



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

TRANSMISSION OF DECISIONS OF THE CENTRAL PLANNING AUTHORITY TO PEASANT
FARMS IN A CENTRALLY PLANNED ECONOMY

W. Herer

1. A Brief Description of a Centrally Planned Economy with a Peasant
Agricultural Sector.

Let us imagine an economic system which is divided into two spheres:

The real sphere /1.p.39 and 69/, or the production sphere, comprising industry, construction and services, included, as a whole in the public sector of the economy, and agriculture in which, in addition to state farms, also the peasant farm sector producing almost all agricultural products, is included. x/

The peasant sector is characterized by private ownership of land and of basic production means /apart from some big machines which are the property of cooperatives/ and has the freedom to dispose of its products.

The control processes sphere or the regulation sphere which comprises primarily the central planning authority to which, to a varying degree, the following sub-spheres or subsystems are subordinated:

- the nationalized monetary and credit subsystem,
- the nationalized subsystem of information on technical and scientific progress,
- the market.

Speaking of the market in a centrally planned economy we have in mind four types of markets:

- the market in which state-owned enterprises trade; this kind of the market we shall call pseudo-market, because commodities here do not change its owners /O.Lange calls them quasicommodities /2.p.132/ and trade takes place between government owned enterprises. We can say then that market relations appear here through a peculiar imputation.

* Planning Institute, Warsaw, Poland

x/ For the sake of simplicity I disregard certain forms of small scale private non-agricultural production /small industrial enterprises, small service enterprises and handicraft/.

- the market in which the individual consumers purchase the means of consumption produced by government owned industry and peasant-owned farms, and sold through government and cooperative retail trade channels /the true market in which commodities change owners/;
- the market in which peasant farmers sell their agricultural products and purchase the means of production in government owned purchasing and supply enterprises;
- the market in which peasant farmers sell their agricultural products directly to the consumer in market places and in trade between neighbours. As the national economy develops, this form of trade is undergoing a process of a gradual and natural reduction and represents a negligible portion of commodity production. It should be noted, however, that the process of diminishing the scope of this market is not a result of administrative restrictions, because farmers have a full freedom of choice in disposing of their products either in the state market or in the private market /in our further considerations the latter we shall call private to distinguish it from the first three which we shall call government markets/.

Let us note, that in the system described above market relations exist, but they are clearly subordinated to central planning.

This subordination is quite obvious in commodity exchange between government owned enterprises. It exists also in the market in which individual consumers purchase in government owned retail stores the means of consumption from incomes derived from the enterprises in the nonagricultural sector /wages and incomes from the sale of agricultural products purchased by the government purchasing enterprises at prices set by the central authority/. We can say then that here both the supply and the demand develop in a direct relation to the decisions made by the central planning authority /this is the reason why in this market it is impossible to have a situation in which supply would exceed demand/.

Less obvious is the subordination of the market in which peasants sell their products and buy the means of production. This subordination appears here, however, if we take into consideration the fact that the demand for agricultural products is represented here mainly by government organizations which purchase agricultural products and sell the means of production needed for agriculture at prices set by the central authority. Since government owned enterprises not only purchase agricultural products, but also process them and sell them to the consumers in the form of foodstuffs, also the private market in which commodities are traded directly between peasant agricultural producers and consumers, is indirectly - although in a somewhat different way - subject to

control by the central planner. This results from the fact that the basic portion of foodstuffs is sold through the government trade network at prices set by the central authority. We can say then that in the private market prices cannot significantly exceed the ceiling set by the prices in the government market, if the latter is in equilibrium. Only within the framework of this limitation are these prices shaped under the influence of the play of the demand and supply forces, with this provision, however, that the demand is created by the government wage fund of the non-agricultural public sector, while the supply is formed by peasant farms which, as we shall try to show, make the choice concerning the allocation of the mass of commodities between the private market and the government market, under strong influence exerted by the central planning authority.

