THE DRUG BUSINESS AND ITS IMPLICATIONS FOR THE DEVELOPMENT OF HEALTH SERVICES IN ETHIOPIA

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INTRODUCTION

The health sector, which at present does not cover more than 20 per cent of the total population of Ethiopia, reflects the dependent relationship of the national economy to international capital.

- About 21% of the recurrent budget and about 40% of the capital budget in 1975 was from foreign assistance.
- 60% of the medical practitioners are foreigners (1975). Almost all the senior Ethiopian medical staff are graduates from foreign universities. The curriculum of Addis Ababa Medical School, until very recently, was a complete transplant from British Medical Schools, while the curriculum of Gonder Public Health College was "built by foreigners".
- Other inputs of the health sector, such as drugs and equipment, are all imported.

Also, it can be said that the Ministry of Health (MOH) is a Ministry which serves only 20% of the population, with inadequate policy variables to control even such a small domain effectively. This may be observed from the history of the development of health services in this country, where health institutions have been set up, expanded, or even closed without prior knowledge of the Ministry of Health. Similarly, the importation of drug items (mission, private and government) does not reflect the country's needs. With the lack of government guidelines and control, which we have just indicated above, the type and mode of utilization of imported drugs are largely dependent on the influence of foreign commercial enterprise.

While the above generalizations may usefully be pursued, in this paper we will limit our discussion to the examination of one element of the system. This will be the study of the drug business, and its implications for the efficiency of health services. We shall discuss these in four parts, as follows:

(1) In Part I the dependency of Ethiopia on imported drugs will be demonstrated. This means that one of the most important policy-variables of health is outside the control of the Ministry of Health. Part III shows that, even under the existing conditions of dependency, the government can still improve the supply and price situations by selective importation and by the initiation of government monopoly in the import and retailing business. The benefits to be gained from a modified dependency may be considered a short-term objective if it is followed by a long-term policy of self-sufficiency.

(2) Part II and III deal with the domestic drug business and their implications for the efficiency of the health services.

(i) In the government market, the high work-load of medical personnel and the non-cost consciousness of the prescription systems underline the danger of drugs as well as the unnecessarily high cost of treatment (Part II).

(ii) In the private market sector, where drugs are sold through private health services, a higher cost of treatment caused by the high profit rate of private retailers is observed (Part II, Part III).

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(iii) The private market sector, where drugs are sold outside the health services framework (without the consultation of medical practitioners), is the worst source of abuse of drugs (Part III).

(3) Part IV, by drawing on the analysis presented above, attempts to derive some implications for policy. The short-run solutions seek mainly to modify the existing dependency, to provide limited benefits until such time as concrete policy measures aimed at overcoming the dependency situation can become effective. The indicated long-term solutions to the problems of drug and the problems of the health services which are part of the overall problems of the economy, and which call for the disengagement of the economy from the fetters of international capital and the simultaneous reconstruction of the society along socialist lines, are dealt within general terms.

Part I

(1) Drug Imports, Prices and their Implications

In Ethiopia there are two sources of drug supply: the source which provides about 82% of the total drug consumption of the country is from imports. The other source, which provides about 18% of the total consumption, is domestic production (Table 1). Since, however, domestic production is heavily dependent on imported inputs (whose final output has a 50% foreign exchange component), the differentiation between imports and domestic production may be misleading, as the latter depends heavily on imported inputs.

TABLE 1

National Consumption of Drugs: 1970/71 to 1972/73

(Size of Existing Domestic Drug Market)

	Consumption by Sector	*Millions of Birr*	*Per Cent of Total*
(a)	Government Sector		
	Imports	8.3	19.3
	Purchases from EPHARM (Domestic Production)	3.6	8.4
	Sub-Total	11.9	27.7
(b)	Private Sector		
	Imports	26.7	62.2
	Purchases from EPHARM (Domestic Production)	4.3	10.1
	Sub-Total	31.0	72.3
(c)	Grand Total (a + b)	42.9*	100.0

* Imports are valued at CIF price (i.e. cost plus insurance plus freight up to the port of entry), while domestic production is valued at ex-facory price.

Imports by WHO, UNICEF and other related institutions are not included, for the reason that they are not imported in sustained amounts. Nonetheless, they will not be expected to exceed the amount of 3 million birr per year.

Note that the drug consumption of 42.9 million birr for three years has jumped to 55.1 million birr in 1977. This did not change the proportion of imports to domestic production shown in the table.

As expenditure on drugs is over 30% of the total annual health expenditure in the country, marginal price changes of drugs on the world market are a good cause for alarm for large consumers like the Ministry of Health. Increases in the price of drugs lead to an increase in treatment costs. In such situations the options for a Ministry of Health may appear to be threefold: increasing fees for patients, increasing government subsidy through larger budget allocations, or closing some of the health institutions. Since none of the above measures is feasible (political and economic situations considered), the only option open to the MOH is to seek foreign assistance, which comes in amounts only enough to whet the appetite for more assistance.

In these circumstances, the study of the drug business and its implications for the development of health services will be more illuminating if it starts with a study of the operations of international drug industries, which are characterized by high rates of profit.

