

# **STRUCTURAL ADJUSTMENT AND ITS IMPACT ON HEALTH SECTOR**

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Certified that the dissertation entitled **Structural Adjustment and Its Impact on Health Sector**, submitted by **Man Mohan Kumar** is in partial fulfilment of requirement for the degree of **Master of Philosophy** of this University. This dissertation has not been submitted for any other degree of this University or any other University and his own work.

We recommended that this dissertation be placed before the examiners for evaluation.

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*Man Mohan Kumar*

## LIST OF ABBREVIATIONS

B.E.	Budget Estimates
CPI	Consumer Price Index
FAQ	Fair Average Quality Price
F.W.P.	Family Welfare Programme
GDP	Gross Domestic Product
IRDP	Integrated Rural Development Programme
IMF	International Monetary Fund
JRY	Jawahar Rojgar Yojana
MCH	Maternal and Child Health Care
PDS	Public Distribution system
PHC	Primary Health Care
R.E.	Revised Estimates
SAPs	Structural Adjustment Policies
WB	World Bank
WPI	Whole Sale Price Index

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## INTRODUCTION

The IMF-World Bank administer's lessons to 'us' in a million ways, currently being consolidated under the name of 'structural adjustment programme'. That is the prescription for developing countries facing mounting amounts of debts, adverse balance of payments and economic recession. This is the result of the several external shocks that have confronted developing countries over the past dozen years. This has notably summarized by Lance Taylor.<sup>1</sup>

Violent swing in oil prices, up in the 1970's, down in the 1980's, a slowing growth in industrialized countries since mid-1970's, and severe economic recession at the beginning of the 1980's, which resulted in low prices and decreased demand for the exports of developing countries.

The effect on developing countries was a double bind, they lost export earnings at the very time their debt obligations were high and rising. Consequently they had no choice but to cut back on domestic investment and consumption to reduce imports and thereby to free up the foreign exchange needed to pay debt interest and amortization. Borrowing countries sought and received stretched-out schedules for repaying debts, but only after agreeing to undertake severe adjustments at the behest of the IMF-World Bank. The repercussions of the adjustment were drastic,

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<sup>1</sup> Taylor Lance (1981), *South-North Trade and Southern Growth*, 'Journal of International Economics', pp.589-602.



and real wages in many countries dropped sharply in the 1980's. In this perverse situation, the brunt of the resource shift fell on the poor, with devastating results. Net flows of the capital between North and south reversed; from 1984 till 1988 developing countries transferred about \$143 billion to industrialized creditor nations (WDR)<sup>2</sup>. In many developing countries, the repercussions are slow growth for many years. The social cost in terms of reducing health expenditure and other social services, with high unemployment and inflation has been tremendous and unequally distributed. Several observers have stressed that adjustment programmes in developing countries are having a markedly deleterious effect on health and nutrition among the poor of those countries (Jolly<sup>3</sup>, UNICEF<sup>4</sup>, WFC<sup>5</sup>, WDR<sup>6</sup>). The root of the poor growth performance and cut-backs in social expenditure in this period in developing countries is the economic slump in the industrialized world. The latter averted these issues but the price was very high and mainly paid by the poorer countries.

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<sup>2</sup> World Bank Development Report, 1990.

<sup>3</sup> Jolly Cornia and Stewart, 1987, *Adjustment with a human face: protecting the vulnerable and promoting growth*, Oxford University Press, Oxford.

<sup>4</sup> UNICEF, 1990, *The State of the World's Children*, Oxford University Press, Oxford.

<sup>5</sup> World Food Council (1985), *Improving Accesses to Food by the Undernourished*, Paris, June 10-13.

<sup>6</sup> World Development Report, Oxford University Press, 1993, pp.52-69.

In the name of cost-efficiency and growth, these unpleasant consequences are celebrated by the neo-classical Theory. In practice however instead of the realization of cost-efficiency and growth one finds slow growth and inequality. With this frame work there is no theory of exploitation but it sees the economy as purely harmonious, concentrating on equilibrium as its main analytical tools and believes that capitalist competition automatically ends all discrimination. Structural adjustment policies see the competitive market as the solution to all problem and any collective plan. For example free health care, is automatically seen as an evil reduction of efficiency and individual welfare. As patients are urged to act like consumers, and doctors like entrepreneurs. It appears that the imperative generally associated with profits has replaced the clinical truth in the organization of health sector.

So, the rhetoric of the cost efficiency and market has become a fundamental and central component of structural adjustment programmes. The proponents of SAPs view health as a technical subject, isolated from social and political issues and conflicts.

Even structural adjustment policies systematically appropriated the basic concepts which were originally oriented towards redistributing income. The IMF-WB described structural adjustment programmes intent stimulating inequalities and poverty as 'revolution' or 'reforms' while their opponents were labelled conservatives. The 'speculators' are described as

'market reformers'. The concentration of absolute power to hire and fire in the hands of management and the increased vulnerability and insecurity of labour is called 'Labour flexibility'. The 'Dis-investment' of public sector units to giant multi-national monopolies is described as 'breaking up monopolies'. 'Restructuring' is the return to specialization in raw materials or the transfer of income from production to speculation. 'De-regulation' is the shift in power to regulate the economy from the national welfare state to the international banking multinational power. 'Structural adjustment' mean transferring resources to investors and lowering payment to labour. So, one can see the concepts [Reform, Agrarian reform, Structural changes] originally oriented towards redistributing income have been turned into symbols for re-concentrating wealth, income and power into the hands of western elite.

In India's case economic performance had been well below the country's potential for decades. The crisis came in 1990. Inflation, unsustainable fiscal and foreign deficits, and a collapse of international credit-worthiness, set the stage for structural adjustment programme on the behalf of the IMF-WB. The purpose of this programme in India is to make for such changes in the production structure as would make India competitive and cost-effective in international market. These policies want to make the Indian production system as well as the foreign trade of India fully in tune with international demand and supply. The main focus is on

the reduction of government public expenditures and to make space for private initiative and enterprise. The impact of compression has fallen on health and other social services more than other sectors of spending. At the same time the existing safety nets in the form of IRDP, JRY and the PDS (Ahluwalia)<sup>7</sup> are striking cause of decline in employment, income and consumption levels. There are various indirect effects which arise primarily from the linkages with macroeconomic adjustment. Inflation, for example often penalizes the poor in particular as they have less opportunity to maintain the value of their income and savings. Thus, structural adjustment reduced the capacity of governments to provide health care and basic services and that of the population to obtain the goods and services they need to secure good health. The combined effect of the structural adjustment policies has been to increase the health risk for larger sections of populations. In India, where the basic problem of hunger, undernutrition, avoidable disease, the absence of adequate clothing and shelter and in general the incapability of people to lead full lives is prevailing, the implementation of structural adjustment policies has severe affect on the health sector. It is this that the dissertation attempts to analysis.

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<sup>7</sup> Ahluwalia, D. (1993), *Public Distribution of Food in India*, Food Policy, vol.18, no.1.

For any such analysis it is important to understand the origin of SAPs and its basic principles. The first chapter therefore is based mainly on an examination of the essential principles of structural adjustment, its content, that is based firmly on the orthodox neoclassical view of economics. This chapter also examines the basis of its principle.

Our next research question was regarding on the impact assessment of adjustment policies and underlying theoretical issues, and its limitations. Chapter II therefore, considers different approaches of modelling macro-economics of developing countries and its distributional aspect. Here I review a number of empirical studies by starting with the effectiveness of macro-economic policy in developing countries during adjustment period, then the nature of government cuts at the time of fiscal and monetary contraction. The nature of household responses to changed income and prices are also examined, and finally country studies focusing on collapsed relation between structural adjustment policies and more direct measures of health.

Having broadly identified the limitation of SAPs and its related theoretical models at the macro level we proceed to take up specific examination of structural adjustment policies and health. The third chapter attempts to broaden the analytical base for considering the channels of impact of SAPs on the health sector. The theory underlying this analytical framework attempts to bring in factors which influence

economy from outside the market. We therefore, have no particular commitment to Orthodox Neoclassical view of Economics, Keynesianism, Monetarism, and Rational Expectation Macroeconomics. The attempt is to move away from the comparative static approach, which assumes that the economy is always in equilibrium that is that demand always equal supply. It uses a broader concept of health, taking account of such factors as living and working conditions etc, rather than consumption alone.

And at last, our analysis assesses the impact of structural adjustment on the health sector of India since 1991. Apart from examining the health sector in the traditional sense we have also attempted to analysed two other crucial dimension of health (a) the availability and prices of foods, and (b) prices of drugs. Both these constitute vital inputs for health.

Throughout, the analysis which is based on secondary literature, is quite aware of the paucity of data and empirical studies. We also are concerned of the fact that both theoretical analysis and measurement in the health sector turn out special methodological and theoretical problems. We have shown to some extent the impact of SAPs on health sector and prices of foods and drugs, which goes long way to determine health of population.

Overall, the impact of SAPs on health sector cover widely varying issues directly or indirectly, and the attempt to bring them together, only

partilly successful. Nevertheless, I believe this a first effort to me that provides a useful basis for writing dissertation and further study.

## Chapter 1

# STRUCTURAL ADJUSTMENT AND ITS BASIC PRINCIPLES

Most developing countries economy face periodic macroeconomic problems of imbalance between aggregate demand and supply, inflation, unemployment and foreign exchange shortage. The origin of such problems lie in the international economic environment because of declines in demand for exports, increased interest charges for foreign debt, increased costs for critical imports such as petroleum.<sup>1</sup> The affected developing countries in such circumstances often undertake macroeconomic adjustment policies to attempt to resolve the problems. These adjustment policies attempt to resolve the problem, undertaken by the countries themselves or particularly if foreign exchange shortage are severe, in collaboration with the IMF and World Bank and also with important international lenders in general, economic adjustment means changing economic political policies to improve economic performance. There are two areas of adjustment.<sup>2</sup>

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<sup>1</sup> J.R.Behrman *The Impact of Economic Adjustment Programmes in "Health, Nutrition and Economic Crisis"*, ed- Bell, David and Michael R., 1988.

<sup>2</sup> I.M.D. Little, Richard N. Cooper, W. Max Corden, Sarath Rajapatirana - *"Boom, Crisis and Adjustment. The Macro Economic Experience of Developing Countries"*, OUT-1993.



- (A) *Macroeconomic adjustment* - It includes an immediate change in macroeconomic policies like tighter monetary policies, reduction of the budget deficit, exchange rate devaluation etc. It aimed at achieving short term objectives particularly lowering inflation, reducing the balance of payment deficit.
- (B) *Structural adjustment* - It includes more fundamental changes in the way the economy operates. It includes privatisation, removal or relaxation of government regulations affecting the economy, reform of international trade policies, tax system etc. It is aimed at enabling the adjusting countries to change the structure of its economy to increase economic efficiency.

The term 'Adjustment' is generally used by the IMF to refer to macroeconomic adjustment, but by the World Bank to refer to structural adjustment.<sup>3</sup> The World bank refers to macroeconomic adjustment as 'stabilization'. Generally, it is to refer to the combination of macroeconomic and structured adjustment, because of the overlap between stabilization and structural adjustment policies. The present chapter is based mainly in examination of the essential principles of structural adjustment.

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<sup>3</sup> *Ibid.*

## **The Main Content of Structural Adjustment**

It has been said that structural adjustment is that part of development policy devoted to achieving a boost to the supply side of an economy by the removal of market imperfections.<sup>4</sup> It is therefore to be contrasted with stabilization, which seek to control the demand side and also with long term supply side policies. In the 1980s the phrase was used by many as a synonym for appropriate development policy.<sup>5</sup> So, there remain multiple differences between those who, like the Latin-Americans structuralists of the 1980s,<sup>6</sup> who favour the removal of imperfections through state intervention and those who like the World Bank<sup>7</sup> favour their removal by state withdrawal, and within this, disputes persist concerning which market should be liberalized and in what order. The IMF and World Bank supported structural adjustment programme have been implemented initially across a large numbers of countries in different parts of the world.

Structural adjustment policies are generally covering a number of

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<sup>4</sup> World Bank *Adjustment Lending, an Evaluation of Ten Years of Experience*, Washington, D.C., 1988.

<sup>5</sup> World Bank, *Adjustment Lending Policies for Sustainable Growth*, IBRD, Policy and Research Series No.14, Washington DC, 1990.

<sup>6</sup> Carbo, Vittorio, and Jaime de Melo, and James Tybout, *What went Wrong with the Recent Reforms in the Southern Cone*, Economic Development and Cultural Change, 34(3), 1986.

<sup>7</sup> World Bank, *World Development Report, the Challenge of Development*, Oxford University Press, New York, 1991.

different areas of economic policy supported by IMF and World Bank and it is based firmly on the orthodox neoclassical view of economics.<sup>8</sup> Structural adjustment policies vary between individual countries because of their particular structural problems. However, all structural adjustment policies supported by the IMF and World Bank have a common underlying principle mainly to increase the role of the private sector in the economy and reduce the role of the public sector and more generally to move the economy towards a free market system.

As we discussed above, there is a substantial degree of overlap between the policy measures in structural adjustment and those incorporated in macroeconomic adjustment (stabilization) policies. Thus, for example, reducing the share of the public sector in the economy overlaps with public expenditure reduction, reforming the exchange rate system and maintaining a competitive exchange rate overlaps with devaluation, interest rate liberalisation overlaps with monetary policy, and tax reform overlaps with short-term increases in taxation.

These structural adjustment policies represent an extension into the future of policies implemented in the short term as part of macroeconomic adjustment. The maintenance of an 'appropriate' macroeconomic framework over the long run is a major part of structural adjustment. The

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<sup>8</sup> David Woodward, *Debt, Adjustment and Poverty in Developing Countries*, Vol.II, Pinter Publishers, London, 1992.

basis of structural adjustment can be divided broadly into three categories:-

**(A) Prices should Respond with Market Condition:**

It means that the prices paid and received for each good and service in the market reflect its relative scarcity. The greater is the demand for a good or service relative to its supply, the higher should be its price.

This has potentially important implications for the level of incomes from different sources. The effect may be considered on two levels, the distribution of income between different factors of production like labour, land, capital, and human capital, and the distribution of income between different households supplying the same factors of production.

In general, developing countries face a situation in which unskilled labour and land are relatively plentiful, while capital in all forms is relatively scarce.<sup>9</sup> This situation arises from the relative international mobility of different factors of production. The relative scarcity and greater international mobility of financial and human capital as compared with land and labour, means that the 'right' price is that required to persuade their owners to keep them in the adjusting country. By contrast, the 'right' prices for land and labour are those determined by their supply in the

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<sup>9</sup> R.H.Heller, *International Trade: Theory and Practical Evidence*, Englewood Cliffs, N.J. 1973.

adjusting country, which is generally in chronic surplus, and the domestic demand for them, which is depressed by adjustment in the case of labour, at least in the short run.<sup>10</sup> The clear implication is higher levels of income for the various forms of capital, which are owned mainly by rich, and lower levels of income of the poor.

This divergence is likely to be compounded by the process of structural adjustment. The liberalisation of capital and foreign exchange market increased the international mobility of financial capital held in the country, and thus increase the income needed to retain it. At the same time, the reduction in investment associated with structural adjustment increased the scarcity of physical capital. Devaluation further widens the gap between financial and human capital and other factors of production, again because of their different degrees of tradeability.

The effect of structured adjustment policies on social and economic confidence and stability, may also compound the problem. There effect will tend to increase the incomes required by the holders of financial and human capital relative to there available internationally, to compensate them for the increased risk of holding their assets in the adjusting countries.

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<sup>10</sup> Nogues, Julio, and Sunil Gulati, *Economic Policies and Performance under Alternative Trade Regimes*, World Bank, Washington D.C., 1992.

These considerations imply a significant tendency for bringing prices in the economy into line with market conditions to increase the degree of inequality within the economy, as the rates of return on the productive assets of the rich are increased relative to those of the poor. Not only do actual incomes diverge toward their respective 'right' levels, but the 'right' levels themselves also diverge as a result of adjustment.