In conclusion of this brief description of the structure of the economic system it should be noted that the private market, which plays a negligible role in supplies for the population, plays a significant economic part through its very existence. For its existence imposes on the activities of the central planning authorities certain restrictions resulting from the fact that the predominant role of the public sector in the purchases of agricultural products is not based on a monopoly guaranteed by administrative orders, but is conditioned by such a state of equilibrium between the demand and the supply in the government market as would equalize prices in the government market and in the private market and prevent substantial increases in the latter over the level of prices in the government market. Major disturbances in equilibrium in the government market may result in such an increase in prices in the private market as would destroy the equality of prices and could cause, in turn, an excessive flow of agricultural products to the private market; this would be tantamount to undermining the whole system which can function properly only in the conditions of domination by the public sector in purchasing agricultural products and supplying the population with food products. /The declining private market, which always has some boom potentialities, is then, in this case, a specific "barometer," helpful in controlling the equilibrium of the system/.

2. Decision Making by the Central Planning Authority.

The preparation of decisions may be divided into the following two processes:

- the search for possibilities /1. p. 103 and 111/, i.e. the formulation of sets of possible decision alternatives concerning the rate of growth and the structure of agricultural production;

- determination of political limits of acceptable solutions; this is done by political management.

"The two processes can, of course, be strictly separated only in theory; in practice, they are intertwined and involve mutual interaction. The "planners" calculate in advance, when submitting their proposals, how they will be "viewed" by the political bodies ... The two processes are linked by a continual exchange of information" /1. p.111/. A final formulation of decisions may be given the form of algorithms treating them as "a series of moves made according to given rules and leading to the solution of a definite problem" /1. p. 116/.

3. Transmission of Decisions to Peasant Farms and to Government Owned Enterprises whose Task it is to Provide the Conditions for Implementing Decisions Contained in the Plan Concerning the Rate of Growth and the Structure of Production.

In the described system of a centrally planned economy there are three forms of transmission of decisions made by the central planning authority, to the real sphere: /I use here definitions borrowed from K. Porwit, 3. p. 40/

- transmission of administrative orders,
- parametric transmission,
- administrative-parametric transmission.

Transmission of the administrative type is based on passing on to economic units in the real sphere legally enforceable directives from the regulation sphere.

In the parametric system the central planning authority does not resort to any form of non-economic coercion with respect to the enterprises in the real sphere. The objectives set by the central authority are reached in the course of independent decision making by these units /3. p.41/. These decisions are made according to the rules of the game set by the central authority, on the basis of the market mechanism and instruments of economic influence. Both these forms of transmission of decisions made by the central planning authority are used with respect to government owned and cooperative enterprises in the real sphere which purchase and process agricultural products, as well as supply directly and indirectly peasant farms with the means of production /non-agricultural enterprises in the real sphere which provide the conditions for implementing the decisions concerning the rate of growth and the structure of agricultural production/. To

peasant farms the decisions of the central authority are transmitted through the market in the parametric form.

The transmitted decisions may be divided into two groups:

- Fundamental decisions /1. p. 117/ which are not very regular and concern the processes of basic importance. These decisions require complex information inaccessible to the particular enterprises; they concern problems which the central planning authority can "see" better. These decisions are often of fundamental and frequently irreversible importance for medium-range and long-range development /among such decisions is, for instance, a decision to build a fertilizer plant or a tractor factory, or a decision concerning the construction of an extensive land amelioration system/.
- Standard decisions which occur periodically and require algorithms consisting of a small amount of simple information, such as, for instance, decisions made by peasant farms or some decisions made by government owned enterprises /for instance decisions concerning the operations of the enterprises which repair machines owned by peasants/. Decisions of the standard type cannot be centralized, among other reasons, also because of a limited information processing capacity of the central authority /the enterprises can "see" here better than the central planning authority/.

We can say then that the enterprises in the purchasing and supply sphere, as well as the particular organizations in the control sphere which provide credit for farms operate, depending upon the type of decisions, on the basis of the administrative method or of the parametric method /administrative-parametric method/.