(2) The Profit of International Drug Industries

The mode of operation of international drug industries is characterized by high profits. In Great Britain, for example, the evidence of excessive profits was brought to light in 1961, when an inquiry by the Public Accounts Committee revealed that eight British subsidiaries of American firms were making profit rates averaging 73% of capital employed. British firms and the Swiss companies were also making 20% and 13% respectively. When these figures were contested by the drug industries, the Ministry of Health of the UK. employed a firm of private accountants to make assessments, which, after using the companies figures of costs and revenue, arrived at an average rate of profit of 33.6%.[1] Such a high rate of profit has caused much concern in the exporting countries. The reasons are historical: the health sector has always been a battleground between capital and labour, and health is beginning to be considered "off-limits" for private profit-making.[2] As a consequence, more and more governments in the west (e.g. Sweden, the U.K.) are financing medical care from tax revenue while at the same time making it accessible to everyone. This has not as yet deprived the health care industry of its traditional profit, as it still continues to supply inputs to health care enterprises.

The highlights of the foregoing discussion must be emphasized. The challenge to capital in the home countries is higher than the challenge it faces in the importing countries, although the challenge in the exporting countries, as we have indicated above, resulted in a mockery, as it has resulted in "a change in the billing system", guaranteeing capital a reliable market and profit without invoking serious protests from the "unwilling consumer and the tax and premium payer".[3] This, however is not intended to play down the gain of labour, which is beginning to have full access to health services, as the society is beginning to accept that health-care is a basic necessity, ranking after food, clothing and shelter.[4] Health expenses are now considered as part of the wage bill,[5] and to this degree capital has to accept a defeat.

This investigation is pursued in the following section with the aim of showing that monopoly capital has a more dominant power and greater possibilities for bigger profits in the underdeveloped countries than in its home countries.

(3) Some International Comparisons of Import Price of Drugs in the Under-developed Countries (UDC)

Although, due to the unavailability of adequate data, detailed discussion is not possible, some limited observations on pricing practices of international phar-

maceutical companies, using the example of some selected products, can improve our understandng of the characteristics of the world drug market. Drugs are one of the many product items of these multi-national campanies (Table 2), which also produce chemicals, computers, cosmetics and electronic equipment; however, prescription drugs are their most important source of profit. Their profitability (from domestic and foreign markets) ranges from about 20% to over 70%. Not included in the above profitability calculations (which, like profits, are losses to consumers) are enormous sales promotion wastes which are in the magnitude of 17 to 30% of the value of sales in developed countries, and which are finally reflected in the prices.[6]

TABLE 2

Examples of Large and Small Companies in the World Pharmaceutical Industry — Turnover, etc., 1970 (ranked by pharmaceutical turnover)

Company	Nationality	Turnover			Group R & D expenditure US.$m
		Pharm US.$m	Group US.$m	% Pharm	
Roche	Switz.	840	1,200	70	90
Merck	US	670	748	90	69
Hoechst	W. Ger.	497	3,553	14	99
E.R. Squibb	US	310	705	44	30
Bayer	W.Ger.	286	2,602	11	128
Bristol-Myers	US	262	979	27	36
Glaxo	UK	261	378	69	10
Rhone-Poulene	France	257	1,985	13	85
I.C.I.	UK	67	3,510	2	123
Carter-Wallace	US	53	125	42	7

Source: *Chemical Age*, Companies' annual reports, and industry and NEDO estimates, quoted in *Take A Pill*(1), p.4, Table 1.1.

There are also enormous research costs (Table 2) which often lead to a type of drug useful to the metropolis but have no relevance for use in a UDC because of differences in epedemiological characteristics (particularly communicable diseases which are not commonly encountered in the rich countries); but yet such costs, which are taken to be as cost of production, are also borne by people of the UDCs.

Prices charged in UDCs also include enormous monopoly profits, which are the result of discriminatory price systems. This may be observed from examples compiled by Vaitsos, who has shown that in 1968 over-pricing for drug in Colombia ranged from 17% to 658% (median: 260% of 48 intermediate pharmaceutical products).[7]

Chaulet and his colleagues, who also conducted a similar study on the price of drugs for the treatment of tuberculosis from 18 African countries discovered (see Table 3-A) that the prices of drugs varied from US$1.32 to US$12.33 for isoniazid, from $1.15 to $15.46 for a drug regimen combining isoniazid and thiacetazone, from $1.46 to $22.02 for streptomycin and from $239.07 to $1282.20 for rifampicin. These differences cannot, according to Chaulet, be accounted for by transport costs.[8]

TABLE 3-A

The Price of Drugs for Treatment of Tuberculosis for Selected African Countries, 1973

Country	*Isoniazid*	*Isoniazid & Thiacetazone*	*Streptomycin*	*Rifampicin*
	Pack of 100 tablets, 150 mg each	300 mg + 150 mg pack, 1000 tabs.	100 gr.	1000 capsules of 300 mg.
Cameroun	1.32	6.83	6.72	594.74
Congo	2.42	5.50	6.98	642.29
Egypt	1.48	1.48	2.97	247.52
Gabon	2.63	7.02	6.49	591.03
Kenya, Uganda, Tanz.	1.67	2.38	3.97	490.84
Madagascar	3.06	1.15	7.55	—
Niger	12.33	15.46	22.02	1,282.29
Nigeria	1.67	3.29	1.46	239.07
Upper Volta	1.54	9.49	8.09	550.65
Ethiopia	2.36	—	4.09	296.13

Source: Except for Ethiopia, extracted from Meredeth Turshen, "Analysis of Medical Supply Industries", in the *International Journal of Health Services*, Volume 6, Number 2, 1976, Table 4, p. 276.