The proponents of structural adjustment tend to focus more on the distribution of incomes between different households which provide the same factors of production, particularly labour and entrepreneurship. Essentially, they see distortions in the economy such as controls on prices, wages, exchange rates and interest rates as creating opportunities for 'rent seeking' activities.

The prime case of state intervention creating opportunities for economic rents is the formal/informal sector division in the labour market like wage indexation, minimum wage legislation, regulations affecting working conditions is largely confined to formal sector.<sup>11</sup> As a result, it creates artificially favourable conditions for those in this sector, but because it increase the cost of employment to producers, it reduces the number of jobs available. This in turn increase the supply of labour in the informal sector, and thus reduces real informal sector incomes.

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<sup>11</sup> Haggard, Stephen, and Robert Kaufman, *The Politics of Economic Adjustment*, Princeton University Press, Princeton, 1992.

Thus, the effect of intervention is to improve the position of those households who are in this position and to reduce the incomes of those who are not. Reducing state intervention and removing these distortions should therefore help to narrow the gap between the two in terms of real incomes.

Essentially, similar argument applied to control on exchange rates, interest rate and prices for goods: those with access to foreign exchange, borrowing or goods on preferential state-controlled terms gain at the expense of higher costs to those who do not have such access. Similar considerations also apply to quantitative restriction on imports, as those who are able to purchase them can sell them at a higher price to those who are most willing to pay for them. The proponents of structural adjustment programme argued that those with preferential access are typically better off than those without, and that reducing or eliminating such distortions will therefore help to reduce both inequality and poverty.

The liberalisation of labour markets is intended to create additional demand for labour in the formal sector by reducing the cost of employment to producers; and this in turn is seen as reducing the excess supply of labour in the informal sector and thus increasing real incomes. This means that the beneficial effects are critically dependent on the creation of additional formal sector jobs.

In practice, the reduction of public expenditure and devaluation tend to reduce the demand for labour in the formal sector in the short run; and

this is compounded by the decline in investment which is generally associated with adjustment.

At the same time the demand for labour in the informal sector is generally reduced by devaluation and tighter monetary policies. The net result of these factors is an increase in excess supply and a reduction in real incomes.

It also implies establishing a closer relationship between an individual's income and his or her productivity. The poorest are often also the least productive, either because their low productivity reduces their productivity through its effect on their nutrition and health and their access to education. In these circumstances, the effect of structural adjustment may be to reduce their incomes further, again, this effect may be further compounded by other aspects of adjustment to the extent that they worsen the health, nutrition and educational attainment of poor households.

Thus, it tends to reduce the total share of income occurring to unskilled labour as a whole, and while it should increase the part of that smaller share which is received by informal sectors workers. The greatest negative effect is therefore on unskilled workers in the formal sector. Within both the formal and informal sectors, however, the poorest have to face a loss of real income relative to the less poor, to the extent that their productivity is lower.



**(B) Reducing the Role of the State**

Structural adjustment represents a deliberate shift away from the concept of the state as an economic agent and social provider. Structural adjustment emphasizes the minimum role for the state, and this inevitably limits the range of economic and political models available. In the longer term it may also affect the political ethos of the country by lowering popular expectations of the state's role.

The relationship between the public and private sectors are fundamental political issues which must be encompassed by national sovereignty and democracy if these concepts are to have any meaning. If structural adjustment imposes constraints on the range of political options which are available for democratic choice in this area must be run as a potentially serious political cost.

There is also a risk that the political shift associated with structural adjustment may enable the government effectively to divest itself of responsibility for economic developments affecting the welfare of population. This implies an erosion in the accountability of the government or policy-making in a particular critical area.

Such a change in political culture encourages governments to reduce their commitment to sectors such as health, education and infrastructure, where state intervention is necessary for successful development.

The privatisation of state-owned enterprises is also the main component of reducing the role of state. The proceeds towards privatisation is a source of non- inflationary financing for the budget deficit. For example, state-owned enterprises are sold to foreign buyers, while it has been a useful source of foreign exchange for many developing countries. In the long run the only enterprises which can be sold are those which are at least potentially profitable. So, it implies the loss to the government of their profits while it retains the losses of the remainder of the state sector. In case of foreign ownership of former state companies implies a future outflow of foreign exchange in the form of profit remittances.

There is also some risk of more immediate adverse impact. The limited resources available for investment are used for the purchase of privatised state-owned enterprises rather than being invested in new productive capacity. This contributes significantly to the decline in investment associate with structural adjustment.

The distributional impact of privatisation can be divided into two components, the impact on incomes and employments and the impact on supply and prices. The immediate effect is essentially to accelerate the process of fiscal adjustment. It also applies to the state-owned enterprises concerned, that is, employment and wages will be reduced and price increased further.

The impact on supply and prices after privatisation depends heavily on the nature of the enterprise being privatised.

In the case of 'natural monopolies', the effect of privatisation is to move from a public sector to a private sector monopolies. 'Natural monopolies' consist of electricity, water distribution, transport, telephone systems where technical factors make competition impracticable. To move towards private sector monopolies could result in an increase real prices to consumers. In some cases, it may be the loss of access to free services to the poor. This has been the explicated objective of structural adjustment programme.

It has been said that in the case of an enterprise producing exports, the direct long term impact of privatisation is likely to be positive in the context of debt problems and macroeconomic adjustment.<sup>12</sup> The removal from the enterprise of the limits on investment imposed by the government's financial constraint should allow increased investment, output and employment and this in turn should have a positive impact on incomes, both directly from the labour market and indirectly in the informal sector. However, during adjustment process this may be limited. The reluctance of foreign companies to invest in the development of new markets in debt problem countries, may result in artificially high prices

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<sup>12</sup> John Williamsou ed, *IMF Conditionality*, Institute for International Economics, Washington D.C., 1983.

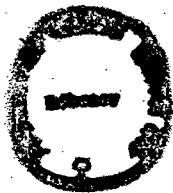
and profits in the long run and offset benefits.

In some cases, a foreign owned company sells part or all of its output to its parent company at an artificially low price. This could significantly reduce foreign exchange earnings.

The structural adjustment policies also insist on expenditure reduction for reducing the role of the State. The most common forms of expenditure reduction are reductions in public sector wages and employment, reduction in public investment, reduction and removal of state subsidies and increases in public expenditure prices.

The reduction in public sector employment and wages increases poverty significantly.<sup>13</sup> The direct effect of reduction in the level of employment in the public sector is the loss of income to those concerned. To the extent that those who lose their jobs fall below the subsistence level, this may increase poverty significantly.

Savings also tend to vary to a great extent in line with initial household income. Those with lower incomes are generally likely to have spent a higher proportion of their incomes on consumption goods and therefore to have less contingency balance. It will tend to have particularly low savings.



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<sup>13</sup> T.Addison and L. Demery, *Macroeconomic Stabilisation, Income Distribution and Poverty* Overseas Development Institute, Working Paper, No.15.

The direct financial cost of reduction in public sector employment is likely to be borne disproportionately by those with lower levels of skill and experience. The problem is most serious for larger families who are likely to have lower initial savings and who need to maintain a higher level of current expenditure during the transition process. This may result in mother or children seeking paid employment at the expense of household work and education respectively. It also gives rise to a major increase in the supply of labour to the urban private sector. It is coinciding with a sharp contraction of demand. This clearly implies substantially lower real wages level.

For the reducing the role of state SAPs also emphasize reduction in public investment which takes place in the early stages of adjustment. Its social cost and its impact on the poor are likely to be relatively high, because it may have a long term effect on the growth rate of the economy and hence on future employment and incomes or on future social provisions, in addition to its more immediate impact.<sup>14</sup>

The short term cost to the poor of reducing public investment arises mainly from its effect on labour market. If an investment project is abandoned, this reduces the demand for labour and thus both employment and real wages. The extent of this effect depends heavily in the nature of the investment itself. In the case of investment related to construction

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<sup>14</sup> Richard Jolly, *Adjustment with a Human Face*, Vol.II, 1987.

based, such as, roads, buildings, irrigation, etc, the impact may be considerable, because of the importance of construction as a source of employment for unskilled workers in both the formal and informal sectors. The problems for these groups, will be further compounded by any reduction in the demand for unskilled labour arising from other elements of adjustment process.

For reducing the role of state, SAPs also emphasize reduction in subsidies. Subsidies is an important form of state support for low and middle income groups. It represents a major component of public expenditure in many developing countries. At the same time, subsidies represent an important departure from the free market model on which structural adjustment is founded.

Food subsidies are the most critical form from the perspective of poverty and health sector, both because of the importance of food as a nutritional item for the poor and because of the central role of the rural poor in food production in most developing countries. It is a major components of consumption for all poor households in both rural and urban areas.

Those most affected by the reduction of food subsidies are food deficit households, because their production of food is less than their consumption needs. Among the poor, these include landless rural households, subsistence farmers and small holders whose output of food

crops is less than their consumption, small livestock producers and the urban poor.

In these groups, food represents a very major component of total expenditure. The actual proportion varies between different income levels and according to household consumption as well as between the groups themselves. Evidence suggested that the impact of food subsidies is very different in different countries and regions. The effect of subsidy reduction can therefore only be quantified on a case-by-case basis.

Subsidized food products are produced mainly by low income small holders. The income effect of subsidy reduction will be to increase the overall incidence of poverty. It will result in a general loss of rural income. This is in marked contrast to the IMF's implicit view that the reduction or removal of food subsidies will have beneficial effects on rural incomes.

As in the case of food subsidies, the impact of a reduction in subsidies on oil products depends on mainly use of diesel are for irrigation, freight and public transport. Freight costs are particularly important for rural communities, because of the need to transport their output to, and other goods from, urban market. The importance of freight cost is greater for communities further among from urban centres which generally tends to be among the poorer segments of rural population. This costs represents a significant proportion of income and expenditure for many low-income

households.<sup>15</sup> In such circumstances, reduced subsidies for diesel may result in a significant reduction in real income for some such communities or a loss of economic opportunities. In effect, increasing transport costs through the reduction in diesel subsidies represents an increased barrier to trade between isolated rural communities and other parts of the country.

'Kerosene' is also important as a domestic fuel used by low-income households is a substantial proportion of non-food expenditure. In such case, reduced subsidies could again have a significant negative impact on real income levels for the poor. It has an important environmental effects because higher kerosene prices result in increased use of wood as a fuel, if the gathering of wood is increased to an unsustainable level.

In the case of fertiliser subsidies, costs will be born by agricultural producers, whose cost will be increased and their output reduced to the extent they reduce their use of fertilisers in response to higher prices resulting in lower net incomes. World Bank<sup>16</sup> suggests that reduced fertilizer subsidies results in reduced fertilizer used may results in a shift towards more labour-intensive farming methods. It will create rural employment and increase rural wage levels. But evidence suggested that

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<sup>15</sup> S.Batliwala, *Rural Energy Scarcity and Nutrition*, FRCH, Bombay, 1987.

<sup>16</sup> World Bank, *Trends in Developing Economies*, IBRD, Washington D.C., 1991c.



it is doubtful that the amount of additional employment generated would be significant.

It is because of agricultural output would be reduced through lower use of fertilizers and possibly the non-use of marginal land which is no longer viable with higher fertilizer prices.

For reducing the role of the State by reducing public expenditure are negative indirect impact. In particular reduction in public sector employment and investment may result in substantially lower employment in the formal sector as a whole. This increase the supply of labour to the informal sector at a time of declining demand, thus depressing real incomes for poor urban households. It has also negative impact on rural poor. The remittances for rural poor from urban relations are often an important source of income and a wider regional effect, through the reduction in demand for locally produced goods and services in areas where public employment is an important source of income. A further negative impact arises from the potential reduction in public sector efficiency resulting from lower real wages levels.

**(C) Opening the Economy:**

It is an important component of almost all structural adjustment programmes by the relaxation or removal of restriction and taxes on foreign trade. It is closely inter-related with macroeconomic adjustment

policies. There are two aspects to the linkages between opening the economy and macroeconomic policies, relating respectively to fiscal policy and the exchange rate.<sup>17</sup>

In developing countries, import tariffs represent an important source of revenue for the government. It means that any reduction in tariff will significantly reduce the government tax receipts. Given the financial constraints on the government in the context of SAPs, and the limits on raising additional tax revenues from other sources implies that overall tariffs levels will need to be off-set by additional reduction in government expenditure. At the same time, reducing the overall level of protection will tends to make imports cheaper thus weakening the balance of payments.

An important effect of opening of the economy is on employment. Inevitably some producers are unable to remain profitable in the face of increased competition from foreign producers and this results in a reduction in employment either through the closure of productive capacity or through the company's effort's to increase its efficiency.

However, there is a time lag between these two effects. The reduction in employment resulting from a company's inability to compete is almost immediate but the increase in employment due to increased profitability is generally slower or neutral. It generally results in an

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<sup>17</sup> Sebastian Edwards and Liagat Ahamed, *Economic Adjustment and Exchange Rates in Developing Countries*, University of Chicago Press, 1986.

increase in frictional unemployment in the short run.

The main impact of trade liberalisation is on the relative prices of different goods within the economy. It depends on the degrees of protection applied to different goods. As the protection applied to different goods is made more uniform, the effect is to raise the protective walls where they were previously lowest and to lower them where they were previously highest. This in turn implies higher prices for goods in the former category and lower prices for those in the latter category. After that, the combination of a reduction in the overall level of protection with faster devaluation increases the prices of exportable goods and unprotected imports relative to those of non-tradeable goods and protected imports.

In most cases, the most strongly protected markets are those for consumer goods particularly which are regarded as luxuries. Goods which are used in production, whether capital goods such as machinery or intermediate goods such as raw materials and components are generally less protected. Essential goods such as drugs and medical equipment are generally subject to relatively low levels of protection, but the treatment of basic foods varies, largely according to the importance of the agriculture sector in the economy.

This implies a tendency for trade reforms to reduce the prices of consumer goods particularly those which are consumed mostly by the better off and to increase the prices of goods which are needed for

production and of more basic consumer goods. As a result, the impact on consumer prices may be most unfavourable to the poor and the negative impact of trade reform on employment may also be compounded.

Overall these three basic principles are central to SAPs. However, these policies are also supplemented by 'institutional strengthening' and 'capacity building'. It has designed to overcome the limitations in the adjusting country's administrative capacity. It includes changes in institutional structures like the closure or merging of ministries, streamlining of administrative procedures. It has also included reform of supervisory structures affecting the private sector and increasing the state's ability to implement them effectively.

Overall, SAPs essentially include policies towards government expenditure cut, privatization, currency devaluation, import liberalization, tighter monetary policies, high interest rates, export promotion, etc to increase international competitiveness, efficiency to earn foreign exchange for debt payment, and to allocate investment to most efficient investors. But all these policies mostly result in negative impact. The worst affected are generally those in the lower middle income groups and the poor.

And all these policies have resulted in cutbacks in health services, education, drinking water, cuts in social welfare, undermining of local industries, encouraging luxury imports where poor cannot afford basic necessities.

## Chapter 2

### **IMPACT ASSESSMENT OF ADJUSTMENT POLICY ON HEALTH SECTOR AND THE UNDERLYING THEORETICAL ISSUES**

This chapter focusses on the impact of the structural adjustment programmes on health. Some observers like Jolly and Cornia<sup>1</sup> UNICEF<sup>2</sup> ADB<sup>3</sup> and the World Food Council<sup>4</sup> have concluded that structural adjustment policies in developing countries have had significant negative impact on health. Jolly summarises the results of these studies or follows

...the result as shown in many countries is rising malnutrition in the short run and in the long run, reinforcement of a style of development which will primarily rely on accelerated growth and trickle down...<sup>5</sup>

Despite the confident assertion in such studies, however, considerable uncertainty remains about the impact of structural

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<sup>1</sup> R.Jolly and G.A. Cornia, *The Impact of World Recession on Children: A Study Prepared for UNICEF*. Oxford: Pergamon Press, 1984.

