





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

2

AD-A158 862

FOREIGN TRADE DECISIONMAKING UNDER BALANCE OF PAYMENTS PRESSURE:  
POLAND VERSUS HUNGARY

Keith Crane

October 1983

NTIC FILE COPY

DTIC  
ELECTE  
SEP 09 1985  
S D  
E

-P-6923

This document has been approved  
for public release and sale; its  
distribution is unlimited.

85 09 06 03 5

### The Rand Paper Series

Papers are issued by The Rand Corporation as a service to its professional staff. Their purpose is to facilitate the exchange of ideas among those who share the author's research interests; Papers are not reports prepared in fulfillment of Rand's contracts or grants. Views expressed in a Paper are the author's own, and are not necessarily shared by Rand or its research sponsors.

The Rand Corporation  
Santa Monica, California 90406



# FOREIGN TRADE DECISIONMAKING UNDER BALANCE OF PAYMENTS PRESSURE: POLAND VERSUS HUNGARY<sup>1</sup>

by Keith Crane

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By _____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	

## I. Introduction

This paper argues that the Polish economic system, particularly the Polish system of making decisions affecting foreign trade, was a major cause of the Polish economic collapse of 1981. The argument is developed through a comparison of the foreign trading systems in Poland and Hungary, both of which are centrally planned economies (CPEs) experiencing hard currency balance of payments problems. They are compared during periods when their governments made balancing their hard currency current accounts a priority. The comparison highlights differences in the foreign trade decisionmaking systems of the two countries which partially explain differences in the economic outcomes experienced by the two countries as their leaders sought to reduce their hard currency current account deficits.

The periods under discussion are 1976 to 1981 for Poland and 1979 to 1982 for Hungary. In 1976 the Polish authorities and in 1979 the Hungarian authorities changed economic policies of borrowing abroad to finance economic growth to policies aimed at balancing the hard currency current account. Although the burden of Hungarian debt at the beginning of 1979 was roughly the same as the burden of Polish debt at the beginning of 1976, once the policy shift was made, the Hungarians were able to close their hard currency trade deficit far faster than the Poles and at less economic cost.<sup>2</sup> A major factor in explaining this

<sup>1</sup>I would like to thank the International Research and Exchange Board, the Economic Institute of the Hungarian Academy of Sciences and the Foreign Trade Institute of the Polish Ministry of Foreign Trade for their support and assistance. I would also like to express my appreciation to Prof. Paul Marer and Dr. Nancy Nimitz for their suggestions and advice. Views expressed in this paper are the author's own and are not necessarily shared by Rand or its research sponsors. All errors and omissions are the fault of the author.

<sup>2</sup>At the end of 1975 (beginning of 1976) Poland's hard currency debt-

appears to be differences in economic systems, especially regarding foreign trade decisionmaking.

Articles in the financial and popular press often focus on Gierek's policy in the first half of the 1970s of borrowing from the West to finance investments in modern plants and equipment as the cause of Poland's collapse.<sup>3</sup> Although the increases in investment between 1972 and 1975 were far too rapid for the Polish construction and machine-building industries to handle, by 1976 investment began to be scaled back. In that year the Polish authorities announced a "new economic maneuver" whereby balancing the hard currency current account was to become a priority. Hard currency imports were to be limited and hard currency exports increased; by 1979 Poland was to have a surplus in hard currency trade [Wrzaszczyk, 1977, p.15]. By 1981, however, the Polish authorities were forced to ask their bankers to reschedule the hard currency debt coming due that year. During the preceding five years the authorities had failed to close the hard currency trade deficits, choosing instead to finance them by increasing hard currency debt. As this debt mounted, so did interest and principal payments. Despite frantic attempts to increase hard currency exports and cut hard currency imports, which greatly contributed to the large declines in Polish output and consumption, these payments could no longer be met by 1981 and the request to reschedule was made.

During the 1970s Hungary also incurred large hard currency debts, primarily due to attempts to maintain former rates of increase in output and consumption despite rapidly deteriorating terms of trade. Although the Hungarians let their hard currency trade deficits mount until 1979, at the beginning of that year the Hungarian leadership implemented an austerity program designed to close the deficit in the course of a few years [Hewett, 1981]. Although growth rates declined and consumption stagnated, by 1981 hard currency trade was in surplus and progress began

---

service and debt/export ratios, two measures of the burden of external debt on an economy, were 30 and 1.79; Hungary's figures at the end of 1978 were 36 and 1.42, respectively [Zoeter, 1981, p.730; and Crane, 1983, p.6]. Polish net material product (NMP) was 6.7 less in 1981 than it was in 1975 and 20% less than it was in 1978 [RS, 1982]. Hungarian output increased by over 6% between 1978 and 1982 [SE, 1982].

<sup>3</sup>See Frieden, 1982, and Cameron, 1980.