The existence of price discrimination, while showing the strong bargaining power of monopolies, illustrates the possibilities of a strong policy variable at the disposal of the so-called small nations. We shall show this, using examples from Ethiopia compared with those countries that paid lowest and those that paid highest prices for selected products (Table 3-B).

TABLE 3 - B

The Price of Drugs in Ethiopia Compared with 18 **Selected African Countries** 1973.

Price Levels	*Isoniazid*	*Isoniazid & Thiacetazone*	*Streptomycin*	*Rifampicin*
	Pack of 100 tablets, 150mg. each	300 mg + 150mg. Packs, 1000 tabs.	100 gr.	1000 capsules of 300 mg.
Country that paid highest	12.33	15.46	22.02	1282.20
Country that paid lowest	1.32	1.15	1.46	239.07
What Ethiopia paid	2.36	—	4.09	296.13

Source: See Table 3 - A.

It may be observed that Ethiopia is by no means among the highest paying countries. Nonetheless, for each of the products imported it paid well above the lowest prices shown above. What is even more interesting is that prices in Ethiopia are 41% higher for isoniazid, 3% higher for streptomycin and 66% higher for rifampicin than the neighbouring countries which previously formed the East African community. Without going into discussion of the difference in the bargaining power of UDC (which is out of the scope of this paper), it may suffice to say that the existence of fifteen private importers and one government importing agency in Ethiopia show a strikingly divided power vis-à-vis the multinationals.

This point should, however, be interpreted with caution, for the formation of a sole drug importing government agency cannot be expected to give a UDC a colosal power with which the big drug companies would have to reckon. For example, Ethiopia with total imports (CIF price), valued at less than US $10 million annually, purchased from different companies, cannot be expected to account for any sizable fraction of the annual turnover of these companies. (On the size of the annual turnover of pharmaceutical companies, see Table 2.) In this respect, it should be understood that the solution to the problem of monopoly prices or the deterioration of the terms of trade of UDCs in general cannot be expected to be found within the context of one small country.

(5) Concluding Remarks

The discussion in this section has, we hope, illustrated that the development of health services is affected by variables outside the health services.

(a) Since almost all drugs (including the raw material imports for domestic production) are imported, foreign monopolies outside the country have a significant negative influence on the development of health services in this country. Examples are
- delays in providing drugs;
- demanding payments on request (i.e. paying before the arrival of the drug products), which is already occuring;
- dumping to destroy domestic production;
- price increase on drugs (even when the country's terms of trade are not affected by it), which may cause temporary dislocations in the process of reallocation of resources.

(b) In addition to imports of drugs when we consider imports like medical equipment and medical staff, which are also essential for the running of health services, it is instructive to know that the majority of health service variables are outside the domain of the Ministry of Health. This is an absolute reflection of the dependency relations of the economy to international capital.

(c) Because the majority of the population in Ethiopia (about 80%) is not reached by the contemporary health sector, the Ministry of Health has little capacity to affect health conditions in this country.

(d) With the mounting demand for more health services, and with almost all available new allocations being earmarked for expansion, the running budgets of the existing institutions have been left without adjustment for commodity price increases. From simple observation of the health institu-

tions, and also from reports reaching the Ministry, it may be seen that buildings are falling down from lack of repair, equipment is out of order (Table 4), and food and drug budgets are becoming increasingly inadequate because operating budgets have failed to take account of inflationary price rises.

TABLE 4

Condition of Buildings and Vehicles of Government and Mission Hospitals

Type of Ownership	% of Buildings			% of vehicles			
	Good	Need Repair	Not Adequae	Not Stated	Good	Need Repair	Should be replaced
Ministry of Health	30.2	41.5	22.6	5.7	59.6	30.7	9.9
Mission	57.9	10.5	21.1	10.5	91.7	8.3	—

Source: Computed from the figures extracted from *Comprehensive Health Services Directory*, Ministry of Health, Genbot 1969 E.C. p. 18, Table VII.

Note that the condition of buildings and vehicles of the Ministry of Health is worse than that of the self-supporting mission institutions.

Part II

An Evaluation of Domestic Drug Businesses

(1) Flourishing Drug Business

Having briefly indicated the power of monopolies over the international drug market, we shall show their indirect influences (their unilateral economic advantage) in the domestic market. The unilateral economic advantage of the monopolies has become possible because of the emergence of a group of merchants, which expands and thrives within the orbit of foreign capital. The merchants role as wholesalers or retailers on behalf of foreign enterprises has enabled them to make a sizable profit. Deriving their profits from the operation of foreign business vitally interested in its expansion and prosperity, they help in the creation of more and more new markets.

Today the thriving drug business which is expanding even outside the framework of the health services (i.e. outside the control of the government) is a good sign of the domination of monopoly capital over the national economy. Major cities are crowded with drug stores. Addis Ababa alone has 37 pharmacies, 16 drug shops and 21 rural drug-vendors, and it is estimated that over 80% of their commodities are sold without prescription. In rural areas, the number of rural drug-vendors,[9] until very recently, was more than the number of health stations. If it had not been for the Ministry of Health's current policy to restrain the expansion of the rural drug-vendors, their number would have continued to be more than

that of the health stations. Conveniently located in the market areas, meeting the demand of the community for "injections", the rural vendors have more customers than the government health stations, which tend to run out of drugs for about three months of the year. In the traditional sense, the penetration of the drug business into the rural areas is part of the dissolution of the precapitalist economy and the disintegration of the natural economy, which was self-sufficient in traditional medicine. This it did without providing an effective comparable service of western medicine as a replacement. In fact, it brought about ill health, since the sale of drugs in most areas preceded the expansion of health facilities, or is made outside the framework of health services.