It should be obvious from the consideration presented above that the type of decisions made by peasant farms should be included in standard decisions /decisions concerning the structure and rate on increase in farm production, and purchases of inputs/. These decisions are made independently within the framework of an automatic control process whose mechanism is, in a sense, set by the central planning authority which does not transmit to peasant farms any administrative orders; the mechanism operates by formulating "subordinate objectives and incentives" in such a way "that the result of independent operations corresponds to the objective set by the central authority" /4. p.752/. This unity of objectives, which is the most characteristic feature of the parametric control system, is formed in the case described above /the central plan - a peasant farm/, so to say, in a "natural" way, because an essential characteristic of a non-capitalist peasant farm is that it strives, similarly as the central planning authority, not

for the maximization of the rate of profit but for the maximization of the rate of increase in the net product of the farm. x/ Both those who transmit decisions and those who receive them have the same goal, which is the maximization of net product. This means that a peasant farm, under defined conditions, increases net production per hectare also in the area of diminishing returns and evidently gives preference to the full utilization of its labour resources, even if, in some situations, the obtained remunerations for marginal labour is lower than the average remuneration obtained by the farm. This kind of tendency on the part of peasant farms is limited, of course, by certain preferences and possibilities of obtaining a higher pay for labour in the non-agricultural sector, as well as by preferences for leisure time. The farmer compares here the advantages of the marginal product obtained from the marginal labour outlay with the advantages of leisure time. For this reason, we can speak here of a natural tendency toward the maximization of the net product with given possibilities and preferences for migration to the non-agricultural sphere and with given preferences for leisure time.

The central planning authority provides additional incentives strengthening this "natural" tendency on the part of peasant farms. This manifests itself in central control over the demand, in the government non-agricultural sector, for labour power flowing from agriculture. /Decisions of the central planning authority concerning the growth of employment in the non-agricultural sector, in its part originating from migration from agricultural areas, must be consistent with decisions concerning the rate of increase in agricultural production /6. p.4/. Similar in nature are decisions of the central authority concerning the ratios between remuneration for labour in the non-agricultural sector and in the agricultural sector, affecting the selection of manpower for agriculture /wages in the non-agricultural sector are determined by the central planning authority directly and remuneration for labour in the peasant agricultural sector is determined indirectly by setting the prices in purchasing agricultural products and in purchasing the means of production, by setting taxation rates and interest on credit/. The central authority determines also the rules of the game which stimulate peasant farms to increase production to a maximum degree. These rules manifest themselves, among other things, also in that peasant farms take advantage of guarantees of

x/ For this reason agricultural reforms speed up the rate of growth of agricultural production /cf.5. p. 222/.

price stability concerning both staple agricultural produce x/ and the means of production. The farmers get, among other thing, a guarantee that the prices of staple agricultural products will not drop in consequence of very high production xx/ - and that the tax levied on the farm will not increase as production increases. xxx/ In addition to decisions concerning the rate of increase in final agricultural production and in the national income produced in agriculture, the central planning authority makes decisions concerning the desired product structure of agricultural production. These decisions are transmitted to peasant farms through the market by means of price information /mutual price ratios of agricultural products, mutual price ratios of the means of production, price ratios of agricultural products and of the means of production/. On the basis of this information and non-price information concerning the conditions and possibilities of obtaining credit, as well as information concerning technical progress, the farmers make decisions concerning the choice of such a structure of production as would simultaneously maximize both the net product of the farm and the product of the national economy as a whole.

It follows from our considerations that in the system described above non-capitalist peasant farms are organically included in the sub-system of central planning. This system limits the possibility of establishing, on a mass scale, peasant farms of the capitalist type. While giving a complete freedom in the employment of hired labour and in purchasing additional land xxxx/, the system creates the economic conditions which limit /without resorting to administrative orders/ the possibilities of transforming peasant farms into capitalistic farms.

x/ This does not apply to some easily deteriorating products, e.g. vegetables and fruits.

xx/ The central authority controls wages in the non-agricultural sector and prices, so it can ensure sales of every increase in agricultural production, provided that appropriate storing, warehousing and processing facilities are available.

xxx/ The basis for tax assessment is the area of the farm and the quality of the land, and not income.

xxxx/ Within the limits set by the Agricultural Reform Act which determines the upper limit of the area of peasant farm and prevents the formation of large estates.