Table 1

HARD CURRENCY TRADE AND NET MATERIAL PRODUCT INCREASES  
FOR POLAND AND HUNGARY

Year	Poland			Hungary		
	Net Material Product	Trade Balance	Current Account Balance	Net Material Product	Trade Balance	Current Account Balance
	(1970=100)	(millions of \$'s)		(1970=100)	(millions of \$'s)	
1971	108	145		106	-245	
1972	120	-270		112	-55	
1973	132	-1270		120	115	
1974	146	-2145		128	-580	-548
1975	159	-2670	-3130	135	-530	-531
1976	170	-2930		139	-345	-365
1977	179	-2155		150	-570	-648(a)
1978	184	-1890		157	-1110	-1242
1979	180	-1690		160	-280	-586(a)
1980	169	-980	-2715	159	-15	-371
1981	149	25	-2375	162	40	-883
1982	137	1560	-1015(b)	---	515	---

Sources

Net Material Product: Poland--*Rocznik Statystyczny*, various years; Hungary--*Statisztikai Evkonyv*, various years.

Trade Balances: Poland (non-socialist trade)--1971-80: *Rocznik Statystyczny Handlu Zagranicznego*, 1981, p.4; 1981-82: *Biuletyn Statystyczny*, March, 1983, p.35. Hungary (hard currency trade)--1971-75: *Statisztikai Evkonyv*, 1975, p.258; 1976-81: *Kulkereskedelmi Statisztikai Evkonyv*, 1981, p.9; 1982: *Havi Statisztikai Kozlemenye*, January, 1983, p.54.

Hard Currency Current Account Balances: Poland--1975-1981: *Rocznik Statystyczny Handlu Zagranicznego*, 1982, p.52; 1982--*Maly Rocznik Statystyczny*, 1983, p.68. Hungary--IMF, 1982, p.236.

Notes

(a) Due to missing data in the Other goods, services and income: credit column, these figures are estimates.

(b) This figure does not include roughly \$2 billion of interest arrears.

to be made on closing the current account deficit. Due in part to Hungary's successful management of its hard currency trade deficit, in 1982 the Hungarian National Bank was able to obtain bridging loans needed to stave off a forced rescheduling almost brought about by the withdrawal of Western banks from Eastern Europe following the imposition of martial law in Poland.

What are the differences between the two countries which led to forced rescheduling and dramatic declines in output in the case of Poland, while Hungary has been able to adhere to repayment schedules and continued to experience economic growth? Koopmans and Montias have devised a framework through which the problem of determining which factors led to the different economic outcomes may be addressed [Koopmans and Montias, 1971]. In their framework an economic outcome can be thought of as the product of the environment in which the economy operates, the economic system and the policies pursued in this system.<sup>4</sup> Any factor which has helped cause the differences in outcomes may be placed in one of these three categories.

A quick examination of the environmental and policy differences between Hungary and Poland during the periods of analysis indicate a surprising number of similarities, although some environmental factors and policy differences were important factors generating the different economic outcomes. More specifically, Hungary experienced a significant decline in its terms of trade, a problem Poland did not face, while Polish agriculture suffered from poor weather. The governments also adopted different agricultural policies and in pricing consumer and investment goods. Although a number of authors have stressed the importance of systemic flaws in explaining the Polish economic collapse

---

<sup>4</sup>Given a specified period of time one may think of the endowments, preferences and information available to participants in an economy at the beginning of a period as the initial environment, those existing during the period as the contemporary environment and those at the end of the period as the terminal environment. An outcome is the difference in environments between the beginning and the end of a period. The system may be thought of as the set of rules, informal and formal, under which the economy operates. Policies are a class of contingent decisions which are announced in order to create stable expectations about future decisions of the policymaker [Montias, 1976, pp.13-20]. See Montias, 1976, for more detailed definitions of these concepts.

[Montias, 1982; and Fallenbuchl, 1982], a detailed analysis of the weaknesses in the foreign trade decisionmaking system, especially in comparison with systems in other CPEs, has been lacking. For these reasons this paper focuses on systemic differences between the two countries; policy and environmental differences will henceforth be ignored.

The study begins with a description of the foreign trade decisionmaking systems in the two countries. Subsequently, it analyzes the impact of these decisions on the process of hard currency current account adjustment. It concludes with a discussion of the differences in the two systems which appear to account for the different degrees of success the two countries have had in closing their hard currency current account deficits.

Data for much of the study were obtained through interviews with Polish managers during the fall of 1981 and with Hungarian managers during the summer of 1982. In these interviews managers of producing enterprises and foreign trade organizations (FTOs) were asked a series of questions concerning the types of decisions they were permitted to make, the incentives and instruments which influenced their decisions and the constraints they faced in carrying out their decisions.<sup>5</sup> Due to the unusual economic conditions prevailing in Poland in 1981, managers were requested to answer the questions in terms of the conditions prevailing during the late 1970s. Interviews were arranged in 28 enterprises and 10 FTOs in Hungary; due to the imposition of martial law in Poland interviews were limited to 10 enterprises and 8 FTOs. In Hungary the enterprises were chosen by the author; in Poland enterprises were selected by local branches of the Polish Bureau of Foreign Trade. A few of the enterprises were "model" exporters; however, some exporters in both samples had performed poorly in terms of meeting export targets or increasing exports. In both countries interviewees appeared to discuss frankly the problems they faced and the weaknesses they perceived in the system.