<sup>2</sup> UNICEF, *The Impact of World Recession on Children: A UNICEF Special Study*, in *State of the World's Children 1984*. Oxford: Oxford University Press, 1984.

<sup>3</sup> ADB, *Asian Development Bank (Annual Report)*, 1984.

<sup>4</sup> World Food Council, *Improving Access to Food by the Undernourished*. Report by the Executive Director to the Eleventh Ministerial Session, Paris (Document WFC/1985/4).

<sup>5</sup> R. Jolly, *Adjustment with a Human Face*, New York: UNICEF, Pamphlet, 1985, p.14.

adjustment programme on health. The purpose of this chapter is to assess what we currently know about the impact of structural adjustment on health sector, and the underlying theoretical issues.

### **Economic Theory and the Impact of Adjustment Policies**

Before, sketching out the implications of economics theory, which is overwhelmingly dominated by orthodox new classical view of economics, keynesianism, monetarism and Rational-Expectations macroeconomic, one should point out the limitations in this regard.

1. First, for some link in the process there is considerable controversy about which of several competing theories are most relevant.
2. Economic theory leads to clear-cut predictions regarding the direction of changes in many contexts only by abstracting from some possibly relevant characteristics of the situation. Often the net effect depends on which of several counteracting responses is most important, which is an empirical question.
3. Even if the direction of an effect is predicted clearly by economic theory, the magnitude still is an empirical matter.
4. These economic theory is most useful regarding comparative static between equilibrium outcomes, but has very little to say concerning the nature or the by lay in adjustment between equilibria.

With such caveats in mind, I attempt to summarizing the

implications of economic theory for assessing the impact of SAPs on health sector. Since those who are most vulnerable are the poorest members of the society, I begin with the impact of the major component of adjustment on resource under the control of lower income people.

### **Impact of Major Adjustment policies on those in lower end of Income Distribution**

The macro economy determines the aggregate supply (AS) and demand of goods and services, and the overall price and employment levels. In the simplest form, the short-run equilibrium income level and price level are determined by the intersection of short-run aggregate demand (AD) and aggregate supply (AS), as at point a in figure 2.1.

Aggregate demand depends on private and governmental consumption and investment and net foreign investment. There major demand components, in turn, depend primarily on real permanent income and wealth, governmental expenditure minus revenue, prices of international goods and services relative to prices of domestic goods and services, and credit availability and interest rates. Expectations also may affect AD.

The impact of expectations is illustrated in the so-called philip curve trade off between inflation and unemployment of fig.2.2. For given inflationary expectations, the economy can be moved along the solid line in this curve, say from a to b, by contractionary policy. Such policy may

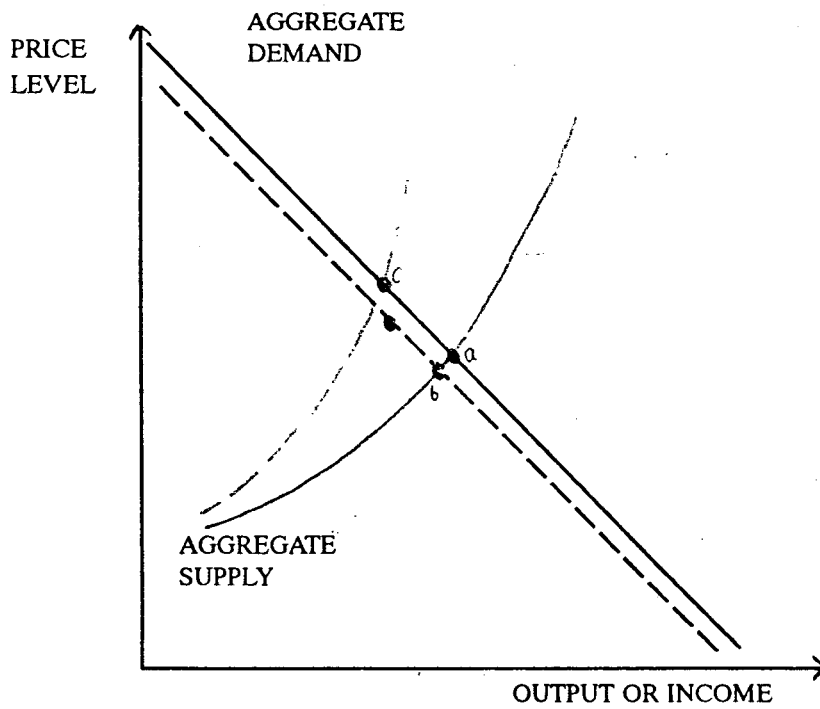


FIG. 2.1 SHORT-RUN MACROECONOMIC EQUILIBRIUM

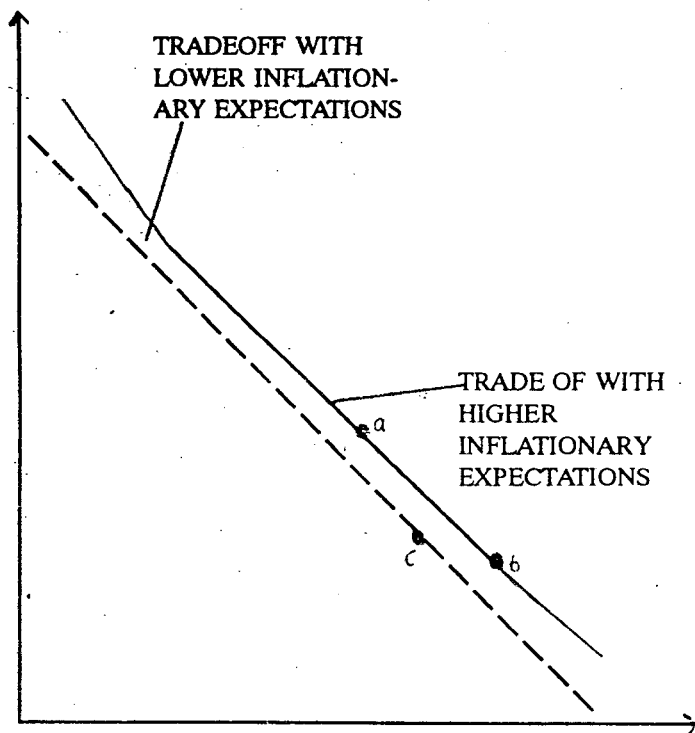


FIG. 2.1 PHILIPS CURVE TRADEOFF BETWEEN UNEMPLOYMENT CONDITION ON INFLATIONARY EXPECTATIONS



change or reduce inflationary expectations with the result that the Phillips curve shifts downward to the dashed line so that the actual movement of the economy is from a to c, with little impact on output and employment.

Returning to the AD curve per se, if interest rates or inflationary expectations rise or any of the other factors mentioned above fall, AD is likely to shift to the left. This would result in a decrease in equilibrium real output and the aggregate price level, with the balance between price and output changes depending on whether the initial equilibrium is on a more vertical or more horizontal segment of the AS curve. The dashed demand curve in fig.2.1 gives an example with the new equilibrium at point b.

Short run AS reflects the conditions in short-run variable input markets, primarily for labour, intermediate inputs, and financing, given capacity production level. The short-run supply curve is likely to shift to the left, resulting in a higher price level and lower output (income) level if price of labour (wages) intermediate inputs or credit (interest rates) rise, if rationed credit becomes less available or if production becomes less efficient. The dashed supply curve in fig.2.1 is an example with the associated equilibrium at point c. In the longer run, AS tends to shift to the right with increased physical and human capital.

To model all of these processes and the impact of policy changes, the relevant product, factor like labour, capital, land and financial market must be represented.

Different approaches to modelling macro-economics for countries like India hinge upon -

1. The importance of rigidities particularly in wages and prices.
2. The importance of expectations and their relation to policies.
3. The representation of market fragmentation.

With this background, one can see the distributional impact of adjustment policies :-

**Devaluation:-** It is a key component of adjustment policies. It increases the costs of imports and prices of exports in terms of the domestic currency. The impact of devaluation on distribution depends upon the extent of expenditure changes. Expenditure changes occurs due to the increase in the prices of internationally traded goods relative to non-traded goods. The implication within a particular context depends on the factor intensity of production and the nature of consumption pattern.

If importable production largely in capital intensive industries, if export production is largely from small farmers, devaluation might increase the incomes of at least some of the poorer members of society from the factor intensity side. On the other hands, the factor-intensity effect

tends to favour profits and increase income inequality. The consumption effect depends on the nature of the traded goods and those who consume them. If the exportables are primarily staple food in the consumption basket of poorer members of society, the consumption effect in itself is likely to worsen the position of the poor.

Devaluation also may induce aggregate real expenditure changes, with feedback on distribution. The conventional result is that eventually exports will expand and imports will decline in response to the changes in relative prices induced by devaluation under the assumption that these relative price changes persist. This leads to an improved balance of payments and an increase in AD and in output and income. There also may be offsetting factors that may lead to devaluation being contractionary. On the AS side. This includes the importance of non competitive, imported intermediate inputs in production and wage indexation in the formal sector. Both of these shift the AS curve to the left with devaluation. On the demand side the net trade component of AD in domestic currency may be reduced if there is an initial large deficit before exports respond. Consumption and investment may decline if wealth falls with devaluation or if income falls. Finally, investment may be reduced because of higher prices for tradeable investment goods.

These contractionary demand and supply factors are widely thought to dominate in the short-run response to devaluation. If they do, the

reduction in real expenditure is likely to reduce the real purchasing power of many poorer people. This would happen as a result of reduced demand for the services and products of the informal sector. In addition, workers who otherwise might have been employed in the formal sector would move into the informal sector, along with people who enter the labour force because other household members have lost work. This labour surplus along with reduced demand would increase unemployment and reduce input return in the informal sector.

### **Direct wage and price control**

These are part of early adjustment process. Since wage increase could offset substantially the impact of adjustment policies such as currency devaluation by shifting the AS curve in fig 2.1. to the left, adjustment policies often include some limitation on wage increases for governmental and formal sector employees. If effective, such policies reduce the real income of individuals who would have been employed in the affected occupations without the wage controls. This may increase overall income inequality but is not likely to have a strong negative impact on most of the poorest members of society are not likely to have been in such occupations if there were no wage policy.

Price interventions as part of adjustment programmes are likely to involve increases in or freeing of previously controlled prices, such as

transport, fuel, food staples, to induce supply expansions, 'reduce government subsidies', and discourage demand. If such price controls had been effective prior to the adjustment programmes, such a policy shift means increased nominal prices for consumers of these items. This is likely to reduce their real incomes.

### **Contractionary Monetary and Fiscal Policies**

These are almost invariably part of adjustment policies, because of excess demand to be at the heart of the problem. Supply expansion presumably requires some time, so demand restraint is viewed as essential in the short-run and contractionary fiscal and monetary policies are widely thought to be the major set of tools for restraining AD with regard to fig.2.1, such policies are likely to shift AD and AS to the left initially, resulting a fall in equilibrium output and income and an ambiguous change in the price level. Such impact depends upon how firms and individuals expectations respond to such fiscal and monetary changes. Assuming that these policies are likely to have some negative impact on output, the balance of payment is likely to be improved due to the decreased purchasing power of the economy. If price are sufficiently flexible, this trend would be reinforced by a decline in the relative price of non-traded goods and services. For this reason, such output reductions and the related decline in labour demand will probably lessen the real income

of most of poorer groups in society.

The extent and duration of negative impact on the income of such group depends on several considerations. One important consideration is the extent gestation required for a longer run positive supply shift. The larger and quicker such response, the less the lively toll on the real income of poorer members of society. A second consideration is how the government cuts expenses and increases revenue and how it affect the poorer members of society. Reduction in pubic health expenditure, food subsidy, etc, have significant negative impact. To the extent that the main asset of the poorer members of society is their human capital, cuts in health, nutrition and educational programmes from which they benefit are likely to have negative long term effects.

### **Encouraging Foreign Exchange Generation and to Limit Foreign Exchange use**

These are also an important passage of adjustment programmes. Afterward devaluation imports be made more expensive to discourage their use by increased import tariff and by a wide range of non tariff barriers. On the other side, exports can be subsidized given special tax breaks. Financial inflows can be encouraged by favourable exchange rates.

Increased tariffs on imports have at least three types of effects on income distribution.

First, such tariffs are a major source of governmental revenues in countries like India. If increased tariff rates do not discourage imports too much, as it is happening in India, it increases the government's revenue and thereby reduces the government deficit.

Second, increased import tariffs change the relative price structure to favour production of importables. Within this trade model, a country exports goods which make the most use of resources which are relatively abundant in the country, like labour for India, while trading with a developed economy. The imposition of an import tariff in this framework favours the relatively scarce factor of production used in importables, which presumably is 'capital' in countries like India, thus shifting income away from labour.

Third, there is an impact on the relative prices that consumers face, and it depends upon the marginal propensities to consume importables relative to alternatives. If the importables are luxuries or other goods consumed relatively by the better off, then the consumption price effect in itself does not worsen the relative position of the poorer people, but it tends to do so if importables are basic goods such as staple foods.

### **Impact on Health Sector Given Changes in Prices and Household Income**

The structural adjustment policies ultimately affect individuals or households through altering their incomes or the prices that they face.

Prices are broadly defined to include the total costs to an individual or households to obtain goods and services.

Households make decisions about time use and consumption given their assets and prices that they face for the use of these assets, consumption item, etc. For the poorer household's interest here, the primary asset is labour with varying degree of skills. That means that wages and nature of employment options are particularly important in determining household incomes. The prices of obvious importance, given the interest in health and nutrition, are for the item that help determine health and nutrition like food, drinking water. Preventive and curative health care, housing sewage and clothing. Both the actual use of such items depends upon relative prices and real incomes, which depends on all prices for goods and services important in consumption basket of the poor.

Economic models of the household assume that individuals in the household have preferences which they express in choices about their own and other's time use, current consumption of goods and services, health, nutrition, and investment in future command over resources. Investment in future command of resources include human capital, investment in health, nutrition, education as well as savings in the form of financial and physical asset acquisition. Household members maximize these preferences, within the constraints of budget and production functions. Budget constraints depend on current asset such as time, their returns and



prices for relevant goods and services. Health is determined by consumption of nutrients and of other items, like drinking water, preventive and curative health care the general environment, etc, and knowledge about how to use such factors.

Constrained maximization of preferences, whether or not there is bargaining among household members, leads us to suppose a relationship between an individual's health and nutrient intakes and the variables mentioned above. These variables can be exogenous to the household or predetermined. The impact of adjustment policies depends on -

1. How the exogenous and pre-determined variables in those relations are altered.
2. How the impact of such changes are filtered through the household.

With regard to this there are a number of critical questions like how responsive are individuals or households to relative price differentials?

### **Empirical Evidence on the Impact of structural Adjustment Policies on Health**

It is not possible to examine all of the links between adjustment policies and health sector with theoretical framework outlined above. But some studies have considered systematically some of the critical links in the process. Here, I review a number of studies, starting with studies on the effectiveness of macro-economic adjustment policies then the nature of

governmental cuts at the time of fiscal and monetary contraction, then the nature of household responses to changed income and prices, and finally country studies focusing on collapsed relation between adjustment policies and more direct measures of health and nutrition.

### **The Effectiveness of Macro Adjustment Policies**

It is a controversial topic. The simple AD and AS curves in fig.2.1 suggest that macro adjustment policies that shift AD can be fairly effective in altering equilibrium output if the initial equilibrium is on the more horizontal part of the AS curve and that they can be fairly effective in altering the equilibrium price level if the initial equilibrium is on the more vertical part of the AS curve. But some analyst like Taylor<sup>6</sup> have questioned whether well-intentioned policymakers in developing economies have enough policy tools to pursue their multiple macro objectives given realities such as inadequate capital markets and resulting ineffective monetary policy. Rao<sup>7</sup> doubts that the initial equilibrium could be on the more horizontal part of the AS curve at least in many South-East Asian and African developing economies, because of the severe supply shortages

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<sup>6</sup> L.Taylor, *Short-Term Policy in Open Developing Economics: The Narrow Limits of the Possible*, in *Journal of Development Economics* I, 1974, pp.85-104.