The ratios between purchase prices of agricultural products paid to farmers and a high free market cost of labour power determined by the level of wages in the non-agricultural sector and by a complete absence of unemployment make the hiring of labour very disadvantageous and thus prevent the development of agricultural production of the capitalistic type /experience shows that under the conditions of full employment a potential hired labourer agrees to work on a private peasant farm only on the condition of receiving a wage much higher than that which he can obtain in the government sector/.

In the case described above we observe then the functioning of an automatic market mechanism created by an appropriate wage policy and a full employment policy which prevent the generation of capitalistic relations in agriculture. The system of peasant agricultural machinery cooperatives, financed by the government, and the credit and taxation sub-systems /progressive land taxation/ also operate in the direction of limiting capitalistic relations.

4. The Functioning of the System in Real Conditions

The system described above has, to a great extent, all the characteristics which are now typical of the Polish economy.

Let us take a look at this economy, then, and confront the model with reality, concentrating our attention primarily on all those limitations which are encountered during the proper functioning of the system.

4.1 Limited Amount of Information - the Learning Process.

The decision maker "however, has, as a rule, no precise knowledge about the real limits" /1. p. 105/. In this connection it happens of course, that the central planning authority transmits decisions which cannot be implemented or for which the conditions indispensable for implementation have not been provided.

It should be said that in this case the transmission of decisions in the form of price information has a certain advantage in comparison with an administrative order in that it does not result /with certain exceptions/ in activities which would bring losses.

Price information transmitted by the central authority is subject to a specific kind of recalculation in hundreds of thousands of farms which have at their disposal the information concerning each farm. The central planner learns about this peculiar type of "recalculation" on the basis of various kinds of feedback information transmitted by the

farms /for instance, information concerning progress in concluding contract agreements and progress in purchasing agricultural products/. The flow of this feedback information enables the central authority to correct errors in central decisions, or to provide fuller safeguards and the conditions for the realization of these decisions.

In certain situations the decisions made by the central planning authority transmitted via price information may not be carried out, or may be carried out with too big a time-lag due to insufficient information possessed by peasant farms or their insufficient technical knowledge, or insufficient sensitivity of the particular farms to price stimuli /cf. 7/.

In both situations described above the process of a peculiar type of learning takes place, i.e. the process of reducing the uncertainty concerning the effects of decisions, which includes both those who transmit the decisions and those who receive them. The final implementation of decisions is then a result of mutual adjustments, learning and compromises. These processes must be supported by the operation of the information sub-system concerning technical progress and of the credit sub-system. The difficulties, which may occur in ensuring the implementation of central decisions via price information, may, of course, result in certain tendencies to control the production structure by non-price administrative orders. It is worth noting, however, that - as experience has shown - the transmission of information concerning prices has turned out, in the case of peasant farms, to be the most efficient instrument and all attempts to transmit standard decisions in the form of administrative orders were thwarted by the absolute impossibility of collecting by the central authority and by the particular planning sub-systems at lower levels such information about every peasant farm as would make possible an appropriate issuing of orders to the particular farms.

1. J. Kornai - Anti-Equilibrium, On Economic Systems Theory and the Tasks of Research, North-Holland Publishing Company, Amsterdam - London, 1971.
2. O. Lange, Papers in Economics and Sociology 1930-1960, Translation edited by P. F. Knightsfield, PWE, Warszawa, 1970.
3. W. Baka, S. Gora, Z. Knyziak, K. Porwit, Planowanie Gospodarki Narodowej, PWE, Warszawa, 1975.
4. O. Lange, Niektore Zagadnienia Centralizacji i Decentralizacji, Referat z 12.I.1962 r. Materialy do studiowania Ekonomii Politycznej Socjalizmu, Wybor tekstow, Ksiazka i Wiedza, Warszawa, 1964.
5. L. Malassis, Agriculture Procesus de Development, UNESCO, Paris, 1973.
6. W. Herer W. Sadowski, XV International Congress of Agricultural Economists, Sao Paulo - Brazil, August 20-29, 1973, Contributed Papers, The Impact of Agricultural Migration on the Rate of Improvement in the Living Conditions of the Population.
7. A. Wos, Związki Rolnictwa z Gospodarke Narodowa, PWRiL, Warszawa, 1975.