---

<sup>5</sup>Copies of the questionnaires are available on request from the author.

## II. THE FOREIGN TRADE DECISIONMAKING SYSTEMS

### A. Poland

During the latter half of the 1970s Polish foreign trade was conducted in the manner of a traditional centrally planned economy.<sup>6</sup> Since intermediate goods were allocated by command rather than via markets, and price controls were used to suppress increases in prices of goods without corresponding control over wages, excess demand in many markets was a permanent feature of the Polish economy. Financing investments through state grants or low-interest loans coupled with pressures to fulfill gross sales plans caused excess demand for investment goods. Since demand for both intermediate and investment goods exceeded the capacity of domestic producers, there was a permanent excess demand for imports. In the face of this excess demand, Poland, like other CPEs, had to control imports; control was achieved by maintaining a monopoly on foreign trade. This monopoly has been wielded through the Ministry of Foreign Trade and the FTOs.

In the 1970s FTOs, of which there were 66, handled all imports and exports in Poland [*Informator*, 1982]. About one third of these were supervised by the Ministry of Foreign Trade; the rest were attached to industrial branch ministries and trusts. Trade through the FTOs was regulated by the foreign trade plans by which the central authorities attempted to impose their preferences for exports and imports on the economy. The central authorities set rough targets for imports and exports by commodity group; the FTO then elaborated detailed plans for exports and imports under the close supervision of its superior institution and in cooperation with producers and final buyers. Through the course of the plan year, however, adjustments had to be made because expected exports failed to materialize or production bottlenecks developed due to shortages of inputs. Under Gierek these day-to-day decisions on the reallocation of imports were made by the trusts and the

---

<sup>6</sup>Poland began to adopt a new system of economic management in 1982. Therefore, the following description does not apply to the system which presently functions in Poland. See Ledworowski, 1979, or Wanless, 1980, for more detailed descriptions of the pre-1982 system described in this paper.

branch ministries in cooperation with the FTOs. The problems they experienced in reallocating resources from domestic consumption to exports and from less efficient exporters to more efficient exporters was an important determinant of the cost of external adjustment in Poland.

Managers of producing enterprises had to implement decisions to increase exports and reduce import use. Although they had far less decisionmaking authority than their Western counterparts, they had some leeway to reallocate output and inputs at the margin and in the interpretation of directives. Furthermore, decisionmakers at higher levels in the economy depended on enterprise managers for the information to make allocative decisions so that managers had a significant influence on such decisions.

To induce managers to act in accordance with their wishes, the authorities employed a number of incentives and instruments. Although several types of bonus schemes existed, especially for increasing hard currency exports, the managers interviewed concurred that bonuses tied to plan fulfillment were of greatest importance. The most important indicators for determining this bonus were fulfillment of gross sales targets, and by the end of the 1970s, fulfillment of hard currency export targets. Managers interviewed generally agreed that that part of the bonus tied to hard currency export plan fulfillment was their major incentive to export to hard currency areas. Pressure from superiors was ranked next in importance for spurring hard currency exports. Since trust and ministry officials determined a manager's career and could alter plan targets during the course of the year, managers had an incentive to follow their directives, even if these contradicted the plan.

Due to the importance of hard currency export plan fulfillment for bonuses, export plan targets were one of the most important instruments employed in the Polish system. Interviewees said enterprise export targets were set by bargaining between the trusts, the enterprise and the FTO; the trust had the deciding voice. These targets, however, appeared to be only provisional; all except one of the enterprise managers interviewed said hard currency export targets were changed through the course of the plan year. Bonuses were disbursed on the

basis of fulfillment of the final, not the initial target. Since managers could be fairly confident that plan targets would be adjusted, if cause could be shown, these targets were a dull instrument for inducing managers to export and a poor predictor of export volume. Planning Commission interviewees said the aggregate of the initial targets had little relation to total exports at year end.

Plans were also used to determine import levels. However, since the aggregate export targets were generally not met, funds available for imports were also less than planned. Moreover, as with export targets, enterprise managers could bargain to change targets through the course of the year. Managers argued for increased imports by citing unexpected increases in orders for hard currency exports or lower than planned deliveries of inputs by domestic suppliers. In three instances interviewees said it was common practice for managers to "manufacture" above-plan hard currency export orders in order to argue for increased quotas of hard currency imports. These managers would conceal potential hard currency export orders in order to keep export targets low, and then when these orders materialized, argue for above-plan shipments of imports in order to fill export orders. In this system, practically speaking, import allocation was determined in an ad hoc manner by trust and ministry officials.