<sup>7</sup> V.K.R.V. Rao, *Investment, Income and the Multiplier in an Underdeveloped Economy*, in the *Indian Economic Review*, February, 1952.

and the crucial role of a large traditional subsistence sector. If so, macro adjustment policies primarily affect the price level, but not output nor employment. Lucas<sup>8</sup> Fernandez<sup>9</sup> Barro<sup>10</sup> have queried whether expectations may make macro policies ineffective in developing economies as many claims is the case in developed market economies. Here an example is the Philip curve trade off between inflation and unemployment conditional on expectations that is illustrated in Fig.2.2.

If any of these arguments are correct, adjustments policies would not have much impact on output and employment and therefore probably not much impact on health and nutrition.

There are a great number of empirical studies that are related to this issue. Unfortunately they do not settle the issue definitely because of the institutional differences among countries. Such studies tend to focus on the more developed and less agricultural Latin American Economies.

The test of the Phillips curve tradeoff between unemployment or output and inflation include Lucas<sup>11</sup> paper in which he presents tests for

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<sup>8</sup> R. Lucas, *Some International Evidence on the Output Inflation Tradeoff*, in *American Economic Review* 63, June 1973, pp.326-334.

<sup>9</sup> R.B. Fernandez, *The short-Run Output-Inflation Trade off in Argentina and Brazil*, in Behrman and Hanson, 1979, pp.133-167.

<sup>10</sup> R.J. Barro, *Money and Output in Mexico, Colombia, and Brazil*, in Jere R. Behrman and James A. Hanson, eds., *Short-Term Macroeconomic Policy in Latin America*, Cambridge, M.A: Ballinger Publishing Company, 1979, pp.177-200.

<sup>11</sup> R. Lucas, *op.cit.*

eighteen countries, including five in Latin America plus the rest are in Europe or North America. His tests suggest that the apparent short-term tradeoff is favourable as long as it remains unused but in countries with a volatile price history in the sample and relatively high variance in demand, the inflation output trade off is very unstable. Broadarshon<sup>12</sup> Fernandez<sup>13</sup> Barro<sup>14</sup> report convince that they interpret as basically consistent with Lucas conclusion for five Latin American countries. Both Barro and Fernandez report that unexpected money supply changes are relatively ineffective in changing output rather than prices, though Baro does report a significant effect for Mexico. Hanson<sup>15</sup> reports a small though significant relation between output and unexpected inflation. Nugent and Glezakos<sup>16</sup> report estimates for 16 Latin American countries. They find no significant unanticipated inflation far the least agricultural countries and a negative output impact for the more agricultural countries.

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<sup>12</sup> M.S. Brodersohn, *The Phillips Curve and the Conflict Between Full Employment and Price Stability in the Argentina Economy, 1964*, in Behrman and Hanson, 1979, pp.201.225.

<sup>13</sup> R.B.Fernandez, *op.cit.*

<sup>14</sup> R.J. Barro, *op.cit.*

<sup>15</sup> J.A. Hanson, *The Short-Run Relation Between Growth and Inflation in Latin America: A Quasi-Rational or Consistent Expectations Approach*, in *American Economic Review* 70:5, December, 1980.

<sup>16</sup> J.B. Nugent and C. Glezakos, *Phillips Curves in Developing Countries: The Latin American Case*, in *Economic Development and Cultural Change* 30:2, January, 1982, pp.321-334.

A second group of studies attempt to evaluate the impact of macroeconomic policies on aggregate economic output in developing economies involve the construction of these economies. There exist hundreds of macro models in this tradition. Such models initially tended to be specified along keynesian aggregate demand oriented lines with the implications including fairly substantial impact of adjustment policies. Such studies usually report some but much more limited impact of adjustment policies, often with substantial lags that make successful detailed predictions and policy formulation extremely difficult.

More recently emphasis has increased on the use of social accounting matrix based and computable general equilibrium models. Adelman and Robinson<sup>17</sup>, De melo and Robinson<sup>18</sup> Pyatt and Round<sup>19</sup> and Taylor<sup>20</sup> have done their study within this model. An interesting example of the use of computable general equilibrium model is provided by the simulation studies of the impact of devaluation on distribution. Some of the results of these simulations are that much greater devaluation is required to

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<sup>17</sup> Adelman and S. Robinson, *Income Distribution Policy in Developing Countries: A Case Study of Korea*. Stanford, CA: Stanford University Press, 1978.

<sup>18</sup> J. deMelo and S. Robinson, *General Equilibrium Models for Development Policy*, Cambridge: Cambridge University Press, 1982.

<sup>19</sup> G. Pyatt and J.I. Round, *Social Accounting Matrixes for Development Planning*, in *Review of Income and Wealth* 23:4, 1979.

<sup>20</sup> L.Taylor, *Structuralist Macroeconomics*, New York: Basic Books, 1983.

eliminate on initial balance of payment deficit in the closed economy then in the others because of the greater dependence on imported intermediate inputs in that economy, that devaluation leads to an improvement in the income share for small holders, but mixed income distribution effects for other low income groups depending upon the structure of the economy, and that price shift plays a major role in changes in real income.

A third group of studies are country studies that tend to use less systematic modeling approaches and empirical tests to evaluate the impact of adjustment policies. The best known studies in this area are the volumes edited by Cline and Weintraub<sup>21</sup>. The lesser emphasis on formal frameworks in these studies leads to a richer but also looser range of interpretations. With regard to income distribution, Cline and Weintraub report that the contrast between the 30 to 40 per cent real wage reductions in the Latin American countries and nominal wage increases to maintain real wages in Pakistan is striking and success at reversing inflation was at least as great in Pakistan, although from a lower base. Such results suggest the possibility in practice and not any in theory of cushioning at least some of the poorer members of society from negative impact of adjustment policies by appropriate selection of the component of these programmes. But since some members of society have their incomes

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<sup>21</sup> W. R. Cline and S. Weintraub, (eds). *Economic Stabilization in Developing Countries*. Washington, D.C.: Brookings Institution, 1981.

reduced in the short-run if the adjustment policies is successful in its effort to reduce a demand supply imbalance by contracting demand the question remains what determines if there is political will and power to protect the poorer members of society.

The empirical studies on the impact of adjustment policies have their problems in part because of the complexities of economies and the limitation of macroeconomic theories and data inadequacies.

### **Altered Composition of Government Expenditure in Adjustment Process**

Changes in the composition of governmental expenditures as part of adjustment programme affect health sector. Even World Bank accepts the alleged vulnerability of social sectors in its various reports:

Since many human development programs are publicly funded they are especially vulnerable when growth is threatened and budget are under pressure... its recurrent costs of social programmes, especially salary costs, tended to make them a prominent and therefore vulnerable part of government budgets.<sup>22</sup>

'Cut in social services are often the first to take place so that the share of social expenditures out of total Shrinks'.

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<sup>22</sup> World Development Report, IBRD, Washington D.C. Page 16, 1984.

Hicks & Kubish<sup>23</sup> examine the pattern in such cuts in real governmental annual expenditure in developing countries during 1972-80.

For each case they asked whether cuts in government expenditures in each of five categories (social, defense, administration, production, infrastructure, miscellaneous) were larger or smaller than the average overall expenditure cut. Table 2.1 summarizes their results with reference to an index of vulnerability defined to be one of the percentage expenditure

Table 2.1

**Reduction of Government Expenditure for  
32 Developing Countries for Various Periods during 1972-80.**

	Social	Defence & administration	Production	Infra-structure	Miscellaneous <sup>a</sup>
Average percentage change in real expenditure	-5	-8	-11	-22	-7
Index of vulnerability <sup>b</sup>	0.4	0.6	1.2	1.7	0.8
Low income	0.2	0.9	0.6	1.2	0.5
Middle income	0.5	0.4	1.7	1.9	1.1

Source: N. Hicks and A. Kubisch.

<sup>a</sup> Largely transfer to local governments.

<sup>b</sup> Calculated as  $e_j/E$ , where  $e_j$  is the percentage change in expenditure on its  $j^{\text{th}}$  sector and  $E$  is the percentage change in total expenditures.

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<sup>23</sup> N. Hicks and A. Kubisch, *Cutting Government Expenditures in LDCs*, in Finance and Development, September 1984.



cut and less than or greater than one if the percentage cut in a category is equal to the average overall percentage expenditure cut and less than or greater than one if a category is relatively protected from vulnerable to such cuts. These results suggests, on the average, social expenditures are the most protected of five categories, with infrastructure and production the least protected.

Hicks and Kubisch caution about drawing too firm conclusions from these numbers because of the small number of cases and because the expenditure data are for the consolidated central governmental accounts. Nevertheless, such results suggest that the frequent assumption that social sectors are particularly vulnerable to cuts in governmental expenditure is wrong. On the other hand, cuts in the apparently more vulnerable production and infrastructure categories may have indirect impact on health sector and income through associated reductions in labour demands, etc.

Pinstrup-Anderson<sup>24</sup> survey many of the existing studies of the impact of the removal of cheap food policies on the poor. Since food expenditures account 60-80 per cent of income of low income consumers, increases in food prices considerably decreased the real income of low income groups and generally had much greater impact of the poor, as is

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<sup>24</sup> P. Pinstrup-Andersen, *Macroeconomic Adjustment Policies and Human Nutrition: Available Evidence and Research Needs*, Washington: LFPRI, mimeo, 1986.

reflected in Table 2.2 These estimates are for a 10 per cent increase in all food prices.

Table 2.2

**Impact of 10 per cent Increase in the Price of Food on Real Incomes of Low and High Incomes Population Groups**

Country	Percentage decrease in real income	
	Lowest	Highest decile
Sri Lanka	8.5	4.1
Thailand	6.0	2.0
Egypt	5.6	1.0
India	7.3	2.9
India (Foodgrain only)	5.5 <sup>(a)</sup>	1.2 <sup>(b)</sup>

Source: P. Pinstруп-Anderson.

<sup>(a)</sup> for the lowest 20 per cent.

<sup>(b)</sup> for the highest 5 per cent.

On the other side of market, the elimination of cheap food policies is likely to result in increased production price for food producers. Pinstруп-Anderson argues that recent research indicates that the short-run impact of food prices on the rural poor is much less favourable than might have been anticipated because many of the rural poor do not derive a large share of their income from food production.

The studies of Gavan and Chandrasekara<sup>25</sup>, George<sup>26</sup> and Ahmed<sup>27</sup> looked at other dimensions of the Food subsidy programmes. These studies reveal that food subsidies have increased incomes and improved nutritional status among the poor. These studies also observe that the cost of general food subsidies programmes may be quite high if there is a tendency to attempt to keep the nominal price of subsidized foods relatively constant in the presence of overall increasing prices. For instance, Alderman<sup>28</sup> refers that the fiscal costs of Egyptian wheat subsidies increased from 0.05 to 3.5 per cent of GDP in the late 1970s and simulate that by 1988-89 the Egyptian food subsidy will increase by 44 per cent in real terms from the 1981-82 level to account for 12 per cent of total governmental budget. So, reducing the cost of these programmes are the

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<sup>25</sup> J.D.Gavan and I.S. Chandrasekera, *The Impact of Public Foodgrain Distribution on Food Consumption and Welfare in Sri Lanka*, Research Report 13. Washington, D.C.: International Food Policy Research Institute, 1979.

<sup>26</sup> P.S.George, *Public Distribution of Foodgrain in Kerala-Income Distribution Implications and Effectiveness*, Research Report 7. Washington, D.C.: International Food Policy Research Institute, 1979.

<sup>27</sup> R. Ahmed, *Foodgrain Supply, Distribution and Consumption Policies within a Dual Pricing Mechanism: A case study of Bangladesh*, Research Report 8. Washington, D.C: International Food Policy Research Institute, 1979.

<sup>28</sup> H. Alderman, J. Von Braun and S.A. Sakr, *Egypt's Food Subsidy and Rationing System: A Description*, Research Report 34. Washington, D.C.: International Food Policy Research Institute, 1982.

objective of structural adjustment policies. For such cases, limiting the beneficiaries of such programmes to the poor and nutritionally vulnerable groups, seems attractive from the point of view of structural adjustment policies. It would seem that governments in a number of cases could cut budgetary expenditure on cheap food programmes without directly worsening the income of most of the poor.

In the case of India, Bhagwati and Srinivasan<sup>29</sup> argue that the larger portion of food subsidy programs costs has gone to PDS and during the reforms period it is necessary to protect the poor effectively and PDS would urgently be reformed. According to him, the inefficiencies of the PDS are due to poor targeting such cases fitting well into the structural adjustment programmes which lay emphasis on efficient resource use. The proponents of adjustment programmes have also suggested targeting through changes in commodity composition from superior cereals like rice and wheat to coarse cereals, and phasing out edible oils and sugar. Such emphasis deteriorates the quality of life of targeted groups, and worsens the nutritional value.

However, cheap food policies are not the only social policies related to health sector that may be cut as part of structural adjustment programme. Direct cuts on health services many have both an immediate

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<sup>29</sup> Jagdish Bhagwati and T.N. Srinivasan, *India's Economic Reforms*, Ministry of Finance, Government of India, New Delhi, 1993.

and a long-run impact, and those on education may have both an immediate and a long-run impact, given the evidence regarding the relations between better education and improved health and nutrition.

The various evidence and literature on structural adjustment programmes observe that it had adverse effects on the poor in Latin America and Africa. Cornia, Jolly and Stewart<sup>30</sup> observe 22 countries which suffered the most substantial cuts in expenditure in health sector. Nineteen out of the 22 countries experienced declining GDP per capita. The cuts in health expenditure per capita exceeded the rate of decline of GDP in a number of cases. In Latin America, from 1980 to 1984, expenditure on health per capita fell in 14 countries. Cornia, Jolly and Stewart argue that the study of Hicks and Kubisch tended to mask most of these negative impacts by focusing primarily on shares of social sector expenditure in total government expenditure rather than on the real levels of expenditure.

### **Individual and Household Response to change in Income and Price**

The most important effects of the structural adjustment programmes on individuals or households are to change their real income and the prices. Here, I summarize some evidence that reducing or eliminating government programmes such as those providing general cheap food my

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considerably reduce the short-run income of many of the poor by 10-20 per cent and in some cases by much more. At the same time, relative prices may change substantially, and for cuts in the food subsidy and relative prices may change are likely to be ones that discourage the consumption of goods that are presumably positively associated with health and nutrition. Here, the crucial question is the probable impact of these income and price changes on food consumption.

Behrman and Deolalikar<sup>31</sup> study reports large income responsiveness for food expenditures, with reduction in total food expenditures often of eight to nine per cent for every ten per cent drop in income among poorer populations. Considerable evidence also exists that the poor are very responsive to relative prices in deciding what food items to consume. Table 2.3 summarizes evidence from a number of countries regarding the combined real income and own-price response to rise price increase.

The poor tend to cut back on their consumption more than the rich in response to such price change. Households also may respond substantially by changing the composition of their food expenditures when relative price changes.

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<sup>31</sup> J.R. Behrman and A. Deolalikar, *Is variety the spice of Life? Implications for Nutrient Responses to Development* Philadelphia, University of Pennsylvania (Mimiographed document), 1986.

Table 2.3

**Price Elasticity of demand for Rice among  
Low and High Population Groups in Selected Countries**

Country	Low Income		High income	
	Percentile	Price elasticity	Percentile	Price elasticity
Colombia	1	-0.43	93	-0.19
Indonesia	8	-1.92	55	-0.72
Bangladesh (rural)	10	-1.30	90	-0.83
Philippines	12	-0.73	87	-0.46
Brazil	15	-4.31	90	-1.15
India (rural)	3	-1.39	96	-0.39
India (urban)	1	-1.23	92	-0.21

Source: Pinstруп, Anderson (1985).