(2) General Comparative Study of Domestic Retail Business in Drugs

In three years the c.i.f. value of drug imports was about 43 million Birr (Table 1); however, the price paid by the consumers is substantially higher. When these drugs were retailed, their prices more than doubled, and were of the magnitude of over 90 million Birr, yielding an average rate of profit of over 50% to the domestic drug business (private and government).

This annual expenditure on drugs of about 30 million Birr in retail prices is well over 30% of the total annual national health expenditure. The ratio for West European countries, which is in the magnitude of 10% to 15%,[10] is considered high, and any increase will probably result only from over-consumption and misuse.[11] But it is not expected to approach Ethiopia's ratio.[12]

Although expenditure on drugs in underdeveloped countries is much lower in absolute terms when compared to that of the developed countries, its proportion in the total health expenditure is much higher than that of developed countries. But, within the underdeveloped world, Ethiopia's ratio of over 30% is very high. The reasons for this include the following:

TABLE 5-A

Consumers' Price Formation of Ethiopia Compared from the Sell of Imported Drug Commodities

	Libya	Sudan	Kenya	Ethiopia		
				Private Imports	Govt. Imports*	Govt. Imports**
C.i.f. price at port of entry	100	100	100	100	100	100
Import duties	—	21.5%	—	41%	31%	16%
Other expenses until whole salers	5%	5%	5%	7%	7%	7%
Purchase price of wholesalers	105	126.5	105	150.9	140.1	124.1
Profit margin of wholesalers	10%	15%	30%	20%	20%	20
Purchase price of retailers	115.5	145.4	136.5	181.6	168.1	148.9
Profit margin of retailers	20%	20%	50%	40%	40%	—
Turn-over tax	—	—	—	2	—	—
Consumer's price	136.6	174.4	204.8	258.5	235.3	148.9

*Government selling imported drug commodities in the outpatient hospital words.
**Government selling imported drug commodities in the in-patient hospital wards, health centres and health stations.

TABLE 5-B

Consumers' Price Formation from the Sale of Locally-produced Drug Commodities

	Private Market Sales in the drug shops	Government Market	
		Sales in the outpatient hospital words	Sales in the in-patient hospital wards, health Centres and health stations
Ex-factory price	100	100	100
Profit margin of Company	48%	40.10%	40.1%
Other expenses before wholesalers	—	—	—
Purchase price of wholesalers	148	140.10	140.1
Profit margin of wholesalers	20%	20%	20%
Purchase price of retailers	177.6	168.1	168.1
Profit margin of retailers	40%	30%	—
Turn-over tax	2%	—	—
Consumers' price	253.6	218.60	168.10

(a) Retail prices are an extension of import prices that include high import duties, transport cost, wholesale and retail profits (Table 5). The high profit rate of the wholesalers and retailers is the cause for the flourishing drug business and the overcrowding of drug-stores, particularly in the capital city. If it had not been for the Ministry Health's restricting policy on licensing and locations of drug-stores, their numbers would easily have doubled. Such an extremely high private domestic profitability (over 100%) creates the illusion of a high expenditure on drugs, and becomes a major cause for the high ratio of drug expenditure to total national expenditure, of over 30%. A comparative study of profit rates of three selected countries, indicates that, as a result of varying profit rates, an imported drug, valued at $100 c.i.f., becomes $138 in Libya, $174 in the Sudan, and $205 in Kenya, when retailed (Table 5-A).

For Ethiopia, it is difficult to talk in terms of one price formation because of the existence of two markets (Government and private), with six different officially permissible prices, if to every imported drug there is an equivalent type from domestic production (Table 5-A, 5-B). Otherwise, if to each imported drug there is no domestically produced counterpart, there will only be three permissible official price levels for each product (Table 5-A). This will be the topic which follows immediately. At this juncture, if we talk of only the private retail market, which accounts for 60% of the total drug consumption of the country, and from which over 70% is retailed, the $100 c.i.f. price becomes about $259 (Table 5-A).

(b) The other reason for the high ratio of expenditure on drugs to the total national health expenditure is the existence of easy access to the private drug market for self-medication. (To estimate the magnitude of this market would be a worthwhile effort, for use as an index for measuring the effectiveness of the Ministry of Health.)

(c) Losses resulting from poor administration of drugs (e.g. improper storage or distribution) is also a factor in explaining the high ratio.

(3) Domestic Drug Price Formation and its Impact on Consumers

What we have already shown as a rate of profit of over 50% is an aggregation of widely differing profit rates of the private and public sectors, whose price compositions are as follows:

(a) When consumers buy imported drugs from private retailers, the price is about 2.6 times higher than the c.i.f. price.

(b) When consumers purchase imported drugs from in-patient hospital wards (government hospital pharmacies), health stations or health centres the price is about 1.5 times higher than the c.i.f. price. When consumers purchase imported drugs from outpatient hospital wards (private hospital pharmacies), the price is about 2.4 times higher than the c.i.f. price.