Polish enterprises simultaneously operated in two price systems: the domestic system in which raw materials prices were fixed by the state and prices on manufactured goods were calculated on a cost-plus basis, and the prices prevailing on world markets. Transactions with business partners in hard currency areas were conducted at world market prices with the exception of certain imports of raw materials.<sup>7</sup> Since the price ratios between manufactured goods and raw materials were higher in Poland than those prevailing on Polish hard currency export markets, opportunities for arbitrage from one market to another abounded. Moreover, the exchange rate was set at less than the marginal rate making exports less profitable and imports cheaper than they would have been at a higher rate of exchange.

---

<sup>7</sup>Raw materials prices were kept fixed in order to facilitate planning and to keep the domestic price level from rising.

The Polish authorities implemented a complex system of subsidies and taxes, partly to forestall arbitrage.<sup>8</sup> Export taxes were levied on raw materials and profits on exports of manufactures by one enterprise in a trust were used to offset losses incurred by other exporters in the trust. Enterprises were also granted an across-the-board subsidy on hard currency exports similar to the VAT rebate granted in the EEC.

## B. Hungary

Although the preferences of the Hungarian authorities continue to determine the composition of Hungarian imports, the Hungarian system is a far cry from the traditional system of foreign trade employed in Soviet-type economies, like that in Poland. First, the restrictions on enterprise participation in foreign trade are much looser in Hungary than in Poland. Exporters of manufactured goods are readily granted export rights; enterprises which do not request export rights may choose the FTO through which they wish to trade. In some cases enterprises are granted import quotas; these enterprise may order imports directly from the foreign buyer without going through the FTO.

Second, plan targets in Hungary are set by enterprises, not by the central authorities. Consequently, the authorities have to use incentives other than bonuses tied to plan target fulfillment to induce managers to make decisions consistent with central goals. The Hungarians opted to set rewards for managers primarily using an indicator based on enterprise profits.<sup>9</sup>

Although in terms of economic efficiency maximization of this synthetic indicator had much to recommend it over fulfillment of plan targets, it posed a problem for the Hungarian authorities when they attempted to close the current account deficit. The authorities have generally pursued full-employment, low inflation policies.<sup>10</sup> In order

<sup>8</sup>See Ledworowski, 1979, for a more complete description of the subsidy system.

<sup>9</sup> $P/(W + K)$  where  $P$  = profits,  $W$  = the total wage bill and  $K$  = the enterprise's fixed assets [Csikos-Nagy, 1982, p.504]. The Hungarian managers interviewed said this indicator determined from one half to three quarters of their bonus income; bonus income generally equaled one third to one half of base salary.

<sup>10</sup>See Granick, 1975, for a fuller discussion of the implications of these goals for the implementation of Hungary's economic reform.

to preserve jobs in present industries and for balance of payments reasons, the government has adopted a de facto policy of prohibiting competitive imports from hard currency areas.<sup>11</sup> Due to the absence of domestic competition in many industries, import protection and monopoly power make it possible for some enterprises to earn monopoly profits on the domestic market. Not surprisingly, since Hungarian enterprises are price takers on hard currency export markets, they have shown a preference for the domestic market. This has made it difficult to induce enterprises to increase exports to hard currency markets.

Fears of inflation made policymakers reluctant to use devaluations to close the current account gap. Due to the Hungarian price system (discussed below), domestic prices are much more closely tied to world market prices than they are in other centrally planned economies. Consequently, a devaluation has a large, immediate impact on the domestic price level. Thus, pursuit of low rates of inflation competed with hard currency current account equilibrium in determining the exchange rate.

Since the home market appeared more profitable to Hungarian enterprises than hard currency export markets, incentives other than the bonus tied to profits were necessary to induce managers to concentrate on hard currency export markets. The managers interviewed said that the most important incentive for increasing hard currency exports was not the bonus tied to profits, but the second part of their total bonus which is tied to a "complex" evaluation. This bonus was set by a board appointed by a manager's superiors on the basis of its evaluation of the manager's work. Factors which were of importance for determining this bonus included plant safety, decreases in energy use and increases in hard currency exports. In the enterprises in which interviews were held the latter factor was said to be of greatest importance. Managers in 23 of the 28 enterprises said this bonus was a significant incentive for increasing hard currency exports; managers in only five enterprises listed the bonus tied to profits as an important incentive for exporting.

<sup>11</sup>The enterprise managers interviewed stated that they were not permitted to import goods produced by domestic suppliers.

Another incentive of importance was pressure from the manager's superiors to increase hard currency exports. Although enterprises were more independent in Hungary than in Poland, the industrial branch ministry still had the deciding voice in a manager's career and in determining his salary. Since increasing hard currency exports has been a priority for the Hungarian government in recent years, managers were motivated to increase hard currency exports in order to please their superiors. In this sample, fifteen managers cited desire for recognition or pressure from superiors as an important motivation for increasing hard currency exports.