Behrman and Dealalika provide a recent test of this possibility for a rural south Indian sample. First, they estimate fairly standard relations for the food quantity response to income for major food groups and find elasticities of the order of magnitude of 0.8 to 0.9, suggesting that food quantities are adjusted almost as much as income when the latter changes. Then they estimate direct nutrient elasticities with respect to income for the same sample and find elasticities at most of 0.1, suggesting low change in nutrients intakes with income. In the relatively poor society in which the variety of food is relatively limited thus, such results suggest that



income decrease causes substantial decrease in food expenditures but mainly by shifting to less costly source of nutrients rather than by consuming fewer nutrients. But some members of the society are so poor that shifting to cheaper source of nutrients may not be possible because no cheaper sources of nutrients are available. This study also study suggest that the impact of small changes in nutrients may be much more in terms of body heat and perhaps energy expenditure than in terms of clinical measures of health status. But Isenman<sup>32</sup> presents time series evidence for Sri Lanka that mortality has responded positively and significantly to the price of paddy, presumably in part through a link between price, nutrient intake, and health.

### **Country Studies Directed to the Evaluation of the Impact of Adjustment Policies on Health**

The most visible of these studies probably are those associated with UNICEF (Jolly and Cronia). These studies do not formalize explicitly the links between structural adjustment programmes and the health and nutrition of children. But they attempt to use secondary data to characterize some of the links relating to factors such as unemployment the composition of governmental expenditures and direct indicators of health and nutrition. They focus on finding possible negative, recessionary

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<sup>32</sup> P. Isenman, *Basic Needs: The Case of Sri Lanka*, World Development 8, 1980, pp.237-258.

impact of adjustment on children.

In the contrary, Preston<sup>33</sup> argues that what is remarkable is that the best data on children's health is infant and child mortality rate which shows continued decline nearly everywhere.

But on further inspection, this trend is less favourable than it might appear. Because, there have been a number of major developments in the health sector since the late 1970s, which might have been expected to improve these indicators substantially like the widespread use of oral rehydration salt for the treatment of diarrhoea and the massive increases in immunization. Data for developing countries as a whole suggest that the increase in immunization between 1980 and 1988 and the use of oral rehydration salt alone reduced the child deaths by 15 per cent, according to UNICEF study (1990). So, declining IMR does not mean overall improvement of health and nutritional status. Also, the effect of adjustment policies on health are slow to materialize and cumulative over time. This would suggest that if adjustment policies have in fact had a negative impact on health, only part of this negative impact would so far have appeared in health statistics. This is in marked contrast to immunization and oral rehydration, which have a much more immediate impact.

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<sup>33</sup> Samuel H. Preston, *Review of Richard Jolly and Giovanni Andrea Cornia, editors. The Impact of World Revision on Children*, in *Journal of Development Economics* 21:2, May 1986, pp.374-376.

However, study of David Woodward<sup>34</sup> suggest a negative impact of adjustment on health indicators in Africa. The table 2.4 shows the role of change of two main health indicators, the IMR and life expectancy of birth over four periods-pre crisis (1969-77), Crisis (1977-82), early adjustment (1982-87) and later adjustment (1987-89). These data are given for five country groups.

Table 2.4

**Change in IMR and Life Expectancy in  
Sub-Saharan Africa, 1969-89**

	IMR Average annual change				Life expectancy Average annual change Years			
	1969-77	1977-82	1982-87	1987-89	1969-77	1977-82	1982-87	1987-89
SIC/ EIAL	-0.252	-2.13	-1.78	-1.77	+0.28	+0.28	+0.47	+0.26
SIC/ OAL	-1.70	-2.16	-1.58	-4.35	+0.33	+0.36	+0.42	+0.28
SIC/ NAL	-2.42	-1.92	-1.96	-1.91	+0.36	+0.38	+0.44	+0.36
MIC/ NAL	-1.80	-1.88	-2.40	-1.89	+0.31	+0.28	+0.55	+0.24
Other/ NAI	-1.52	-2.96	-2.05	-1.69	+0.22	+0.85	+0.47	+0.34
ALL SSA	-2.08	-2.00	-1.96	2.38	+0.35	+0.39	+0.48	+0.26

Source:- Woodward, (Debt, Adjustment; and Poverty), 1990.

SIC = Severely indebted countries

MIC = Moderately indebted countries

EAIL = Early and intensive adjustment lending

OAL = Other adjustment lending

NAI = No adjustment lending

<sup>34</sup> David Woodward, *Debt, Adjustment and Poverty in Developing Countries*, Vol.II, London: Pinter Publishers, 1992.

The first three lines of table show the performance of three groups of countries with similar levels of debt, but different degrees of adjustment, the third to fifth lines show three groups with the same degree of adjustment.

The impact of debt during the early phase is clear. The 'other' group doubled their rate of reduction of the IMFR and increase of life expectancy during the early phase, but the rate of reduction of IMR was sharply reduced and the rate of increase of life expectancy remained broadly unchanged for more indebted groups. After 1982, the situation is less clear. In absolute terms 'other' groups performed no better than the severely indebted countries.

A comparison of the adjustment categories within the severely indebted group suggests that non-adjusting countries were more seriously affected than the intensively adjusting countries during the crisis phase (1977-82) in terms of IMR, but they succeeded in avoiding any further deterioration thereafter. In the intensively adjusting countries, by contrast, performance continued to worsen during the adjustment phase after 1982.

On life expectancy, the intensively adjusting countries performed substantially worse than the non-adjusting group in the crisis phase in 1987-89, but the situation of two groups was broadly similar in 1982-87.

This appears to support the suggestion that adjustment may have had a significant negative impact. However, the South Asian experience

with adjustment programmes shows an improvement in social conditions because of the favourable initial conditions have eased the path of these countries. The set of measures adopted by these countries (Malaysia, Indonesia, South Korea) are the higher prices for the principal food crop rice, employment generation and subsidies for agricultural inputs. The combined effect of these policies was in an increase in employment, productivity and incomes in rural areas. The creation of more flexible economic structures, expansion of labour-intensive investment programmes and shifting the composition of public expenditure towards sectors that benefit the poor have ensured the vulnerable sections. But factors other than the adjustment programmes played a major role in achieving the higher growth rate of these countries, like favourable international trade condition, egalitarian politics and sustained investment in human capital. It is also important in this context that is the political commitment to various sectors influences the extent and direction of adjustment to be borne by these sectors.

## Chapter 3

### **THE LINKS BETWEEN ADJUSTMENT AND HEALTH**

In any developing countries health sector is an integral part of the socio-economic development process. Because, health is not just absences of disease and illness, it is a state of complete physical, mental and social being. Health, therefore is indirectly related to the social context and the very existence of people. Hence 'health' is not a function of medical care alone. but of the overall integrated development of social, cultural, economic, educational and political. Therefore, health services is considered to be only one input to the production of health. The task of primary health must begin with the social endeavor of achieving the necessary social and economic transformation at the local levels.

Primary health services depend on availability of food supply, proper nutrition and adequate supply of safe water and basic sanitation. MCH, prevention and control of communicable disease and provision of essential drugs. So, Health sector involve all related sectors and aspects of development. Other inputs such as education, social and environmental factors, including agricultural, industrial and urban-rural policies may be just as important as health sector. The historical, political, economic forces in the political economy not only shape and condition the health sector

recognised.

The impact of SAP on health sector is critical. Economic evidence suggests that health sector in developing country adversely affected by SAPs, either concurrently or with substantial lags. The most reliable data on health status, IMR generally shows continued declines despite SAPs. This debate of impact on health sector investment is reviewed in the 2nd chapter with country analysis. Here we discuss conceptually the process at work which influence health sector of an economy undergoing structural adjustment.

Changes in the use of health services have been regarded as a result of change in demand and supply. The 'supply' side represents the provision of services by the state and other agencies. This determines the availability of services to households.

The 'demand' side of health sector consists of the services which are available used and by those who can buy them and need them. Demand side therefore does not necessarily cover the health needs of the entire population.

### **The Supply Side of health Sector**

SAPs affect the supply of health services primarily through its

they also influence many non-medical force important for health. So, it is an integral part of socio-economic development processes and its activities need to be co-ordinated with those social and economic sectors.

The health of the members of family is also important in determining household incomes and its consumption. If a producer or worker suffers chronic ill health, she or he may not work at all. This may have a reduced income potential. Small peasants being unable to work at a critical time in the production process due to his/her ill health may produce crops whose output is relatively unaffected by shortage of labour at particular times, in preference to those which could generate the highest level of income. All these are situations in which a family loses economically.

Beyond the household, health is also of critical importance to the economy as a whole, since it represents a central component of human capital, which is the productive potential of the labour force in a country. In the long term, the potential income of an economy is constrained by scarcity of capital and human capital. The scarcity of capital can be eased to some extent by a solution to the debt crisis, by inflows of aid and foreign investment but if human capital is eroded, it will limit the benefits to growth.

Because of the above role that health of a population plays in national economies, the importance of its health sector has to be



impact on changes in the level of public expenditure in health and related sectors and on its comparison within each sector.

The clearest and most direct linkage between SAP and health is the effect of reduction in government spending which affected different type of expenditure, wage level and employment, different level of services like clinics, hospitals, etc, and different type of services like academic and vocational education, village health workers, health education, immunisation etc.

However, World Bank has tended to be that the health services are generally protected by expenditure reduction. But Heller and Dimond<sup>1</sup> find that the SAPs and foreign debt was an important factor in determining the level of government spending on health. They also cast doubt on the view that health expenditure have been relatively protected from adjustment. Hicks and Kubisch,<sup>2</sup> for example considered all 37 case of reductions in real government expenditure between 1972 and 1980.

However, there is considerable disagreement about the impact of SAPs on macroeconomic outcomes and health this problem arises from the time-lag between cause and effect. The economic charges on health to a

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<sup>1</sup> P.Hellr and J. Diamond, *International Comparison of Government Expenditure Revisited, 1975-86*, IMF Occassional Paper 69, Washington, D.C., 1990.

<sup>2</sup> N. Hicks and A. Kubisch, *Cutting Government Expenditures in LDCs*, in Finance and Development, September, 1984.

great extent, cumulative over time and Health can only be measured effectively by indicators such as morbidity and mortality rates. However, changes in economic condition do not immediately cause illness or death, but rather increase people's vulnerability. The change in vulnerability occur gradually over time.

Resistance to disease can be regarded as a form of 'savings' which are accumulated over time to meet the cost of disease. The rate at which these savings are accumulated depends on a large number of factors like intake of calories, protein, water quality, sanitation, preventive health measures, immunisation, housing and environmental conditions etc.<sup>3</sup> The effect of any change in these conditions is to increase or reduce the level of savings over a period of time.

Any deterioration in housing condition is likely to occur gradually as a result of maintenance, water quality will decline over time if new investment in this area is reduced.

If the general level of resistance to a disease is lowered because of above condition, epidemics or parasitic diseases may spread and become more prevalent. Thus, there may be strong causal links between government expenditure and health.

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<sup>3</sup> David Woodward, *Debt Adjustment and Poverty in Developing Countries (The Impact of Debt and Adjustment at the Household Level in Developing Countries)*, Vol.II, London: Pinter Publisher, 1992.

The level of government expenditure is important for health sector, its pattern and use within each sector is also critically important. The effects on health sector depend critically on changes in composition of expenditure at various levels, distribution of incomes and revenues and relative prices, which will be critically analyse further in this chapter. The health and nutrition effects are likely to be most dangerous if the real resources available to the poorest groups are reduced by SAPs policy.

During the first phase of SAP, fiscal adjustment is subject to practical constraints by consideration of political expediency. In this phase, political constraints generally mean the manpower expenditure and particularly employment levels tend to be protected. Strong politically groups are able to protect their interest relatively well. This mean that the emphasis of expenditure reduction tends to be an investment. Reduction in expenditure an manpower generally takes the form of lower real wages rather than cuts in employment.

This pattern often results in critical shortage of materials, which may seriously reduce the quality of the services which can be provided. This problem is compounded by the shortage of foreign exchange, since most medical supplies, for example, are generally imported. The impact on the quality of health services are negative because this may result in shortage of basic medical equipment like rubber gloves, syringes and sterilising equipment, which seriously increase the risk of infection and

shortage of drugs may prevent the treatment of some condition.

During the second phase of SAPs effort is made to correct these problems. New investment continues to have a low priority as the main emphasis is placed on funding the recurrent costs of past investment. Where real incomes have fallen substantially, the emphasis tends to be on reducing employment levels rather than on further wage reductions. However, the extent to which supplies of materials or real wages levels can be increased is seriously limited by the continued financial constraints and the political constraints on reduction of employment.

SAPs often result in substantially reduced real incomes for health professionals. In African countries, income of health workers and nurses fallen below the subsistence level, resulted negative supply of such personel. As income declines, it becomes necessary for nurses and health workers to supplement their incomes from elsewhere. This result in a distraction from their professional duties, which may seriously reduce the time available for providing health care.

So, the result of reduced expenditure on public health services has been both to reduce their availability and their quality. Reduced real income for health professionals may have a particularly important effect in the latter context, as well as shortage of basic supplies in the health sector.

## The Demand Side of Health Sector

The health status of a population seen as a result of the combination of their need for health services, the extent to which they use health services and the effectiveness of the services they use, it is the result of the historical, political and economic forces of country.

The extent to which health services are used depends on the intersection of demand and supply mediated by the pricing system. Demand too is influenced by the need for services. Structural adjustment programme affect a households need for health services by given mechanism:-

- (1) *Nutritional Standards*: The impact of SAP on nutritional standards arise primarily from its effect on household incomes and food prices. Households whose real income fall during adjustment programme may face substantial deterioration in nutritional standards, because of fall in real incomes. Expenditure on food is likely to be reduced because this is such a major item of household spending. This is compounded by increase in food prices as a result of devaluation or withdrawal of subsidies. According to Behrman,<sup>4</sup> studies, the consumption of particular items of food is highly sensitive to

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<sup>4</sup> J.Behrman, *The Impact of Economic Adjustment Programme* in Bell and Reich (eds.) "Health, Nutrition and Economic Crises: Approaches to Policy in the Third World", Auburn House, Dover, Massachusetts, 1988.

changes in their prices relative to other foods. The sensitivity of consumption to changes in both incomes and prices is substantially greater for poor households than for those with higher incomes.

For some households, there may be scope to protect calorie consumption by substituting towards cheaper alternative foods. This had led the World Bank to suggest that food subsidies should be restricted to the single cheapest source of calories.<sup>5</sup> But 'caloric intake' is the minimum dimension of nutrition, but protein consumption is essential for a health work force.

This is particularly important where substitution takes place away from relatively high protein cereal staples such as rice and wheat and towards starchy staples such as potatoes etc, which are much lower in protein. The starchy staples tend to be much less tradeable than cereals. This means that their real prices tend to fall during devaluation while those of cereals often rise. This may induce a substitution away from cereals and toward starchy staples, resulting in a marked reduction in protein intake. This danger is particularly important among poor, because of substitution between different foods in response to price changes tends to be much stronger among

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<sup>5</sup> World Bank, *Report for the Poverty Task Force on Poverty Alleviation*, Vol.II, Washington, D.C; 1986.

the poor in some cases.<sup>6</sup>

The intake of vitamins and minerals is also critically important to health. The consumption of these may well decline as a reduced variety of diet. The best documented case of this is iron deficiency, which can have a substantial negative impact on general health status. Other important case includes Vitamin B deficiency, which cause pellagra and vitamin A deficiency which can cause blindness and increase the risk of child death from respiratory illness.

