

Directorate General of Budget  
and Foreign Aid

Project for the Utilization  
of an  
Electronic Computer

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## I - Purposes and Objectives of the Project

The present project aims at giving the Vietnamese Administration the necessary means for introducing an efficient automation in the work methods of different government financial, accounting and statistical Services

The introduction of this automation would, in the first stage, permit ~~the~~ aiming at the three following main objectives:

- Improve the budgetary control system and extend it to the totality of secondary budgets.
- Ameliorate the system of tax collection and control in order to facilitate an increase of the state revenue and ensure a greater equity in the civic contribution to the national expenses;
- Supply the government with data which can be used immediately, relative to the evolution of the production, the movements of the <sup>major</sup> ~~great~~ categories of goods, the state of the national stocks, in order to permit a rapid adaptation of the economic policy to the actual situation of the country.

The agency which is to realize these objectives must have effective means at its disposal and will have the following functions:

- 1 - Centralization of all public accounts, in order to know with a minimum length of time:
  - a) the actual situation of each budgetary account pertaining to the national budget as well as

provincial budgets and autonomous budgets.

- b) the treasury situation of all the public funds, the projects funds and autonomous funds.

This accounting centralization will lead to a systematization of the control of public expenditures.

When the Performance Budgeting system can be applied the repartition of the expenditures must be made within each program.

- 2 - Control through checking of declarations of turn overs and declarations of incomes; establishment of all the lists of direct taxes; control of the tax- collection.
- 3 - Management of the national stock of <sup>the</sup> main categories of domestic and imported goods, using the information gathered on the occasion of <sup>various</sup> different transfers from one sector of the Economy to another.

This management must rapidly start the <sup>implementation</sup> application of decisions taken in the economic and financial field (for example: assistance to some production sectors and consumption taxes, etc.) or commercial field (policy concerning grant of importation licences, for example).

- 4 - Setting up of statistics of production, importation, exportation, consumption.

## II - Justification of the project

### A. Importance of the proposed objectives.

1 - Necessity of having an improved management of public accounts. It is now <sup>it</sup> impossible to know exactly the way in which the state resources are used.

The control of expenditures, even if general, is almost <sup>MOD.</sup> inexistent because of lack of qualified personnel. ~~With~~ <sup>All</sup> the more reason, nobody knows the situation of each budgetary account. A rough and historical estimate of the execution of the budget is available only after a period of 4 or 5 months after the end of the fiscal year.

In these conditions, the government has no means to control its expenditure policy. No estimate or planning is possible during the fiscal year. The deficits or <sup>(surplusses?)</sup> "suréquilibres" which can happen during the execution cannot be disclosed and corrected.

~~The~~ <sup>Over</sup> expenditures are incontrollable, whether in the framework of an article or a chapter of the Budget.

The introduction of electro-accounting methods <sup>using</sup> with ~~perforated chart~~ <sup>punched cards</sup> (carte perforée) <sup>implemented</sup> ~~carried out right~~ this <sup>very</sup> year, will already bring a perceptible improvement in the control of the execution of the national Budget.

However, the problem of control of the execution of peripheric budgets remains. On the other hand, the control must be exercised even over the individual expenditures. The system of apportionment of expenditures must also be developed in order to ensure a perfect control of the execution of future Performance Budgets.

A well managed budget, avoiding a waste of the state funds and giving a greater economic effectiveness to the expenditures will help the government lead the country towards a more rapid development.

2 - Necessity to improve the tax control and collection.

The greatest part of the internal resources of the state derives at present from indirect taxes. The explanation is that the basis of these taxes is more easily controlable and their collection is relatively simple. But the total amount of these taxes has already reached the reasonable maximum. To increase the internal resources of the state by raising the indirect taxes and especially the production tax, would not only increase the iniquity of the very essence of these taxes but also constitute a danger of deflation in the present period of economic reconversion.

The proportion of direct taxes to indirect taxes is 10.82% in Vietnam, while it is 110.30 in the United Kingdom, 116.43 in West Germany, 201.77 in the United

States (even in India - an underdeveloped country, it is 50.70<sup>o</sup>/o.)

There already exists a theoretical means of increasing the amount of the state resources, which is ~~the~~ direct taxes, <sup>such as</sup> ~~that is~~ the income tax, and the tax on commercial profits, etc. <sup>All that is needed is</sup> ~~One only need~~ to improve the system of control and collection of these direct taxes, especially the taxes on the commercial and industrial profits.