(c) When consumers purchase products of EPHARM (local producer) from in-patient hospital wards, health stations and health centres, the price is about 1.7 times higher than the ex-factory price. When the same commodity is purchased from the outpatient Hospital ward, the price is about 2.1 times higher than the ex-factory price.

(d) When consumers purchase EPHARM's products from private institutions, the price is about 2.5 times higher than the ex-factory price.

Why six sets of prices? Health institutions have three channels through which they can purchase their drug supplies. One is the government medical corporation and the second is the private importing agencies. The former is less expensive than the latter, due to differences in profit margin (Table 5). But because of inadequate budgets, no health institution can purchase all its drug requirements from the less expensive government corporation. City hospitals purchase part of their drug needs from private importers on credit,[13] while rural hospitals, health centres and health stations, which do not have such facilities, reduce their activities when their allocations to purchase medicines run out. The third source, which is a highly protected domestic producer, brings about another set of prices.

The existence of 6 different possible sets of officially permissible prices for the same product, therefore, implies the existence of the cheapest and the most expensive price and four sets of prices in between. This, however, does not mean that a consumer has the option of six prices to choose from, as some of the markets are not accessible.[14]

In the goverment market, the choice for a cheap brand is limited by the stipulation of the prescription system.

In the private sector, on the other hand, although drugs are more expensive than those in the government sector, there is a choice from the three possible prices subject to the following conditions:

(a) If the consumer without a prescription (self-medication) seeks the cheapest drug.

(b) If the consumer who, despite the fact that he has a prescription, may be willing to change the brand of the drug that is shown in the prescription

for a similar but cheaper brand. This, however, is not possible in the government sector, where the consumer who is attended to in a government health institution must stick to the stipulation of a specific brand of drug shown in the prescription.

From the supply side, the continuation of production of multiple products will not cease as long as the pharmaceutical companies operate like all other capitalist firms — for profit. To remain in the market (and not lose the battle of competition), companies keep on putting out new preparations, many of which duplicate one another. Because of these marketing manipulations,[15] consumers are faced with a plethora of interchangable preparations. For example, in Spain, 25,000 medical preparations are on sale; in Brazil 14,000; and in France 11,000 of French origin, plus several thousand other imported preparations, [16] and in Ethiopia about 5,000.

If control from the supply side is not possible, control may be made on the demand side by passing a law that medicines can be introduced into the country only with the sanction of the Ministry of Health. The example of the Soviet Union, where the official register of medicaments permitted lists some 2,500 items, and where the law provides for the strictest control over the introduction of medicinal preparations and their administration,[17] is highly instructive.

Unless such a law is introduced, the dangers or uselessness of drugs will have a negative effect on the development of health services. Through strict control of imports, some undersirable products and the dangers of drugs may be avoided. This will also reduce some of the burden of costs of treatment. This, of course, is not possible to implement prior to the carrying out of some institutional measures which are indicated in Part IV. Even with these measures, monopoly profits will continue to exist until domestic production that is largely based on domestic inputs is initiated.

Part III

More on Efficiency in the Use of Drugs

In the discussion above, it was shown that the drug business is a lucrative business. It was shown that there are two major markets with mainly two major pricing practices which result in two completely different treatment costs. The attempt in Part III will be to show how the consumers suffer from an improper utilization of drugs.

For clarity of discussion, two types of channel of drug purchase are identified: one is the purchase of drugs through prescription (i.e. purchase is made within the health service framework), and the second is the purchase of drugs without prescription (i.e. purchase is made outside the health service framework).

(a) Purchase of Drugs through Prescription

The demand for prescribed drugs (within the framework of health institutions is not a direct demand for it; but a demand for health services. This makes it a derived demand. Hence, the economic relation, in this case, is not between price and quantity of drugs, but between the amount of money individuals are willing

to pay for a package of medical services, of which drugs form only a part, and whose impact is known only at a later stage when the prescription is presented to a drug-store. Hence, while the demand curve for health services (which includes drugs) will be expected to be downward-sloping, the demand curve for drugs separately will not be expected to behave like the health service demand that includes it.

The supply curve is also expected to be inelastic. For example, if the price of drugs is made to fall sufficiently to attract more people (from the population at risk) to the health services, their access to the health services will be limited by the capacity of the health services; which means more drugs cannot be sold because of price cuts. If, on the other hand, the price of drugs rise, those with cash income in the short run may be willing to spend to meet the extra treatment costs. Only when the rise in price persists will those in the low-income bracket tend to look out for "cheap treatment" in the private sector, where drugs are not only sold without prescription (at least to avoid health services fees) but also where the buyer is able to demand a cheaper but a similar type of drug.

(b) Purchase of Drugs without Prescription

Outside the health service framework, the demand and supply curve for drugs will be expected to be elastic. On the demand side, we have a large number of people who are adversely affected by the inaccessibility of the health services (capacity limitations, absence of health services, fees and the prescription system) and therefore seek for treatment outside it. This will mainly include part of the poor and ignorant, who may not think of going to the health services in the first place, although there may be some of them who go to the health services for treatment, but suspendit if costs exceed their ability to pay the full treatment costs.