Another important factor is that the calorie intake on individual needs is mostly determined by her or his expenditure of energy. Many of the survival strategies, such as working hour, adopted by households in response to reduced real income levels or increased prices for essential goods entail an increase in energy use in terms of calories to make up for lower output prices or higher input prices or increased home production to reduce household spending needs.<sup>7</sup> If this increase in energy expenditure is not fully compensated by an increase in calorie intake, the effect will be equivalent to a deterioration in nutrition.

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<sup>6</sup> Prinstop-Andersen, *Food Prices and the Poor in Developing Countries* in *European Review of Agricultural Economics* 12:1-2, 1985.

<sup>7</sup> J. Strauss, *Does Better Nutrition Raise Farm Productivity?* in *Journal of Political*, April, 1986.

(2) *Households's Allocation of Time*: The impact of structural adjustment policies may also have critical impact on the households allocation of times which is critical to the health of household members, especially at times of high labour use, such as weeding and harvesting seasons in agricultural communities. As financial pressure increased, poor households respond by increasing the time allocated to productive and income-earning activities. It is a kind of self exploitation, and at the same time, the time needed for day-to-day household activities may be increased as household substitute expenditure of time for expenditure of money, home production of food and other goods may be increased to substitute for purchases from the market. This increased pressure in time has a number of potentially important impact in health.

The increase in working time increase physical and mental stress which may lower resistance to disease.<sup>8</sup> The increase in time pressure may also reduce the willingness or ability of household members to take time off work for ill- health. A number of household activities make an important contribution to health conditions, like, child care, cleaning, household maintenance, fetching water, food preparation etc. If these activities are reduced by the tighter constraints on household time, health standards may

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<sup>8</sup> David Woodward, *op.cit.*



decline as a result. Time is also an important factor in the households ability to make use of formal health services and the main alternative to the use of health services is care within the home. As the time available is reduced, so the ability of the household to provide such care will be reduced and its quality will decline.

- (3) *Environmental Condition:* SAPs result in a deterioration in households living environments primarily in two ways. Firstly, reduction in public spending reduce the provision of health related services such as water, sanitation, rubbish disposal, street cleaning, etc. At the same time, the reduction of some household activities like maintenance and cleaning as a result of reduced income and non-working time, causing a progressive deterioration in the environment both for household concerned and household nearby. These affects are cumulative over time, calling forth, a progressive deterioration in the environment. The initial effect may be limited but if the SAP process are protracted, the overcell effect may be substantial.

A deterioration in the living environment may substantially increase the infection with contagious disease, or of other sources of infection such as contamination of food as water supply.

(4) *Nature of Work:* The nature of work done by household members and the conditions in which they work are also important factors affecting health needs in some cases particularly in urban areas. Increased financial pressure on household during adjustment process, increase the value to them of income relative to other aspect of welfare, including the avoidance of risk to their health and safety at work. This problem may be particularly important to those displaced from the formal sector by reduction in public sector employment, who often responded by moving into the informal sector.

The problem of unhealthy working conditions applies both to self-employment and to wage-employment in the informal sector. In the former case high risk activities includes, like prostitution and child prostitution. In this case of prostitution, apart from the considerable health risks and the emotional and psychological damage to the individual concerned are also potential serious wider repercussions. In particular, the spread of sexuality transmitted diseases most importantly AIDS, may be substantially accelerated, particularly where circular migration between rural and urban areas is involved.

In the case of wage-employment and many other self-employed occupations, the problem relates more to the working environment. According to a recent survey by Bose.<sup>9</sup> According to him that the working conditions are extremely poor for wage workers in the informal sector, generally falling outside the scope of government regulations, little care is taken to provide hygienic, safe and congenial conditions of work.

The result is a much higher incidence of health risks from unsanitary conditions, inhalation of toxic substances, etc.

It is clearly uncontroversial that those households whose real incomes are reduced by adjustment will tend to face increased health risks as a result. What is less widely recognised is that the health risks of those households which sustain their real incomes through survival strategies such as increased working hours, acceptance of worse working conditions, substitution towards cheaper food sources may also be increased, as many of those households who live in areas where the overall effects of adjustment are negative, even if they themselves are not affected.

Conversely, the SAP process will tend to reduce the health needs of those whose income increases as a result of export crops. Primarily

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<sup>9</sup> M. Bose, *The Urban Informal Sector Revisited*, (Discussion Paper No.276), Institute for Development Studies, 1990.

small holders who produce export crops may suffer some off-setting negative effects, for example if water supplies, sanitation of other health related public services are adversely affected.

- (5) *Cost of Health Services*: For most people, health care carries a high cost to households in terms of their time, which household may be unable or unwilling to sustain. And if there are charges for health care, some household may not be able or willing to pay them. The quality of service available will affect how much time and money the household considers it worth spending to obtain health care.

### **Cost Recovery in the Health Sector**

A major component of structural adjustment programme in the health sector has been the introduction of cost-recovery system. The objective of this approach is to generate additional resource for these services to compensate for reductions in government funding and to encourage more economic and efficient use of resources.

The first of these objectives at least, is based on an entirely legitimate argument. By levying charges on those who can afford to pay them, it is in principle possible to increase the resources to finance health services for those who are not able to pay.

While cost-recovery may increase the resources available to finance services, it has the effect of discouraging their use, particularly among poor

who are least able to afford higher charges. The net effect on the access of the poor to health services is the result of this combination of increased resources and in changes in who has access to services. The sensitivity of the demand for health services to increase in their prices is therefore critical to the effect of user charges. Its implications for access to health services are obvious. If households respond to higher charges by using service less, this is likely to result in deterioration in their health status. At the same time, the effect of price changes on the use of health services is also of fundamental importance to the amount of revenue which can be raised in this way. The greater the reduction in use resulting from a given price increase, the less additional revenue will be generated. It is possible that higher charges may actually reduce the resources available if the demand response is strong enough making increases in user charges entirely counter productive.

The World Bank's policy to health sector financing in SAP's produced by the Bank in 1987. The proposed approach is to institute charges at government facilities, especially for drugs and curative care and use differential fees to protect the poor.<sup>10</sup>

This policy was based on a very definite view of the likely effect of user charges on the use of health services. Another World Bank study by

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<sup>10</sup> World Bank, *Financing Health Services in Developing Countries*, IBRD, 1987.

It is argued by World Bank that a well-designed system of user fees will help to improve the allocation of resources and demand between different types of health interventions, so that the use of different services more closely reflects their relative cost. According to World Bank, it's main objective in this regard is to encourage patients to switch from high cost to low cost service, where later are more appropriate. However, it is mainly the non- poor who have the opportunity to respond to charges in this way, as most poor household's choice between alternative health providers is often very limited.

The main measure of the efficiency of public health services must be seen in terms of this ability to meet the needs of population with a given level of resources and this depends not only on the cost-effectiveness of the provision of services but also on the extent to which people's access to health services corresponds to their need for those services. If cost recovery results in a weakening of the link between need and access, this will therefore represents a reduction in the efficiency of the service.

The proponents of cost recovery argue that existing system is already biased to services towards those with higher levels of income, particularly those in urban areas have much greater access to health services and make much greater use of them than the poor who are largely excluded from the health system.

This problem will be compounded by cost-recovery rather than being resolved. Gertler and Gaag<sup>13</sup> found that the poor were much more sensitive to price increase and it is primarily the poor who reduce their use of health services in response to price increase. There are many potential sources of inefficiency arising from cost recovery.

Firstly, reduced utilisation means that the capital stock is underused. Some recurrent costs, such as, drugs may fall in line with reduced utilization, resulting in an increase in total costs per patient. More generally, there are substantial economies of scale in the provision of health services which are lost if the volume of service provided is reduced.

Secondly, if people do not avoid seeking treatment as a result of the imposition of charges, they may well delay seeking treatment either in the hope of recovery, or in order to find the resources with which to pay in other context, delaying the use of a service in case it is not needed might be regarded as an improvement in efficiency. It represent an attempt to avoid a wasteful use of resources. In the health sector, it often results in a deterioration in the health of a patient and a consequent increase in the cost of treatment, as well as unnecessary long term health damage in some cases.

Thirdly, there may will be health benefits deriving from visits to health facilities and beyond the treatment which is being sought. Contact

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<sup>13</sup> P. Gertler and J.Varieter Gaag, *Ibid.*

with health staff is an important source of general health advice and health posts are a focal point for specific health education campaigns. If people use health facilities less, their contact with these sources of information and advice will be reduced and the effectiveness of health education will be eroded. Any deterioration in health conditions due to the reduced effectiveness of health education will tend to increase health needs and treatment costs in the future.

Another source of inefficiency is the administrative cost of collecting fees. This cost represents a fractional loss of resources in the process of transferring them from patients into the health system.

In the wake of this controversy. Now World Bank admits government intervention in health sector is necessary in some cases to protect poor and admits some rational for it. World Bank report<sup>14</sup> admits three economic rationals for government action.

- (a) The poor cannot always afford health care that would improve their productivity and well being. Publicly financed investment in the health of poor can reduce poverty.
- (b) Some actions that promote health care are pure public goods create large positive externalities. Private market and user fees would not produce them at all or would produce little.

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<sup>14</sup> World Bank, *World Development Report: Investing in Health*, IBRD, 1993.



- (c) Market failure in health care mean that government intervention can raise welfare by improving how those market functions.

In this perspective World Bank prescription for the health sector is as follows:-

- (a) An economic cell be instituted in the ministry of health under the guidance of the bank for more efficient utilisation of funds.
- (b) The Govt. restrict itself to the prevention of communicable diseases and family welfare.
- (c) The Ministry should seek extensive loans from World Bank for providing adequate finance for the various vertical programmes.
- (d) That user fees be instituted in public hospitals to recover costs and fees be charged for medical education.

However, for the protection of households who cannot afford user fees, WB provides the essential clinical package. It includes family planning, prenatal care, treatment of sick child, treatment of T.B. and sexually transmitted disease, and treatment of minor infection and trauma. All other health care policy and activities classify as 'discretionary' to be provided only if finance allows.

It is a clear position. It simultaneously justified the near comprehensive public coverage given in most developed countries while

denying the same to the people of SAP's implementing countries. It will also mean all excess to basic surgical and medical care will be denied to households who cannot afford userfees.

The proposed essential clinical package is suspect. Its three element out of five, family planning, prenatal care, treatment of sick children are directly connected with population control.

However, it is very difficult to examine all of the links between structural adjustment programme and health sector with theoretical framework, because there are many complicated links in the overall process and complex. This makes it difficult to maintain 'ceteris paribus' assumptions.

No empirical studies currently available examine all of the links between structural adjustment programme and health sector. But, there are some systematically critical links in the process.

However, health sector is adversely affected by economic adjustment policies, either concurrently or with substantial lags. Macro and microeconomic theories indicate possible channels for such effects, primarily through altering income and prices. And there are many questions that have to be answered. In a particular economy exactly what are the effect of economic adjustment policies on aggregate economic indicators. How do these translate through product and input markets into changes in the real income and prices broadly defined faced by poor

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individuals and house holds. And the most important is to, what extend such individuals and households change their behaviour in response to the real income and real price changes in ways that affect their health, and what are the time lags and adjustment periods throughout this complicated system? It is also necessary to find intervening links between SAPs process and health sector.

## Chapter 4

### **IMPACT OF STRUCTURAL ADJUSTMENT POLICIES ON INVESTMENTS ON HEALTH SECTOR, FOOD PRICES AND DRUGS**

The government of India has embarked on a path of structural adjustment since 1990. The programme in line with the familiar IMF-World bank prescription, has covered a wide spectrum of policies including fiscal and budgetary contraction, downsizing of the public sector, convertibility of the rupee, lowering of tariffs and substantial reductions in quantitative restrictions on trade. This chapter examines the impact of structural adjustment on health expenditure, food prices and drugs which together constitute the three critical inputs into health.

The chapter is organised as follows, the first section assesses the impact of SAPs on health expenditure of Centre and the States. The second section assesses the impacts of SAPs on food prices, and third outline the implications for drugs prices.

#### **Impact on Health Expenditure**

A rigorous analysis of the impact of adjustment on health would require an evaluation of the counterfactual: what would have been the levels of spending in the absence of adjustment? Even with a fully specified economy-wide model, it would be difficult to identify precisely the

counterfactual situation. Moreover, as Beharman and Deolalikar<sup>1</sup> argue, in evaluating the impact of adjustment, the relevant comparison is itself not obvious. A number of empirical difficulties are also worth noting. To assess the impact rigorously, the levels of total public spending of Centre and the States on health are as important as the composition of spending separately for primary health care, curative health care etc. Moreover, assessing the short-run impacts on such outcomes as infant mortality and life expectancy is impossible owing to the absence of data on outcome indicators in post-adjustment years, and on the qualitative dimensions of spending such as the relative shares of salary and non-salary inputs in total public expenditures. There may also be significant time lags between changes in level and composition of spending inputs and outcomes.

### **Methodology:**

This analysis is necessarily restrictive in scope owing to the above limitations. First, the analysis is confined to public spending on health only. Following Beharman and Deolalikar, I adopt a simple methodology, ignoring many of the complex issues raised above. I seek to establish the basic facts, do the levels of public spending on health for the two years following adjustment (1991-92 and 1992-93) deviate significantly in a

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<sup>1</sup> J. Beharman and A.B. Deolalikar (1991), *The Poor and the Social Sector During a Period of Macro-economic Adjustment*; The World Bank Economic Review, Washington D.C.

statistical sense from their underlying secular trends in the period 1973-90 prior to adjustment? Expenditure incurred by the Centre and the individual States are analysed given that under the Indian constitution, the States play a more active role in providing health facilities than does the Centre.

To estimate the trends in health expenditures over the period 1973-92, a simple forecasting method is adopted. In forming the forecasts, first average annual growth rate of health expenditure has been computed and accordingly the forecast value of health expenditure for two post-adjustment years, 1991 and 1992 has been computed. The forecast value for 1991 and 1992 has contrasted with actual value of health expenditure that occurred in 1991 and 1992. The observation for 1991-92 and 1992-93 is being forecasted from the estimated model. It is important to re-emphasize that the objective is to determine whether there is a statistically significant deviation in the post-adjustment expenditures from their secular trend values.

The data on health expenditures is compiled from the various issues of the Reserve Bank of India Bulletins.<sup>2</sup> I have taken data upto 1992-93. The data from 1993-94 and 1994-95 are not complete till date. They are Revised Estimates and Budgets Estimates of the government and these new data are not very different from the original data.

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<sup>2</sup> Reserve Bank of India Bulletins for various years.

The health expenditure series is the sum of expenses on medical, public health, family welfare, water supply and sanitation. However, these figures do not fully reflect all expenditures on health. While expenditure financed directly or indirectly by the government sector are likely to be incorporated more or less accurately, there is an underestimation of private expenditures. However, this discrepancy is not alarming from the point of view that the objective is to study the impact of macro economic adjustment policies on health sector spending by the government. In the table, nominal expenditure figures have been converted to real expenditure at 1980-81 prices using the Gross Domestic Product (GDP) deflator at factor cost. The expenditure series used in the analysis includes the sum of expenditure on capital (plan and non-plan) and revenue (plan and non-plan) expenditures. Plan expenditures are expected to provide for infrastructural expansion and system effectiveness. The non-plan outlays primarily include maintenance and committed expenditures.

## **Results:**

### **Central Government Expenditures**

Table 4.1 shows the trend in health expenditure, total and per capita, of the central government for the period 1973-1992 at 1980-81 prices. The average annual growth rate of real health expenditure for the period 1973-1992 is 6 percent and average annual growth rate of per



capital health expenditure for the period is 3.9 percent. In 1990, immediately prior to the period when the government implemented a number of macro-stabilization policies, the Central Government spent Rs.2.65 (1990) per person on health and its total expenditure (in 1980-81 prices) was Rs.219.1. The health expenditure for 1992 shows a decline of 11% with a decrease of 14% in per capita terms. The question, therefore is are the expenditures for health, for the two years following the structural adjustment policies statistically different from the observed trend between 1973 and 1990?