Both of these incentives run counter to the thrust of the Hungarian economic reform; according to the reform managers are to pursue profits, not the wishes of a ministry. The 1980 price system incorporated incentives more in keeping with the original spirit of the reform; it was designed in part to harness the pursuit of profits to foreign trade goals. One goal of the new price system was to make domestic price ratios closer to those prevailing on the world market. In the new system imports were priced at delivery cost plus tariffs [Csikos-Nagy, 1982, p.322].<sup>12</sup> Exporters, like their Polish counterparts, received sales prices. In contrast to Poland, however, the domestic price system in Hungary became closely linked to the world market. Manufacturers which exported more than 5% of total output to hard currency markets fell under the "competitive" price rule. Under this ruling the margin (not the price) that these producers could charge on goods sold on the domestic market was linked to the margins they made on hard currency exports. For example, if the cost of earning a dollar of foreign exchange by exporting the product equaled the dollar/forint exchange rate, i.e. the price of the export equaled its cost, manufacturers could levy a 6% markup on domestically sold goods. If costs were one fourth less than the exchange rate, a 12% markup could be levied on domestic sales.<sup>13</sup>

---

<sup>12</sup>Prices on raw materials are frozen for intervals of three months rather than fluctuating daily.

<sup>13</sup>Information for this section came from Marer, 1983, pp.163-5 and Csikos-Nagy, 1982, p.322. For a more complete discussion of the price system see these two sources.

These restrictions on markups on the domestic market had a twofold purpose. One was to eliminate the difference in profitability between domestic and hard currency export sales, thereby making the domestic market less attractive. In this case the reform appears to have been partially successful. Of the managers interviewed many said that prior to 1980 products sold on the domestic or ruble export markets were more profitable than products sold on hard currency markets; in these enterprises this difference disappeared after 1980.

The second purpose of the reform was to encourage managers to raise margins on hard currency exports. Although Hungary must be characterized as a price taker on international markets, Hungarian managers control a number of variables such as meeting delivery deadlines, quality control, fulfilling orders to specification, etc., which influence the markup on a commodity. Since profits are the major determinant of a manager's salary, by linking profits on domestic sales to hard currency export profits the price system ought to have provided an incentive for managers to exert more effort to control these factors and thereby increase margins. Interviewees lent little support to this hypothesis. In thirteen instances margins on hard currency exports fell; in only seven instances did they rise.

Despite the emphasis on the use of prices rather than commands for the allocation of resources in the Hungarian system, perennial excess demand for hard currency imports exists. In recent years greater use has been made of the exchange rate to control import flows;<sup>14</sup> import permits, however, have still been the primary instrument employed to control imports.<sup>15</sup> All import orders in Hungary must be accompanied by an import permit. These permits are issued by the Ministry of Foreign Trade which generally granted them as a matter of course for products imported in previous years. However, if a manager wishes to import a product not previously imported or in greater quantities than in previous years, the request is generally referred to a board composed of

<sup>14</sup>In 1983 the forint was devalued a number of times; devaluation was one of the conditions for obtaining IMF loans.

<sup>15</sup>See Gacs, 1980, for an excellent analysis of the import permit system.

employees of the FTO through which the product is to be imported and of other knowledgeable people in the industry. At this point the enterprise management must convince the board that the import is necessary. If a substitute produced domestically or in the CMEA is available or the supply of hard currency is tight, the probability that the permit will be granted decreases and the length of time it takes to process the import increases. One manager argued that any hard currency import may be obtained, it just takes more effort in some cases than in others. Consequently, managers must balance the effort of bargaining for the permit against the benefit of using the hard currency import. Thus increased or diminished difficulty in obtaining import permits acts as a non-price method of rationing imports.

The profitability indicator also provided an incentive for reducing the use of inputs, including imports. All the managers said that their primary objective was to avoid a loss; if the enterprise incurred a loss, bonuses were eliminated and the management could be dismissed. Consequently, managers had a strong incentive to halt the production of loss-making products; in fact, all the managers interviewed insisted that they would not export at a loss. Thus this emphasis on eliminating losses provided a mechanism for reallocating resources from loss-making products to more profitable uses.

### III. IMPLICATIONS FOR CURRENT ACCOUNT ADJUSTMENT

Closing a current account deficit involves two processes: reducing absorption, i.e. the proportion of total output consumed or invested, and reallocating output from domestic use to exports and substituting domestically produced goods for imports. In both Poland and Hungary decisions concerning the volume of investment and consumption are made at the center and to a great extent are implemented by the center through limits on bank lending and investment quotas, on the one hand, and through price increases on consumer basics, on the other.

Decisions concerning the reallocation of output and inputs, however, are not as easily implemented by the center. Even in Poland managers had some freedom at the margin to reallocate output and to substitute one input for another. Moreover, the many daily decisions made by managers which affect quality control, product development and

waste may have a significant impact on exports and imports. Consequently, the incentives and instruments which influence managers' decisions in these areas determine the ease with which resources may be reallocated in the system and current account equilibrium may be attained.