Among the high-income groups (e.g. some of the rich in rural districts), there are also those who have no access to prescribed drugs because of the unavailability of a health facility or because of their knowledge of the high patient-load of medical practitioners (therefore indicating concern over the poor quality of service); these, if quite well off, may resort either to private medical practitioners, or to the purchase of drugs without a prescription, because of an assumed confidence in the knowledge of the illegal prescribers.[18] (N.B. There are many known cases of alarming medical malpractices.)

There will be a seeming advantage for the poor when patients resort to illegal medical practitioners from the point of view of reducing "treatment costs". That is, the consumer conveniently avoids the health service fees, the long waiting lists of the crowded institutions, and the non-cost-conscious prescription systems. Should the cost of such treatments rise because of increases in price of drugs, this type of consumer will be expected to switch to traditional medication.[19]

Thus the demand curve for non-prescribed drugs will be expected to be elastic.

The supply curve for drugs is also expected to be elastic. If the price of drugs in the domestic market increases, the quantity of drugs imported will immediately increase.[20]

Part IV

Some Implications for Policy

Although the cause of high drug prices in this country is the enormous profit margin as the product passes from the exporters to the consumers, the solution

cannot be unconditional elimination of all duties and profit rates, as is often claimed; this in any event would not affect profit rates of international monopolies.

Such an over-simplified solution, which appears so attractive and which indeed has received wide applause, would bring about more harm than benefit. The first disadvantage of such a measure is that a faster expansion of the drug market than that of basic health services will increase the consumption of drugs outside the health service framework, and thereby increase the misuse of drugs. The second is that a possible reduction in price will benefit more the population that are enjoying the already highly subsidized health services.

Given the present Ethiopian conditions, where there does not exist an organic relation between the health services and the drug market, and where the latter is more accessible than the former, the problem of health services (coverage, accessibility and quality) in the short run may begin to be solved through the synchronization of reduction in prices of drug with expansion of health services, so that drug consumption (as part of the health service consumption) occurs *via* the health services. In this case, a fast expansion of health services will allow a fast reduction of the price of drugs (without its negative consequences). In this respect, consumer demand should be directed towards demand for increased access to health services (construction of more new health stations, health centres and rural hospitals), rather than towards unconditional reduction of drug prices.

In the long run, the contradiction between business desire for profit (including the exporter's profit) and consumer's interest in cheaper treatment may be solved through development of the economy and vigorous socialist construction for self-sufficiency. The demand at this stage should be unconditional access to health services for all those who need it. At this stage, the pricing of drugs and the pricing of the health-service product that contains them may be used as an administrative mechanism for efficiency rather than as a tool for profit maximization.

In what follows, we will give specific dimensions to the already identified short-term and long-term solution.

A. Short-Run Policy

(1) The existing drug prices in Ethiopia contain the profit of multi-national companies when imported and the profit of domestic business when retailed:

(a) The contradiction between domestic business interest in profit and consumer's interest in cheaper and better treatment may be solved by the nationalization of drug retailing and importing; by earmarking the profit for the development of basic health services; and by the formulation of a national drug policy for efficient and proper use of drugs (assuming nationalization results in better services).

(b) The contradiction between the interest of international capital in profit and the interest of consumers in cheap treatment cannot be solved by nationalization alone. Nationalization (where the government becomes a sole importer) can marginally improve this country's bargaining power with multi-national companies for better prices. This contradiction can only be solved by economic independance where by a long term policy of self sufficiency in drug production may be a part.

(2) At present, the government should be cautious about drastically reducing the price of drugs because of the characteristics of the two drug markets:

(a) In the government market, the strict policy of sale of drugs through prescription marks the relatively efficient utilization of drugs. Nonetheless, because of the inability of the government to expand the health services in the short run, the following dangers may be noted, should prices be cut:

(i) By increasing the workload of the already crowded health facilities, it may make them chaotic, causing such overcrowding that it may even be difficult to meet emergency situations. From this an overconsumption and abuse of drugs may follow, since, when the physician is unable to devote enough time to each patient, the diagnosis may be uncertain and the drugs prescribed may be unnecessary.

(ii) The benefit that accrues from a fall in price goes only to a segment of the population that already has access to the highly subsidized health institutions.

(b) In the private market, since drugs are sold through prescription as well as without prescription, two separate outcomes will be expected from a cut in prices:

(i) In the case of the purchase of drugs without prescription, a price cut will immediately expand their consumption, and thereby increase the dangers.

(ii) In the case of purchase of drugs with prescription (within the framework of the private health services), a price cut may draw more patients than before. Further expansion of the workload is limited by the size of facilities. The advantages that may accrue to consumers through cheaper drugs may be lost to the private institutions through higher charges for medical personnel and equipment services, with the objective of limiting demand to their capacity.

In this regard, the policy to reduce drug prices drastically should be preceded by the expansion of health services and by increasing their accessibility. Putting up more clinics is not a difficult undertaking, as the financial and personnel requirements are within the resource base of this country. For better quality of the services, the increased number of clinics may further be attached to a higher health institution for referrals. Otherwise, the short-run price policy for drugs should be to allow existing prices to remain as they are (except perhaps for the most urgently needed drugs for disease control). Yet, by the preparation of drug lists for imports.[21] and the reduction of prices for selected products, the government can still provide consumers with cheap products.[22]

(3) In order to overcome the misuse of drugs in the health institutions, the Ministry of Health should also speed up the development of a network of laboratory facilities in Ethiopia. As it is now, there is a serious danger of misuse of antibiotics. While medical people cannot accurately prescribe a drug for treatment of most infections without the necessary support of a bacteriology laboratory, most hospitals, health centres and health stations do not have such facilities. In this situation, a medical person may embark

prematurely on broad-spectrum antibiotic therapy, change to another drug if the first does not work, and continue to jump from one antibiotic to another in search of the "right" drug for the unidentified disease.