Table 4.4 gives the trends, forecast and actual values, in the central government expenditures. Though the actual values of health expenditures are lower than the values forecasted by the model, both, in aggregate and per capita terms, the difference between the forecast and the actual values show that there was significant deviation in the health expenditures in the post-adjustment years of 1991-92 and 1992-93 from their secular trend values. The analysis is done for levels of real expenditures and for real per capita expenditures.

Table 4.1  
**Trends in Central Government Health  
 Expenditures (1980-81) Prices**

Year	Health Expenditure (Rs. Crores)	Per Capita Health Expenditure (Rs.)
1973	64.50	1.12
1974	68.00	1.15
1975	88.00	1.46
1976	112.20	1.83
1977	113.20	1.80
1978	116.00	1.80
1979	91.20	1.39
1980	116.40	1.73
1981	124.50	1.82
1982	139.50	1.99
1983	136.90	1.91
1984	153.50	2.10
1985	147.90	1.97
1986	188.10	2.46
1987	172.80	2.21
1988	201.80	2.53
1989	221.90	2.73
1990	219.10	2.65
1991	217.90	2.58
1992	195.40	2.27
Average Annual Growth Rate	6%	3.9%

Table 4.2

**Forecasted Value of Central Government Health Expenditure for  
1991 & 1992 (1980-81 Prices)**

Year	Health Expenditure (Rs. Crore)	Per Capita Health Expenditure (Rs.)
1991	226.43	2.67
1992	240..50	2.77

Table 4.3

**Difference in Actual & Forecasted Value (%)  
of Central Government Health Expenditures (1980-81 Prices)**

Year	Health Expenditure	Per Capita Health Expenditure
1991	-3.91	-3.49
1992	-23.08	-22.03

Table 4.4

**Trends in Level of Central Government Health  
Expenditures (1980-81 Prices)**

Variable	1973	1980	1990	Rate of Growth 1973-90	Forecast Value. 1991	Actual Value 1991	Forecast Value 1992	Actual Value1 992
Health Exp. (Rs.Crore)	64.50	116.40	219.10	6	226.43	27.90	240.50	195.40
Health Exp. per capita	1.12	1.73	2.65	3.9	2.67	2.58	2.71	2.27

## **State Government Expenditures**

Under the Indian constitution, health expenditures are the primary responsibility of the individual States rather than the central government. Of the total expenditures, Centre and States combined, the State government's share of health expenditures is 85 to 90 per cent over the period 1974-92. Therefore, it is imperative that we analyse the health expenditures of State governments in the immediate post-adjustment period.

Table 4.5 presents the trends in the consolidated (All States) State governments expenditures on health observed over the period 1974 to 1992. Data for the State governments show that health expenditures trebled between 1974-90, whereas per capita expenditures have more than doubled over the same period.

However, the expenditures for 1991-92 and 1992-93 show a decline compared to earlier period. Between 1990 and 1992, health expenditures by all the States taken together fell from Rs.3055.53 crores to Rs.291.87 crore, a decline of 4.5%, per capita expenditures on health declined by 7.4% from 1992. These changes constitute statistically more significant deviation from the trend values of the State governments expenditures on health compared to central government expenditures on health.

Table 4.5

**Trends in State Government Health Expenditure  
(1980-81) Prices**

Year	Health Expenditure (Rs. Crores)	Per Capita Health Expenditure (Rs.)
1974	902.85	15.32
1975	1065.48	17.60
1976	1245.65	20.20
1977	1225.48	19.44
1978	1417.33	22.01
1979	1491.35	22.67
1980	1608.20	23.95
1981	1768.12	25.81
1982	1955.80	27.90
1983	2201.76	30.71
1984	2306.56	31.44
1985	2458.47	32.83
1986	2653.14	34.64
1987	2868.03	36.71
1988	2924.94	36.72
1989	2959.39	36.42
1990	3055.53	36.88
1991	2840.06	33.64
1992	2918.87	33.93
Average Annual Growth Rate	6.7%	4.6%

Table 4.6

**Forecasted Value of States Health Expenditures (1980-81 Price)**

Year	Health Expenditure (Rs. Crore)	Per Capita Health Expenditure
1991	3367.49	39.74
1992	3603.03	41.63

Table 4.7

**Difference in Actual and Forecasted Value of States Government Health Expenditure (%)**

Year	Health Expenditure	Per Capita Health Expenditure
1991	-18.57	-18.13
1992	-23.44	-22.69

Table 4.8

**Trends in Levels of All States Government Expenditure on Health (1980-81 Prices)**

Variable	1974 (Rs.)	1980 (Rs.)	1990 (Rs.)	Rate of Growth	Forecast Value 1991	Actual Value 1991	Forecast Value 1992	Actual Value 1992
Health Expen. (Rs. Crore)	902.85	1608.20	3055.53	6.7	3367.49	2840.06	3603.03	2918.87
Health Expen. (P.C.)	15.32	23.95	36.88	4.6	39.74	39.74	41.63	33.93

Table 4.8 gives the trend, forecast and actual values, in all State governments expenditures. The actual values of health expenditures is significantly lower than the value forecast of the model. In both cases, real health expenditure and real per capita health expenditure, the difference between the forecast value and the actual value are statistically more significant than compared to central government expenditure on health. These data reveal that, for the two years following the structural adjustment policies, States bear the additional burden in the health expenditures because of more significant decline of the health expenditure compared to central government health expenditures.

For Centre and States taken together, the actual real short-fall of expenditure per head at constant prices of 1980-81, as against the trend rate of growth, was 11%-12% in both 1991 and 1992 for health, and between 1990-92, real health expenditure per person, Centre plus State, fell from Rs. 63.3 to Rs. 56.6, a significant decline of 12%.

Table 4.9

**Expenditure on Health Per Capita in Rupees**

Major States	1970-71	1975-76	1980-81	1985-86	1991-92	1992-93	1993-94 (RE)	1994-95 (BE)
A.P.	5.96	8.20	16.36	30.66	55.09	60.51	65.06	68.91
Assam	5.12	7.39	11.69	30.67	49.51	59.37	61.56	79.93
Bihar	2.88	3.96	7.78	15.82	30.69	42.62	49.35	58.81
Gujarat	8.01	11.24	18.83	39.35	67.25	69.09	76.01	80.00
Haryana	7.53	11.43	18.43	40.83	56.39	62.49	71.32	76.22
J & K	10.02	13.54	32.43	61.35	122.13	149.77	162.08	152.99
Karnataka	5.44	11.37	16.28	33.81	64.30	76.80	88.49	103.84
Kerala	7.03	14.43	22.43	41.64	75.43	76.86	103.77	122.07
M.P.	4.73	6.61	13.18	25.37	40.40	48.33	58.14	62.67
Orissa	4.90	8.15	15.50	25.54	48.48	52.05	66.72	64.40
Maharashtra	7.64	11.26	19.94	38.09	65.13	74.15	80.74	77.87
Rajasthan	8.23	9.87	16.61	31.36	61.76	71.30	77.62	92.56
Tamilnadu	6.76	11.42	18.23	36.25	66.82	84.98	95.46	100.75
U.P.	3.18	5.50	10.07	29.74	43.76	50.44	50.18	52.02
W.B.	6.02	12.03	20.08	32.89	55.82	59.85	68.71	71.90

Source: Data Compiled from Finance and Revenue Accounts, Comptroller and Auditor General of India and Demand for Grants, Respective States.

The State-wise data, all at 1980-81 prices, confirm that the burden of health expenditure cuts has been borne mainly by expenditures of the States themselves, rather than by the Centre. This fact, incidentally, suggests that it is Primary Health Care, rather than the national - level



curative programmes and medical education services, that have taken the most strain.

In Maharashtra and U.P., for aggregate levels, actual expenditure for the years 1991 and 1992 respectively, significantly lowered from their forecast values for both years, for W.B in 1991, and for Punjab and Rajasthan for 1992. For 13 large States as a whole, the actual spending level in 1991 was lower than the forecast value. The direction of results is similar for per capita levels. States such as Punjab and Rajasthan were able to maintain their per capita expenditures in the post-adjustment period at approximately the same level as observed in the pre-adjustment period.

The case of U.P., India's most populous State with a high poverty ratio, is interesting. In UP, per capita spending on health rose in real terms for Rs.10.10 in 1973 to Rs. 25.10 in 1990, though it continued to be lower than the average for all States taken together, Rs. 36.88 in 1990. Moreover, the per capita spending in 1990 was only 0.491% of Kerala's; Bihar's spending in 1973 was extremely low in comparison to Kerala's. Though its spending trebled by 1990, its level is still way below Kerala's.

The State-wise data also show that inequalities have increased among States during structural adjustment programme U.P, in 1990 the second lowest spender of all the States on health (Rs. 25 per head against an all-State average of Rs.37), had by 1992 fallen back to Rs. 19, more

than 25% below the level predicted on the basis of pre-adjustment (1973-980) trends. Leaders such as Punjab, Kerala, and Rajasthan but maintained spending had not shown significant decline below either actual or predicted trends.

It can be concluded that in the early years of adjustment, real expenditure on health has fallen, especially when compared the forecast. The States compared to the Centre did most of the cuttings, and the shortfall is generally worst in the logging States.

As is evident from the above analysis, the structural adjustment has an adverse impact on health expenditure. Table 4.10 gives further details about health expenditure. The government has over the years committed not more than 3.5% of its resources to the health. The budget expenditure for 1994-95 at 2.63 percent of total government expenditure, is the lowest ever.

Table 4.10 clearly reveal that the most persistent declining trend has been on expenditure for hospitals and dispensaries, especially since the early 80's, and a significant declining trend since 1991-92, following adjustment years. Only family welfare expenditure has grown rapidly up to 1991-92, and since then slowed down. Similar is the case in MCH programme. The decline in the health expenditure for hospitals and dispensaries may be also seen in the context of the massive expansion of private hospitals and private practices. It has also resulted in an

unhealthy competition for manpower resources etc. The unchecked growth of private health care and its unregulated functioning has made profiting from misery a big business.

Table 4.10

**Expenditure on Health: All India  
Percentage Distribution**

	1970-71	1975-76	1980-81	1985-86	1991-92	1992-93	1993-94	1994-95 (BE)
Disease Prog.	13.63	13.50	12.96	11.69	10.59	10.84	10.41	9.51
Hosp. & Disp.	37.29	45.29	43.30	37.82	26.78	27.66	27.46	25.75
Med., Edu., Tra., Res.	7.19	8.74	9.07	8.67	10.19	10.99	10.92	7.69
Family	-	12.89	11.94	17.94	19.39	16.54	16.88	17.27
MCH	-	0.39	0.51	0.50	2.03	1.80	1.95	0.76
Health Add.	20.05	5.40	4.91	4.73	4.49	4.47	4.50	4.20
Revenu Expen. Health	3.84	3.49	3.29	3.29	3.11	2.71	2.71	2.63

Source: Combined finance and revenue accounts, Comptroller and Auditor General of India and demands for grants, respective states for various years.

P. Duggal<sup>3</sup>, states that the average share of private health sector was above 80 percent. It is also evident from above analysis of central and States governments expenditure, the burden of health expenditure cuts borne mainly by States governments. It means, it is primary health care rather than nation level programme that has suffered the most. Which

<sup>3</sup> Duggal, Ravi (1986), *Health Expenditure in India*, FRCH Newsletter, I.I. Bombay.

means the majority of population either go to the Taluka or district hospitals or go to the private practitioners.

Under structural adjustment policies, the WB prescribe<sup>4</sup> that the PHC restrict itself to the prevention of communicable diseases and family welfare and leaves the curative aspect to the private sector. This means that all access to basic surgical and curative medical care will be denied to the poor. This also means that the narrowing down of PHC to being selective. This strategy neglects wider public health aspects and concentrates only on 'child-survival' strategies and maternal health in the hope of controlling population. The cuts in general welfare expenditure also did not permit strengthening of the links of health services sectors with other sector. This means the whole concept of the primary health care is distorted.

Under structural adjustment programme, the WB proposed more vertical health programme. Further support to highly centralised and bureaucratic vertical programmes, will only succeed in further destroying the curative component, while at the same time leaving the poor to the tender mercies of the private sector for curative care.

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<sup>4</sup> World Bank Report (1993), *Investing in Health*, Oxford University Press.

## **Impact on Food Prices and Nutrition**

Beginning in July 1991, under structural adjustment programme, the devaluation and floating of the rupee, has had indirect effects on the whole economy including agriculture and food price. However, agriculture was not included in trade liberalization measures taken during 1991 and 1992,<sup>5</sup> except for the relaxation of some export controls. At the end of 1992, about 60 agricultural and livestock products were subject to some form of export control, as well as about 46 manufactured products, most of which were processed primary commodities. In April 1993, a further range of products were removed from this list.

Until 1991, the main achievement of Indian agriculture and food policy is to depend more and more on buffer stocking and operations stock holdings. The basic objective of this was ensuring an equitable distribution of available food supplies, especially in the deficit area and among the poor sections. Also the insulation of the domestic markets from world market conditions and the governments buffer stocking policies in the case of foodgrain, have meant that the domestic prices of most agricultural commodities remain considerably more stable than international prices. Under structural adjustment programme, freeing imports and exports of wheat and rice and the other commodities from canalization, licensing and

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<sup>5</sup> 'Budget' for Respective Years.

other controls will mean that domestic price will move up and down with international prices. It also implies that the government of India should rely increasingly, and may be almost exclusively, on forward or options buying in the international grain market rather than on large stores. It is obviously a riskier business for a large country such as India, where a major crop failure might affect markets, and even cause non-delivery of grains promised at prices that turned out to be unfavourable to suppliers after the event. In particular, in a very thin and fluctuating rice market, a major actual or even potential incident of this sort could be price disruptive.

Both output price and foreign exchange/trade liberalization, and agricultural desubsidization, the 'two sides' of the new thrust to spread adjustment into the agricultural sector will lead to rises in food prices. According to Lipton<sup>6</sup> Study, cereals comprise 40% of the budget of the poorest quarter of the population, and in this case price rise by 20%, would amount to an 8% cut in real income per head for the poorest quarter of the population.

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<sup>6</sup> Lipton, M (1993), *Liberalization, Poverty Reduction and Agricultural Development in India*, a Paper Presented at University of Oxford, in 1993.

Pursell and Gullati (1993)<sup>7</sup> also estimate by comparison of domestic and world prices prevailing in 1992/93, the net effect of implementing the reform agenda probably will be to raise the overall level of food price by about 15% to 20%.

**Methodology:**

A rigorous analysis of the impact of adjustment on food prices has been done by using dummy for checking whether structural changes in the agriculture sector are happening or not. To assess the impact of structural adjustment on Food price, food production and food distribution, I adopted the basic linear model, (Table 4.11).

$$Y = a + bt + ct^2 + dD$$

where all regression are run with the indicators in natural logarithmic form.

D is a dummy variable that takes the value 1 for 1991 and 1992 and otherwise Dummy is used if structural change has taken place in the economy.

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<sup>7</sup> Pursell, G. and Gulati, Ashok (1993), *Liberalizing Indian Agriculture an Agenda for Reform*, a Paper Presented at University of Oxford in 1993.