For the year 1955, the total of resources coming from taxes on commercial and industrial benefits is 400 millions piasters whereas the net income of the distribution sector has been estimated at 10 milliards piasters. The percentage of the amount of money collected relative to the amount of taxable sums is then 4<sup>o</sup>/o, whereas the average rate of taxation on the benefits is 20<sup>o</sup>/o.

An increase of the internal resources of the state will <sup>permit</sup> ~~make possible~~ the release of resources coming from American aid. <sup>With</sup> this increase, helping to fill up the current budgetary deficit, the American Aid could be <sup>utilized</sup> affected in total to its natural role that is the investments of <sup>in capital use</sup> ~~infrastructive~~ and equipment.

- 3 - Necessity of a National Stock. At present the national stock is mostly constituted by imported goods. Now, the importation process is not very <sup>flexible</sup> souple. To the

present long procedure is added the remoteness of *the* exporting countries. In these conditions, only an accurate estimate of the needs and variations of the stock, would permit a regular supply of the market which can be adapted to the rythm of the internal consumption. This accurate adaptation will strangle the effects of speculation on the variations of the stock, and will lead to the regularization of prices.

Another aspect of the effect of the normalization of the stock level, is <sup>to</sup> release capital, which ~~are~~ <sup>is</sup> now immobilized in speculative operation, for productive investments. This new orientation of speculative capital towards sound investments, will be all the more facilitated as a atmosphere of confidence in the currency has been created through the regulating effect of the management of the stocks on prices.

Finally, the regularization of the stocks will result in a decrease of income of the <sup>third</sup> ~~tertiary~~ sector (~~secteur tertian~~). The consequence of this will be a reduction of domestic prices which are now encumbered by very high distribution costs. In other words with the management of the stocks we can hope to bring the part of commercial income which is now too great (24<sup>o</sup>/o of the national income - estimates for 1955 - against 23.5<sup>o</sup>/o for agriculture which is however the main productive activity) to a more reasonable level.



B - Justification of the utilization of an Electronic Computer or Electronic Data-Processing Machine (E.D.P.M.)

The works described above, because of their complexity and volume, can be realized only with the aid of Electronic Computer.

1 - Interest of automation.

The development of backward countries is conditioned among other things, by the improvement of their administrative system. In fact, the rythm of development *depends on the quality of the economic development plans,* plans, the quality of the programs planning as well as their execution. Now, the programs planning requires a thorough knowledge of the economic data; and the execution of these programs requires that modifications of these initial data, due to the carrying out and progressions of the same programs be taken into account.

These conditions normally requires an efficient administrative organization having sufficient qualified personnel. But it is obvious that this requirement cannot be satisfied in a country like Vietnam where it is impossible to hope to form, in a relatively short period of <sup>time</sup> ~~time~~, the "cadres" (technicians) the administration should have in order to reach a high degree of efficiency. Perhaps there could be found a small group of high 'cadres', but it seems impossible to train rapidly the thousands of good middle 'cadres' needed.

The recourse to automation is then the only means to palliate this shortage and the only way leading to

an improvement of the administrative action.

Indeed automation will save the middle 'cadres', since its ideal field of application is precisely the routine works.

2 - Superiority of Electronic Computers over the classical Punch Card Machines for carrying out the desired automation.

The works mentioned at the beginning of this project are essentially characterized by:

- the keeping of files of numerous accounts (budgetary accounts, treasury accounts, stock accounts, accounts of taxable business-men),
- Serial <sup>classifications?</sup> appertionments (ventilations en chaine).
- Multiple comparisons for checking purposes.
- Statistical works and calculation of averages percentages and coefficient from numerous basic data.

An estimate of the figures of the previous years shows right now that the volume of works will be very important.

Budget

If each paragraph of the Budget is to be considered as an autonomous account, it will be necessary to keep a permanent file of about 8.000 accounts.

We can foresee about 700,000 movements in a year for the Central Budget, and as many for the perepheric budgets. Each

However, the personnel necessary to perform the codification

The products <sup>will be entered</sup> ~~with be registered~~ in the account <sup>books</sup> when they go through the custom office and taken out when they are sold to a non-tradesman.

The complexity of the operations and their volume, demand that the automation equipment have an aptitude to synthetic works, a great flexibility and a great speed.