#### **A. Communications with Clients**

If information between foreign and domestic partners flows more rapidly and more accurately in one system than another, transaction and communication costs ought to be less and the possibilities for increasing exports ought to be greater. One striking difference in the two systems is in contact with foreign clients. In Hungary several of the enterprises had obtained their own export rights and set up their own export bureaus. Managers in these enterprises concurred that these bureaus had enabled them to increase the volume and profitability of their hard currency exports. They said that since they could directly employ salesmen through the bureaus, they could motivate them more effectively; they said the bureaus had also greatly improved communications with clients. Managers of enterprises which did not have their own export rights often complained of poor service and low motivation in the FTOs. Several of the Hungarian managers took sales trips abroad and were in frequent contact with their clients. In Poland, on the other hand, one manager complained of being denied contact with a client; the FTO insisted on conducting all discussions and negotiations. None of the Polish enterprise managers interviewed indicated they had traveled to the West on export business.

#### **B. Incentives to Export**

In both countries managers said bonuses tied to increasing or meeting targets for hard currency exports were the most effective incentives they faced to export to hard currency areas. The second most oft-cited incentive was pressure from the manager's superiors in the trust or ministry.

There were important differences in the incentives employed, however. In Poland bonuses were tied to fulfillment of an absolute target; although over-fulfillment was rewarded, managers were cognizant

that targets in succeeding years would be "ratcheted", i.e. set slightly above the level of the past year's performance; this practice acted as a disincentive to increase exports. In one instance a manager stated he had turned down an order for hard currency exports because of ratcheting. In most years the volume of his enterprise's hard currency exports was low. One year a foreign client wished to make a large order; the manager declined because he was afraid that due to the size of the order export targets would be raised in the future to levels he would not be able to achieve. The Polish system also provided managers with an incentive to understate their export capabilities in order to keep export targets low, since low targets are easier to fulfill than higher targets. This coupled with ratcheting created a mechanism by which managers were discouraged from trying to increase hard currency exports to the maximum possible level.

Although Hungarian managers said they were motivated to export by bonuses tied to increases in exports, not profits, the Hungarian system did not appear to have the rigidities inherent in the Polish system. Bonuses for hard currency exports were awarded on the basis of relative, not absolute performance. Export performance in Hungary was measured by changes in the value of hard currency exports; an enterprise was judged in comparison with other enterprises in the same industry and in comparison with the previous year's level of exports. Therefore, in contrast to managers in Poland, managers in Hungary had a more open-ended maximand and a more competitive environment; they needed to strive to do as well as other managers in their industry. Thus incentives in Hungary were better geared to pushing managers to exploit all opportunities to export than those in Poland.

The greater emphasis on profits in Hungary than in Poland, appears to be another important factor in explaining Hungary's superior performance in balancing its hard currency current account. All the enterprise managers in Hungary were adamant that they did not export at a loss, although many said they continued to produce loss-making products for the domestic market due to pressure from the ministry. If an export was unprofitable, the product was either modified or export sales were stopped. In Poland, on the other hand, some managers complained that they were forced to suffer losses on exports because

otherwise targets would not be met; export targets were of greater importance than profits.

This difference appeared to have a significant effect on the composition of exports. Although the rate of technological change appears to be much slower in Hungary than in most market economies [Major, 1980] and [Kovacs, 1980], fear of losses spurred managers to attempt to modify old products or develop new ones so that exports remain profitable. Similar incentives were absent or weak in the Polish system, because of the emphasis on achieving a specified volume of hard currency exports. The interviews provided some evidence to indicate that this incentive stimulated more innovative behavior in the Hungarian system than exists in the traditional CPE: when queried concerning the source of innovations in exports and export production, managers in only one of the ten Polish enterprises said the enterprise was the source of the innovation. In contrast, managers in twelve of the 28 Hungarian enterprises, over 40%, cited the enterprise as the source of the innovation.

### C. Incentives to Curb Import Use

The different incentives, bonuses tied to profits in Hungary and bonuses tied to gross sales in Poland, also affected the allocation of hard currency imports. Since most imports in both countries are inputs, import demand is a derived demand. In Hungary as production of loss-making exports was halted, imports were freed to be used in the production of other, more profitable exports. In contrast, the Polish system appeared to have no mechanisms for inducing enterprise managers to voluntarily forgo using hard currency imports. On the contrary the system appeared to be inadvertently designed to increase import use. Emphasis on gross sales and hard currency export target fulfillment over profits introduced a bias towards increasing output at the enterprise, trust and ministry levels and, consequently, a bias towards increasing demand for inputs, including imports. This problem was compounded because price differentials did not appear to reflect quality differences between domestically produced inputs and hard currency imports. None of the enterprise managers complained of the cost of imported inputs, while several of the FTO managers said they were too

low; thus the price system provided little incentive to conserve on imports. Enterprise managers faced incentives to substitute hard currency imports for domestically produced goods, as well as bargain for increased quantities of inputs in general. In this system it is not surprising that managers resorted to the stratagems described above in order to increase their import quotas.