(4) The above policy measures affect only some 20% of the population which is within the reach of the health services. The remaining population, although uncovered by modern health services, is served with traditional medication. Although lack of knowledge in this area may preclude us from suggesting some specific policy measures, general recommendations may not be out of place:

(a) The MOH should have a clear policy (not just aspirations), with regard to traditional medicine. In this respect, the role and importance of the practitioner in the provision of health services should be recognized and should be financially supported.[23]

(b) The present research efforts should be speeded up in order to enable the quick identification of the dangerous and the non-effective traditional medications, in contrast to those that are effective. The popularization of the latter and the discouragement of the former is the least contribution the Health Ministry should make for those who will remain outside the modern health service sector for some years to come.

(c) The present MOH commitment to start the training of peasant doctors (pd) (Ethiopia's equivalent to Chinese barefoot doctors) may easily be coordinated with the traditional health sector. In this programme, the MOH should explore all the possibilities for training traditional practitioners (who already have the aptitude for such functions) into pd. This will be a step forward in the integration of the traditional sector into the modern sector.

B. Long-Run Policy

The nationalization for health services (i.e. abolition of the private sector, giving the state control over the health services and drug business) which should be undertaken is not necessarily a socialist measure. It is a bureaucratic manoeuvre to modify dependencies, and it may result in some marginal increase of efficiency in the health services and perhaps also bring about a spill-over of some benefits to the masses.

The most efficient long-run drug policy should be one which is an integral part of the socialization of the health services; that is the self-sufficiency which goes together with the replacement of bureaucratic rule of health services, by community control of health services This is a condition which will necessitate and expedite the production of drugs based on needs, an achievement which would also be remarkable when compared to existing imports, which are primarily made to the consumers of the advanced countries with high standards of living and preventive action.

It may be said that a socialist measure may not be achieved in one stroke, as it depends on the vigour of the revolution. Given that the first possible step is to achieve nationalization (control by the bureaucracy), we deduce that, unless it is followed by a second step which is socialization (that is, control by the masses of not only the means of production but also the mode of utilization of the surplus), the result will be superficial changes that will continue oppression and backwardness. In as much as the first step depends on the vigour of the existing revolution, the second step depends on its continuation. Otherwise, what is initially gained can be lost, slowly but surely, in state capitalism, in which the power of capital and bureaucracy will survive, and underdevelopment of the country (of which health is a part) will persist.

FOOTNOTES

1. *Take a Pill: the Drug Industry, Private or Public*. Research and Publications Group of the London Health Students Communist Party Branch, 27 Pearman St., London S.E. 1.

2. Herbert Klarman, *The Economics of Health*. New York & London: Columbia University Press, 1970, p. 111.

3. The difference now is that the drug business, instead of selling its products (drugs, equipment, personnel services, etc.) directly to the consumer, now sells them indirectly through the government (paid for by tax revenue), as in the UK, or through insurance schemes, as in the US. Navaro aptly calls this development a "change of billing system", as people continue to pay for these services and as the health care industry also continues to be organized on profit lines. See Vincente Navaro, "National Health Insurance and the Strategy for Change" in *Readings for Medical Care and Hospitals*, 24, *Policy Issues and Methodological Approach in National, Regional and Urban Health Planning (March 27 to May 22, 1974)*.

As health expenditure is an important household expenditure item, the rising cost of medical treatments was simply squeezing out the middle-income consumers, and thereby narrowing the market for the monopolies. This new system of indirect payments lets medical expenses be shared between the consumer and the non-consumer of the health services, thereby reducing the burden on the health service consumers, and consequently protecting monopolies against shrinking markets.

The second advantage to the monopolies is related to the reliability and regularity of the market for planning production.

The third advantage to the business is the indirectness of the payments that invokes no protest from the ". . . unwilling consumer and the tax and premium payer". For a detailed discussion of this, read, for example, Snader Kelman, "Toward the Political Economy of Medical Care" in *Readings for Medical Care and Hospitals*, 24, *Policy Issues and Methodological Approach in National, Regional and Urban Health Planning (March 27 to May 22, 1974.*

There is, however, a limit to the expansion of profit through this scheme in the long run. The Sainsbury Parliamentary Report in the UK, which showed the concern and the need to curb the expanding profits of monopolies, is a good illustration. Source: *Take a Pill: the Drug Industry Private or Public*, p. 5.

4. Herbert Klarman, *The Economics of Health*., p. 14.

5. John L. Mcknight, "A Cancerous Health Development: the case of American Medicine," in S. Harmel & O. Nordberg (eds), *Development Dialogue*. Motala: Borgestroms Tryckeri AB, Sweden 1978, p. 15.

6. Meredeth Turshen, "Analysis of the Medical Supply Industries", in *International Journal of Health Services*, Volume 6, Number 2, 1976, p. 271.

7. Quoted in Meredeth Turshen, "Analysis", p. 272.

8. Chaulets and Vaitsos data on drug prices reveal two possibilities:

   (a) The varying bargaining power of the developing nations vis-à-vis the monopolies.