The E.D.P.M. satisfies these conditions in a better way than the classical Punch Card Machines:

- a - The E.D.P.M. provided with memories on magnetic tape permits much more complex operations than classical machines, because it multiplies the elements of which are necessary to the elaboration of a work. For example, the same file can contain on magnetic recordings much more information than the 80 columns of the classical punch cards, and in a much small volume. Then the synthesis of a great number of data - by way of transformation and <sup>compari</sup>son - corresponds pre-eminently to the possibilities of the E.D.P.M.

On the other hand, the E.D.P.M. handles the data separately, from the recording until the outcoming of the results, whereas the classical punch card machines deal with the data as a whole, by decomposing each elementary operation in a chain of standardized works. The E.D.P.M. is then much more flexible since for each separate case, it can take into account the

particular conditions which sub-programs can record in advance within the framework of the general program. In the present situation, it is to be feared that the classical machines have not enough flexibility to be adapted to the numerous different cases which a reform, even though complete, cannot abolish.

- b - We have seen that the problems stated above are characterized by a very important volume of basic data. The results which the solution of these problems will bring will be interested only if : (a) they are collected in very short <sup>time</sup> ~~tune~~; (b) they are sure to be without mistakes and need no cheking which is a waste of <sup>time</sup> ~~tune~~. These results are, in fact, essential elements for the management and planning.

The fate of the economic and fiscal programs of action as proposed above depends on the rapidity with which the results are gathered.

Now, the work speed of the E.D.P.M. is well adapted to the collection of results which can be utilized in management problem. The rapidity with which the machine can perform the calculation and <sup>classification</sup> ~~appercionment~~ operations, enables it to solve many statistical problems in five times less ~~time~~ than the classical machine. In fact, due to the great capacity of memories of the E.D.P.M. <sup>it</sup> is not necessary to do the numerous preliminary sorting and <sup>inter</sup> ~~in the~~ classification

work required in the operation of the classical machines. Moreover, the utilization of magnetic tapes with the E.D.P.M. leads to a considerable acceleration, of the reading and recording speed.

According to the figures given by constructors, with a classical machine using punch cards it takes 3 hours in order to read a card file of 25,000 accounts, whereas 15 minutes are sufficient for reading the same card file recording on magnetic tapes.

The speed element is also justified by the fact, already mentioned, that the E.D.P.M. is capable of solving simultaneously several problems in the course of a same passage of the cards. For example, for the control of the execution of the budget, a single passage of card "movements" would be sufficient for the E.D.P.M. to establish, on one hand, all the accounting reports (statement of balances, expenditure and encumbrances reconciliations, etc.) and on the other hand, all the papers of daily transactions (encumbrances, expenditures, etc.) the list of all abnormal cases (rejected expenditures, exhausted allotments, etc.)

### C - Rentability

Almost all the advantages of the project cannot be presented in terms of figures, but <sup>they</sup> are of such importance that each one by itself fully justifies the cost of the project.

Thus, the complete mastery of the national budget and of the secondary budgets, will result in an economy and a better effectiveness of the public expenditures (the total volume of the National Budget is 4 milliards VN\$ per year, and that of the secondary budgets is 1 milliard).

If it was necessary to strengthen the Administration of the Budget (assuming that the qualified personnel is available) in order to perform imperfectly the work entrusted to the machines, it is estimated that it would be necessary to increase at least 3 times as much as the annual budget of this Directorate (which is now 48,000,000\$).

The increase which would be  $48,000,000 \times 2 = 96$  millions piasters, represents 4 times the price of the machine.

Concerning the tax collection let us remind that only for taxes or commercial benefits, the increase of the collection could be estimated at a minimum of 500 millions piasters a year (25 times the price of the machine).

(Total of taxes on commercial and industrial benefits collected now: 400,000,000\$. Tax rate: 16% on the benefits of individuals - 24% on the benefit of societies - Total of net income of the commercial sector: 10 milliard piasters).

A good management of the stocks would permit a perceptible reduction of losses due to the temporary superabundance of the stock of some imported perishable goods: sugar, cement, antibiotics, flour, etc. Without being able to make any estimate,

let us simply remind that the annual quantity of imported goods amounts to 9 milliards piasters a year of which 25<sup>o</sup>/o of more or less perishable goods.

The management of the stocks would also permit to plan an ~~a~~ alimentation of the market which would be perfectly adapted to the possibilities of sale, <sup>and</sup> ~~which~~ would reduce the period of impro- ductivity of the capitals represented by these stocks.