is used to finance (in the sense of final financing) investment, the algebraic difference  $I - S$  of a peculiar agent, or of a group of peculiar agents, being the net lending to the other, while in the real world, the finance of all the production including investment occurs at the beginning with the creation of money, investment preceding savings.

3. The financial account appears only at the end, while in the real world money is required from the beginning. So only final finance appears and only net, and not gross, borrowings and lendings are considered.

Nevertheless the N.A. have very well understood the productive function of the government and may be used to evaluated it.

### IV. THE NATIONAL ACCOUNTS AND THE PRODUCTIVE FUNCTION OF GOVERNMENT

For the N. A. any agent, i.e. a firm, a bank, a household, or the government, may be a producer. So any agent may have a “production account”. There is a distinction between “market production”, “production for own final use” and “other non-market production”. When production is not sold, the N.A. have some difficulties to respect their own rule that the production must be evaluated at its selling price. So the most part of the non-market production of the government is measured at its cost i.e. roughly the compensation of the employees plus the intermediate consumption. Thus the value added of this non market output is roughly equal to the compensation of the employees, and the GDP is the sum of the market production measured at its selling price plus the non-market production measured at its cost price, which is not very coherent. If we follow the circuit theory all the GDP should be measured by the monetary revenue paid.

I agree that government is a producer and I want only to give some indications how to use the N.A. to explain government production, even if I do not agree with the sequence described by the N.A. The calculus that I am going to present below cannot be accurate, but is only an indication that the concept of government profit is viable. The account of government in the N.A. has not been built to calculate the profit and among the difficulties there is the fact that the market and the non- market productions have been gathered in a unique account.

The non-market output of the government is a resource of its production account. For instance in France and for the whole government (that means central, local and social security<sup>1</sup>) it was in 2006 of 329 billions of euros, which is the sum of the compensation of the employees (235) and of the intermediate consumption (94).

So the value added is equal to the compensation of the employees and the operating surplus for the production of the non-market output is nil. The compensation of employees appears in the generation of income account.

Thus, relatively to the non-market output, the two first accounts of the government appear as follows :

| production account     |            | generation of income account |                 |
|------------------------|------------|------------------------------|-----------------|
| uses                   | resources  | uses                         | resources       |
| interm. consumption 94 | output 329 | compensation of empl. 235    | value added 235 |
| value added 235        |            |                              |                 |

The division in these both accounts is rather artificial, since the production and the distribution of the monetary revenue occur at the same time and that the only true monetary flows are the intermediate consumption and the compensation of employees. The values added of both accounts cancel one another. As for the output it is balanced by the final consumption which appears in the use of disposable revenue account. This final consumption is no more a monetary flow, since the government does not pay to itself any money to acquire these goods and services. For the year 2006 the French government has acquired a final consumption of 424 billions of euros comprising the 329 produced by government as non-market output the other 95 being market output produced essentially by firms. The N. A. divide this total final consumption in an individual consumption of 276 and a collective consumption of 148. The individual consumption comprises what may be attributed individually to the households (that is essentially health, education, cultural services and social intervention). The individual consumption is affected to the households in what the N.A. call the use of adjusted disposable income account (in France in 2006 the consumption of households before this adjustment was of 993 billions of euros ; their effective consumption after this adjustment was of 1 292, coming from a transfer of individual consumption of the government for 276 and of the non-profit institutions serving households for 23.).

Government, like the other producers, may make profit. I have said that the global profit made by all the producers is  $\Pi = I' - S_h$  or  $\Pi = C - C'$ . We can take the last formula to calculate the government profit made on the production of non market goods and services. Government receives taxes and social contributions net of subventions and benefits which are a part of C. Now the households pay their consumption goods received from the government as they pay the market goods, but they pay with taxes instead of prices. For the year 2006 we may calculate that current taxes (that is excluding taxes on capital) and social contributions net of subventions and benefits received by the government from the other agents are of 457 billions, whereas the final consumption of the government was 424 billions. So if we consider all the taxes paid by all the agents and the whole final consumption of government and not only the individual one, we may consider that the government has made a profit of 33 billions of euros on the production of non market goods and services. This figure is only a pure indication to illustrate the government may

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<sup>1</sup>Social security in Europe is compounded of compulsory health and retirement insurances and of family benefits.

make profit while most of the economists are worrying about “public deficits”. If one considers the current transfers must also be deducted, we have no longer a profit but a loss of 5 billions.

## V. CONCLUSION,

As I have said the few calculus presented cannot be accurate but are a simple illustration of the fact the calculus of the profit realised by the government as a producer should be possible. Government, as any producer, must pay revenues before getting back its money either by selling or by taxing. The monies used by any producer, even by the government, to pay the revenues have to be borrowed to banks, either by the producer itself or by some one else.

This idea is reinforced by the fact, demonstrated by Pr L. R. Wray in “Understanding Modern Money”, that government uses central money to pay its revenues and that taxes have to be paid in this central money, while private firms pay their revenues in private money issued by private banks. So central money does have to be created before taxes be paid.

## REFERENCES

On the French national accounts :

[http://www.insee.fr/fr/indicateur/cnat\\_annu/base\\_2000/cnat\\_annu\\_2000.htm](http://www.insee.fr/fr/indicateur/cnat_annu/base_2000/cnat_annu_2000.htm)

On the European System of National Accounts :

[http://eur-lex.europa.eu/smartapi/cgi/sga\\_doc?smartapi!celexapi!prod!CELEXnumdoc&numdoc=31996R2223&model=guichett&lg=en](http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&numdoc=31996R2223&model=guichett&lg=en)

L. R. Wray, Understanding Modern Money, Edward Elgar, 1998

I joint a presentation of circuit theory that I have done at the 6<sup>th</sup> post-keynesian workshop in Knoxville in June 2000, which has not been published in English