   (b) The all-out power of monopolies and the possibilities of price discrimination as evidence of monopolistic behaviour as means of maximizing profit, given that the price elasticity of demand is more than one.

   However, the data do not tell us whether one country as a whole is better off than others just because it has relatively low prices for its drug imports alone. It is the terms of trade (consideration of both imports and exports) that should be considered.

9. "*A pharmacy* is an establishment in which pharmaceutical preparations are compounded and/or dispensed to the public under the supervision of a licenced pharmacist who is a graduate of an accredited school of pharmacy, while a *druggist shop* is an establishment which offers for sale to the public pharmaceutical preparations, cosmetics and other related items, but does not engage in compounding preparations of any medical products or the dispensing of narcotic drugs; and a *rural drugvendor* is an establishment authorized to sell to the public items from a limited list of standardized prepared medications and cosmetics in those geographic areas where such services are not available through pharmacies or druggist shops; they are normally staffed by advanced dressers, who have worked satisfactorily five years with the Ministry of Health". Source: *Comprehensive Health Service Directory*, Ministry of Health, Genbot 1969 E.C. (May 1977 G.C.), pp. 1-2.

10. *WHO Chronicle*, Geneva, Vol. 2, No. 9, Sept. 1975, p. 347.

11. Ibid, p. 337.

12. If the Government health services demand for a higher drug budget (particularly those of health services in the rural areas) is met, Ethiopia's ratio may jump to over 40%.

13. Hospitals have two types of pharmacy, known as government and private pharmacies. Hospitals are allowed to keep 15% of their profit from the private hospital pharmacies, while all revenues from the sales of government hospital pharmacies and 75% of the profit from private hospital pharmacies are claimed by the Ministry of Finance.

14. Thus the difference between the two markets indicates three possible policies for the Ministry of Health to consider:

   (1) Drugs should not continue to be sold over the counter like candies. It must be accepted that most treatments cannot be given without the use of medical advisers, at least with those antibiotics that have serious possible side-effects or those medicines that contain alcohol or narcotic substances that may produce alcoholism or addiction to narcotics.

   (2) The prescription system should not be allowed to continue to neglect the cost implication of widely differing prices of a drug with different brands. Although the market is flooded with an inordinate number of preparations with a wide range of prices for similar drugs, it is the expensive drugs that are extensively used, due to heavy marketing pressures.

   (3) The importation of drugs should also be selective because, despite the fact that many drugs lack "evidence of effectiveness", according to official tests in the US and UK, they are widely used in this country.

15. Edward Babayan in *News Times: a Soviet Weekly of World Affairs*, 7 Feb. 1977, p. 23.

16. It is not uncommon to see drug salesmen in the capital city and other major towns lavishly hand out "free" samples to physicians, medical scientists, pharmacists, nurses, technicians, and even to friends outside the health professionals.

17. Edward Babayan in *New Times*, p. 24.

18. The knowledge of the existence of different kinds of income groups in the private market has been noted to have led to price discrimination as evidence of monopolistic behaviour, i.e. as a means to maximize the income from the retail business or the private health service business emanating from the ignorance of the consumers.

19. The traditional medication may not be less hazardous to health. For example, infection of the tonsils may be cured by an appropriate treatment of antibiotics, but, unable to afford (or through fear of being unable to afford) the health service charges, people may resort to operation on the tonsils by a traditional practitioner.

20. Supply from imports should not, however, be expected to be unlimited. There may be foreign exchange constraints or import restrictions. Right now the level of imports of drugs is very much lower than these alarming levels.

21. The preparation of a drug list is an important recommendation which is of long standing. For many years now, many medical practioners have requested the preparation of drug lists for imports.

    Similarly, a WHO "Consultation on the selection of essential drugs" (was held in Geneva from 11-13 October 1976 (WHO/DPM/76.1), to develop guidelines for the selection of essential drugs as a necessary element in the development of a national drug policy.

22. Numerous attempts have been made to show that the problem of health services in Ethiopia is the inadequacy of health facilities and their uneven coverage of the population. This problem (shortage) is blown up in terms of physical counts (size of manpower, hospital beds, etc.), and the solution provided is a request for an increase in health budget which has never been forthcoming. The requests, despite their usual disassociation of health service demand from the political framework of the country, have two apparent shortcomings:

    (a) They neglect the improvement of the efficiency of the existing health services, which would definitely increase the health service output.

    (b) They assume that the government has unlimited funds for the expansion of health services, which may result in unimplemented health plans even when there may be a political willingness to act.

    This paper, while trying to arrive at an efficient drug policy, also explores an alternative source of financing health services.

    Considering the low level of the health budget of this country, an additional amount of some $10 million should not be under-rated, as it is enough to run adequately a 150 double-staffed health centre or enough to run 1500 double-staffed health stations. This is the same as saying that a population of about 10 million Ethiopians that have no access to health services can be covered, by basic health services.

    Nonetheless, these numerical examples are shown merely to indicate the magnitude of resources that may be available from such a policy. The author, however, would like to stress that such a policy (expansion of health services) may not necessarily produce health — there have now appeared convincing studies that health is more of a function of food (including water), shelter, clothing, employment, security and other social variables.

23. This recommendation originated from a pannel of traditional medicine practitioners at the 1968 conference of the Association of Pharmacists.