Since Polish enterprise managers had no incentives to voluntarily reduce import use, decisions on the allocation of imports had to be made at the center. Therefore, the efficiency with which imports were allocated in Poland depended on the quality of decisions made by the center. A number of factors worked against optimal decisions in this system. First, the quantity of information needed concerning input needs, potential exports and domestic sales and output tradeoffs between enterprises was so great that planners lacked the information-handling capacity to manipulate this information so that feasible, let alone optimal decisions could be taken. Second, since enterprise requests for imports exceeded the quantity of imports purchased, not all requests were fulfilled. Therefore managers had an incentive to exaggerate their import needs so that they would be assured of minimally necessary imports of inputs, even after their requests were reduced. During much of the 1970s bottlenecks generated by this system were eliminated by allowing above-plan imports financed by increased borrowings from the West. However, as it became imperative for Poland to close its trade deficit, these imports were reduced.

Interview data illustrate the allocative inefficiencies of the system at this point. Shortages of hard currency imports were listed most often (sixteen times) as a binding constraint on increasing hard currency exports by the enterprise and FTO managers interviewed. The next most frequently cited constraint was shortages of domestically produced inputs. According to these managers hard currency exports could have been increased, if the enterprises had been permitted to purchase needed hard currency imports, but planners lacked the information or incentives to reallocate hard currency imports so as to make this possible.

As stated above, the Hungarians also resorted to a non-price mechanism, import permits, for the allocation of hard currency imports. The use of import permits like import plans have efficiency costs. Shortages of hard currency imports were cited thirteen times by interviewees as curbing hard currency exports. The use of import permits in Hungary, however, appeared to have two advantages over the system of quotas used in Poland. A number of enterprises were given quotas with which they could make purchases directly without going through FTOs; according to managers in these enterprises this right allowed them to purchase what they needed when they needed it, thereby eliminating administrative costs and production costs associated with delays and forced substitution of inputs. Second, by shortening or lengthening the queue for hard currency import permits, planners can control import demand. The managers interviewed refrained from requesting certain imports in times when hard currency was in short supply. On the other hand, if they felt a particular import was essential for the operation of the enterprise they would expend the time and energy needed to obtain a permit. Thus the Hungarian system introduced a mechanism for self-regulation of import demand, albeit an inefficient one.<sup>16</sup>

#### **D. Prices and the Pursuit of Comparative Advantage**

The cost of current account adjustment in Hungary and Poland depended on the degree to which the two countries were able to exploit their comparative advantages. If inputs had been transferred to the most profitable exporters and if those imports which provided the least marginal benefit had been eliminated, the costs of adjustment would have been minimized. Therefore, the efficiency of a foreign trade decisionmaking system depends on its effectiveness in reallocating imports towards their most efficient uses and inducing the most efficient producers to increase exports.

---

<sup>16</sup>The import permit system appeared to preserve previous patterns of import allocation. Managers readily received quantities and assortments of imports similar to those of previous years. It became difficult to obtain imports only if quantities were increased or the assortment changed. Consequently, the system was a poor one for

In this regard the instruments and incentives employed in the Hungarian system appear to have been superior to those in the Polish system. One such instrument was prices. To reiterate, Polish enterprises operated in two price systems: the one prevailing on the world market and the domestic system in Poland. Since price ratios between manufactures and raw materials were greater in Poland than on export markets, domestic prices were poor guides to the economic cost to the country of using one combination of inputs or another and export profits were often not a good indicator of comparative advantage.

In Hungary, on the other hand, domestic and world market prices were closely linked; they informed managers much better of the economic cost of using one input mix or another. Moreover, since profit margins on products sold on the domestic market were determined by margins on hard currency exports, managers had an incentive to pursue comparative advantages; emphasis on targets for export volume in Poland severely limited the role of comparative advantage in decisionmaking at the enterprise level.

#### IV. CONCLUSIONS

This study indicates there were substantial differences in the effectiveness of the incentives and instruments the Polish and Hungarian authorities used to induce enterprise managers to make decisions consistent with closing their hard currency current account deficits. To reiterate, current account adjustment consists of two processes: one, reducing absorption (consumption and investment) below output so that a surplus will be available for export and two, reallocating output from domestic to export markets and substituting domestically produced goods for imports. The authorities in both countries had similar instruments available for reducing absorption. The major difference in the two systems is in the efficacy of the instruments employed to reallocate output and inputs. It is here that the Hungarian system appears to have been more effective.

---

reallocating import. See [Gacs, 1980] for a more detailed discussion of the drawbacks of this system.

In both countries the authorities attempted to effect the reallocation of output and inputs through drives to increase exports and reduce import use. A secondary goal, also of importance, was to increase the efficiency with which imported inputs are employed. Responses by enterprise managers in the two countries indicated that the Hungarian system was superior in all three areas. The Hungarian system provided enterprise managers with open-ended incentives for increasing exports while the Polish system was geared to the fulfillment of absolute targets. Polish managers listed no incentives for decreasing the use of hard currency imports and several incentives for substituting these imports for domestically produced goods. Although quality differences between hard currency imports and inputs available on the domestic market or from the CMEA were such that Hungarian managers preferred the former, they were encouraged to substitute domestically produced inputs for imports through devaluations (devaluations have made hard currency imports more expensive) and by making import permits increasingly difficult to obtain. The emphasis on profits in Hungary in combination with a price system which was designed to reflect price ratios on the world market (although with some distortion) introduced a mechanism in the economy which encouraged managers to pursue comparative advantage. Polish producers, who were more concerned with attaining export targets, faced much weaker incentives to stop the production of loss-making exports or increase the production of profitable exports. Moreover, Polish prices were poor indicators of the economic cost of exports; they failed to guide managers towards optimal input mixes. Thus the Hungarian system was better adapted to inducing managers to make decisions in accordance with comparative advantage.

Although it would be impossible to quantify the impact of systemic differences on the different success with which Poland and Hungary have sought to close their hard currency current deficits, the study indicates that the incentives and instruments employed in Hungary induced managers to make decisions concerning foreign trade which were far more consistent with central objectives than those employed in Poland. Incentives and instruments employed in Hungary better facilitated increasing exports, reducing imports and reallocating inputs

to more efficient uses than those employed in Poland. This conclusion should not be construed, however, to imply that the Hungarian system efficiently guides the economy toward external equilibrium. Although the system appears to function better than that employed in Soviet-type economies, the protected domestic market, the import permit system, and the continued influence of the central authorities and ministries on the allocation of inputs indicate that the system suffers from large losses in allocative efficiency. Hungary's continuing balance-of-payments problems indicate that the system still does not incorporate mechanisms for rapid, allocatively efficient adjustment to external disequilibrium.

## BIBLIOGRAPHY

- Cameron, Juan, "What the Banks Did to Poland," *Fortune*, September 22, 1980, p.125.
- Crane, Keith, *A Comparison of Foreign Trade Decision-Making in Poland and Poland*, dissertation, 1983.
- Csikos-Nagy, Bela, *Gazdasagpolitika*, Kossuth Press, Budapest, 1982.
- Fallenbuchl, Zbigniew, "Poland's Economic Crisis," *Problems of Communism*, 2, March/April, 1982, p.1.
- Frieden, Jeff, "Why the Big Banks Love Martial Law," *The Nation*, January 23, 1982, p.1.
- Gacs, Janos, *Import korlatok, hianyjelensegek es a vallalat alkalmazkodas*, Konjunktur- es Piackutato Intezet, Budapest, June, 1980.
- Granick, David, *Enterprise Guidance in Eastern Europe*, Princeton University Press, Princeton, NJ, 1975.
- Hewett, Edward, "The Hungarian Economy: Lessons of the 1970's and Prospects for the 1980's" in Joint Economic Commission of Congress, *East European Economic Assessment*, Vol. I, Government Printing Office, Washington, 1981.
- Informator Sluzby Zagranicznej oraz Handlu Zagranicznego i Gospodarka Morskiej*, Ministry of Foreign Trade, Warsaw, January, 1982.
- Koopmans, Tjalling and John Montias, "On the Description and Comparison of Economic Systems" in Alexander Eckstein, *Comparison of Economic Systems*, University of California Press, Berkeley, CA, 1971.
- Kovacs, Janos, "Alku, asszimilacio, alku," in Tardos, 1980, p.393.
- Ledworowski, Dariusz, *Ekonomika handlu zagranicznego*, Polskie Towarzystwo Ekonomiczne, Warsaw, 1979.
- Major, Ivan, "A termekszerkezet atalakulasa valtozo gazdasagi kornyezetben" in Tardos, 1980, p.255.
- Marer, Paul, "Evaluation and Estimation of National Accounts Statistics in Centrally Planned Economies: A Conceptual Framework," March, 1983, mimeo.
- Montias, J. Michael, *The Structure of Economic Systems*, Yale University Press, New Haven, CN, 1976.

Montias, J. Michael, "Poland: Roots of the Economic Crisis,"  
*Association for Comparative Economic Studies Bulletin*, 3, Fall, 1982,  
p.1.

*Rocznik Statystyczny*, Glówny Urząd Statystyczny, Wydawnictwa  
Statystyczna i Drukarnia, Warsaw, 1982.

*Statisztikai Evkonyv*, Kozponti Statisztikai Hivatal, Budapest, 1982.

Tardos, Marton, *Vallalati magatartas-vallalati kornyezet*, Kozgazdasagi  
es Jogi Konyvkiado, Budapest, 1980.

Wanless, P., "Economic Reform in Poland 1975-9," *Soviet Studies*, 32,  
December, 1980, p.44.

Wrzaszczyk, Tadeusz, "Kierunki dalszego rozwoju gospodarki," *Nowe drogi*,  
1, 1977.

Zoeter, Joan, "Eastern Europe: The Hard Currency Debt" in Joint  
Economic Commission of Congress, *East European Economic Assessment*,  
Vol. II, Government Printing Office, Washington, D.C., 1981.

**END**

**FILMED**

**10-85**

**DTIC**