Table 4.11

**Impact of Structural Adjustment on Food Production,  
Distribution and Prices in India**

Indicators	Constant	Time	Time <sup>2</sup>	D	First order auto-correlation coefficient	R <sup>2</sup>	Sample Period
Foodgrain Prod. (000 tonnes)	11.777 (193.432)	0.009 (0.410)	0.002 0.882	-0.082 (-1.00)		0.770	1980-92 Dummy 1991-92 & 1992-93
Net procurement of foodgrains (M.T.)	2.494 (16.153)	0.005 (1.554)	-0.002 (-0.056)	-0.226 (-1.475)		0.527	1980-93 Dummy 1991-92 & 1992-93
Wholesale food price index (1981-82=100)	4.679 (124.108)	0.022 (1.321)	-0.004 (2.491)	0.077 (1.542)		0.986	1982-92 Dummy 1991-92 & 1992-93
Procurement price of paddy (Rs. P.Q.)	3.872 (89.694)	0.071* (7.789)	-0.001 (-0.538)	0.156* (2.460)	(3.941)	0.969	1970-92 Dummy 1991-92 & 1992-93
Wholesale price index of Fertilizer 1970-71=100	4.437 (42.987)	0.130* (6.045)	-0.004 (2.491)	0.403* (2.654)		0.878	1970-92 Dummy 1991-92 & 1992-93
1960-61=00	2.356 (2.226)	0.023 (1.264)	-0.003* (3.677)	0.023 (0.292)	0.558* (2.708)	0.969	1969-92 Dummy 1991-92 & 1992-93
Pub. Dist. of Foodgrain (M.T.)	2.535 (29.902)	0.006* (2.517)	0.004* (-2.119 5.367)	0.215* (2.556)		0.554	1980-93 Dummy 1991-92 & 1992-93
Procurement Price for what (Rs. P.Q.)	4.292 (87.589)	0.055*	-0.001 (5.367)	0.284*			

Source: Indication has taken Economic Survey 94-95.

M.T. = Millions Tonnes

P.Q. = Per Quentl

CPI for Agricultural Labourers

CPI = Consumer Price Index

\* Denotes significance at the 5 percent level

D is a dummy variable that takes the value 1 for 1991 and 1992 and [0] otherwise.



Figures in parentheses are t values.

Which is computed to check whether the difference are statistically significant are not.

and, (D) denote the level of significant. First order auto-correlation coefficient included if a Durbin-Watson test indicated such correlation.

### **Results:**

Results show (Table 4.17) the trend of structural adjustment and its impact on food production, distribution and prices. The foodgrain production in 1992-93 shows no significant decline by the dummy coefficient of the relevant regression equation. The impact of adjustment on the net procurement of foodgrain and wholesale price index are also not statistically significant as shown by the dummy coefficient of the relevant regression equation.

Adjustment has an adverse impact on wholesale price index, consumer price index for labourers public distribution of foodgrains and procurement prices for paddy and wheat. It is shown by the dummy coefficient of the relevant regression equation and. In the case of consumer price index for agricultural labourers, first order auto-corelation coefficient shows the significant adverse impact of adjustment. All these results denote significance at the 5 percent level.

The regression estimates of the table 4.12 also indicates that although the procurement prices have gone up, the benefits of increase in the procurement and market prices did not go in favour of small and marginal farmers. Probably the benefits were eaten up by the rise in fertilizer input prices. Besides, the small and marginal farmers have rarely a marketable surplus. Essentially, they are all consumers and therefore got affected by the rise of consumer price index for laboured and rises in the prices of foodgrains.

Table 4.11 also indicates that the procurement prices have gone up, but the net procurement during this period has not increased. It suggests that the market prices of paddy and wheat increased. It suggests that the market prices of paddy and wheat increased along with the increase in the procurement prices. It is shown by tables 4.12 and 4.13.

Table 4.12

**Annual Rate of Inflation, Essential Commodities**

	Weight		1993		1992	
		WPI	PI	WPI	PI	WPI
General index	100.00	100.00	8.6	8.6	8.4	9.1
Rice	12.45	3.69	5.4	11.0	15.3	12.5
Whole wheat	4.43	2.25	7.8	13.7	16.8	9.4
Wheat atta	1.75	0.76	7.9	6.0	8.7	1.44
Essential Commodities	48.83	21.77	9.7	13.2	5.3	5.7

Source: Economy Survey 1994-95  
 CPI Consumer Price Index  
 WPI Wholesale Price Index

Table 4.13

**Procurement Prices (Rs.)  
[Crop Year Basis]**

Commodity	Variety	198 9- 90	1990 -91	Incr %	1991 -92	Incr %	1992 -93	Incr %	1993 -94	Incr 199 3-94
Paddy	Common	185	205	10.8	230	12.2	270	17.4	310	14.8
	Fine	195	215	5.1	240	11.6	280	16.7	330	17.9
	Superfine	205	225	9.8	250	11.1	290	16.0	350	20.7
Coarse cereals	FAC	165	180	9.1	205	13.9	240	17.0	260	8.3
Maize	FAC	165	180	9.1	210	16.7	245	16.7	265	8.2
Wheat	FAC	215	225	4.7	275	22.2	330	20.0	350	6.1

Source: Selected Economic Indicators (Ministry of Finance) for various years.

In 1992-93, the consumer price index of rice and whole wheat and flour rose by 15.3 percent, 16.8 percent and 8.7 percent respectively against the general consumer price index increase by 8.4 percent. This price rise is believed to have been triggered off by the rise in the procurement price above 16 percent for rice and more than 18 percent for wheat.

This rise has been further fuelled by an increase in rice stock by 22 percent thereby reducing market supply. This stock offtake could not therefore help in reducing the market price of foodgrain, because in India, the open market prices of foodgrain are to a large extent guided by the procurement and issue price.

Table 4.14

**Cereals (Procurement offtake Stocks)**

Item	Year	'000' Tones
Rice Procurement	91-92	10444
	92-93	12722
	93-94	14182
	94-95 up to Nov.	8490
Offtake	91-92	10053
	92-93	9444
	93-94	8962
	94-95 up to Nov.	5268
Stocks (End of)	91-92	9754
	92-93	11041
	93-94	14652
	94-95 up to Nov.	
WHEAT Procurement	91-92	7752
	92-93	6379
	93-94	12835
	94-95 up to Nov.	11868
Offtake	91-92	8787
	92-93	7695
	93-94	6049
	94-95 up to Nov.	2877
Stock (End of)	91-92	2351
	92-93	2975
	93-94	7283
	94-95	-

Source: Selected Economic Indicators (Ministry of Finance) for various years.

A major impact of the structural adjustment programme was the reduction in fertilizer subsidy (Table 4.11). The fertilizer subsidy consisted of two major components, a subsidy to farmers and a subsidy to fertilizer

industry and its suppliers. The significant decline in the fertilizer subsidy has affected the 'surplus' of farmers, resulting in a loss in income and often reduction in fertilizer use and fall in production. Ragav Gaiha<sup>8</sup> (1993) Study revealed that the fertilizer use and fall in production also went down significantly consequently aggravating poverty, measured by the head count from 59.5 to 62% in Maharashtra and 62.8 to 66.89 percent in Karnataka. The measurement of poverty that has been used by Gaiha is the share of food expenditure in household income. Here it is observed that the share of food to total expenditure has gone up both in Maharashtra and Karnataka suggesting an impoverishment in their consumption levels.

So, the steep rise in procurement price and PDS issues price and the reduction in fertilizer subsidy has resulted in 60% rise, from April 91, to Dec.94, in the open market of foodgrain. Besides cereals account for more than 85% of the calorie intake of the poorer households particularly in the rural sector and further constitute about 60 to 80 percent of total consumption expenditure for these groups. [NSS, No.238].<sup>9</sup> Hence cereals consumption is an important indicator of food security. In the short-run, the overall impact of structural adjustment programme on foodgrain has resulted in a declining trend of per capita net availability of cereals and

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<sup>8</sup> Gaiha, Raghav (1993), *Structural Adjustment Rural Institution and the Poor in India - A Comparative Analysis of Andhra Pradesh, Maharashtra and Karnataka*, University of Delhi.

<sup>9</sup> National Sample Survey, No.238.

pulses (Table 4.15), despite the fact that for past six years the monsoon had been good and the foodgrain production shows no significant deviation from previous trend (Table 4.11).

Table 4.15

**Per Capita Net Availability  
Per Day (Grams)**

Year	Cereals	Pulses
1986	434.2	49.9
1987	435.4	36.4
1988	4111.8	36.7
1989	452.6	41.9
1990	453.6	41.1
1991	468.5	41.6
1992	434.2	34.3
1993 (Provisional)	427.4	37.0

Source: Economic Survey 1994-95.

It is normally found that the percentage of total expenditure allocated to food is constituting 60 to 80 percent of total consumption expenditure. When we compare the NSS results of 1987-88 and, 1992 we notice that the percentage allocation to food over there years has increased from 64.01 percent to 64.99 percent in 1992 in the rural areas. This suggests an increase in the rural poverty. Even in terms of physical units,

the total per capital cereals consumption has gone down both in urban and rural areas between 1990-91 and 1992. But the Economic survey of 1994-95 claimed a continuous decline in poverty ratio. The 'expert group' constituted by Planning Commission to consider the methodological aspects of the poverty ratio, estimates much higher proportion of poor. S.P. Gupta <sup>10</sup> by using this 'expert group's recommendation, derived that poverty declined from 39.3% to 35.51 in 1990-91, but increased to 40.69% during 1992 (Table 4.16).

Table 4.16

**Percentage of Population Below Poverty Line**

Areas	1987-88	1988-89	1989-90	1990-91	Jul-Dec 91	Jul-Dec 92
Rural	39.1	39.2	33.7	35.0	40.0	41.72
Urban	40.1	38.4	36.0	37.0	37.6	37.44
Combined	39.3	39.0	34.0	35.0	39.4	40.69

Source: S.P. Gupta "Recent Economic Reforms and their impact on the poor and vulnerable Sections of Society" mimeo - 1994.

The above table indicates a sharp deterioration in rural poverty and structural adjustment programme is a major cause of this deterioration.

This situation will further deteriorate by the outcome for the

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<sup>10</sup> Gupta, S. P. (1994), *Recent Economic Reforms and their Impact on the Poor and Vulnerable Sections of Society* Mimeo.

liberalization of food trade under the GATT negotiations. After 1991, Gulati, Pursell research classified that within Indian agriculture, there are large differences in net incentives between crops. At the official exchange rate, as measured by the effective subsidy indicator which allow for the protection of output, tradable inputs and subsidies on non traded inputs, Gulati, Pursell classified the main crop broadly as follows: (Table 4.17).

Table 4.17

**Incentive for Crops**

Negative Incentive	Rice, Cotton
Zero or Low Incentive	Wheat, Coarse grains, Pulses, Tabacco
High Incentive	Oilseeds, Coconut, Rubber, Sugarcane

Source: Gulati & Pursell

This is the broad scenario, assuming no major changes take place in the global policies influencing international agricultural markets. This suggests a shift in the cropping patterns from foodgrains to cash crops. Because, cash crops have high incentive and also more export linkages. Such a trend has already begun. The index of area under foodgrain has fallen from 100.6 in 1989-90 to 98.1 in 1992-93, while that of non-foodgrain crops has increased from 117.6 to 130.1 during the same period.<sup>11</sup> Such

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<sup>11</sup> Economic Survey: 1994-95.



a shift in cropping pattern and the liberalization of agricultural sector is in favour of big corporate sectors and multinationals. This situation will result in far greater degree of mechanization of agriculture. Such a shift will further increase unemployment in rural areas, which will further increase poverty in rural areas.

Besides the implementation of Dunkel's proposals,<sup>12</sup> which would require tariffication of import barriers, a reduction of 36% in average import tariff equivalents, the same percentage reduction in export subsidies, and a reduction of 20% in domestic support measures. This would apply to the member countries of GATT, developed and developing countries, except that the reduction by the latter would be only two-thirds of reductions in OCED countries.

The effect on world prices of implementing the Dunkel proposals have been comprehensively modelled by Branado and Martin,<sup>13</sup> and they have also considered the effects of two other plausible reforms, notably reductions in the US set-aside programmes and reductions in negative protection. The result of all these exercises are that international price of foodgrain will increase; [Table 4.18].

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<sup>12</sup> Uruguay Round of Multilateral Trade Negotiations, Document No. MTN/W/FA dated April. 1992.

<sup>13</sup> Branado and Martin (1993) *Implications of Agricultural Trade Liberalization for the Developing Countries*. W.B. Working paper.

Table 4.18

**Impacts of Dunkel Proposals on Food Prices**

Item	Percentage Income
Wheat	6
Rice	2
Coarse Grain	4
Sugar	12
Oilseeds	5
Pulses	5

Source: Brandado and Martin (1993) 'Implications of Agricultural Trade Liberalization for the Developing Countries', W.B. working paper.

The relevance for India is that if it liberalizes its own agricultural trade under GATT's negotiations, it is likely to give further upward push to the general level of its domestic food prices.

Further, with liberalization, rising exports and easier access to imported inputs and high incentive for Commercial crops would lead to more credit subsidies, electricity and canal water. This would lead to increase in prices of cereals and other food items.

These changes will increase problems for vulnerable low income groups. People living below poverty line will be hurt by increased food prices. Subsistence farmers will be squeezed by higher prices for inputs such as water, electricity and fertilizers, but they will not benefit from the higher prices for marketable production.

## IMPLICATIONS FOR PHARMACEUTICAL

The health care economy in India is one for which reliable data are difficult to find. We have only calculation of the central and State government expenditures on health care. The National Council of Applied Economic Research (NCAER) has conducted national survey since 1986 to establish market structures for a variety of consumer goods. A household survey of medical care was conducted in May-July 1990.<sup>14</sup> However, taking all available figures and with many approximations, it has been calculated that total health expenditure at all levels are around 3 to 5 percent of GDP, of which a major share of expenditures is on drugs.

The household health expenditure estimates that urban and rural households alike, in all income groups, overwhelmingly prefer the allopathic system of treatment. At the all-India level, for more than 90% of the illness episodes, the allopathic system of treatment has been sought.<sup>15</sup>

The allopathic system of treatment is to a large extent synonymous with modern drugs. In India, in the absence of the basic prerequisites of good health-adequate nutrition, safe drinking water, basic sanitation and environmental health measures - drugs play an even more decisive role as

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<sup>14</sup> NCAER (1990): *Household Survey of Health Care Utilisation and Expenditure*, New Delhi.

<sup>15</sup> NCAER (199): *Household Survey of Health Care Utilisation and Expenditure*.

the first line of defence against disease.

The NCAER survey reveals that there are shortage of medicines in PHCs. At the household level, the expenditures on fees and medicines are 65 percent, and most of it is on medicines even though the treatment is carried out in hospitals of the public sector. Other district studies <sup>16</sup> by NCAER have also shown that an important reason why government facilities in rural India are not well used, is the shortage of drugs. In this situation prices of drugs is a matter of serious national concern. Also drug availability must improve urgently because the per capita figures are very low. Against Rs.34 per capita in India (figure for 1986) it was Rs.43 in Pakistan Rs.70 in Nigeria Rs. 95 in the Philippines, and Rs. 190 in Egypt.<sup>17</sup> Even allowing for low Indian prices, the consumption in India is at a very low level. It is in this context that one must consider the impact of structural adjustment programme on drugs and it is also important to consider the issue of Dunkal proposals in drugs and pharmaceutical.

Owing to the paucity of data it is difficult to assess fully the level of Drugs expenditure in the post-adjustment years. But increase in price of drugs and pharmaceutical is already obvious. Acceptance of Dunkal

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<sup>16</sup> NCAER (1993) *Household Survey of Health Care Utilisation and Expenditure*.

<sup>17</sup> Rao, S.L. (1993) *The Indian Health Care Industry* a paper-presented at the University of Delhi.

proposals along with 'Trade Related Aspects of Investment' will also change the drug industry. Under structural adjustment programme the trade, liberalization has been already taking place. The 'New Drug Policy' is in accordance with trade-liberalization and international interest. In this situation, Drug Price Control order can no longer function as a price control mechanism. As we have discussed earlier that cuts in health expenditure has already taken place in the central and States budget. [Table 4.1 and Table 4.4].

In India, for running of health services, there is a large bureaucracy and a huge line of workers [Doctors, Nurses, Pharmacists, Paramedics]. For instance, as in March 1991 <sup>18</sup> in the rural areas the State was employing 3,11,455 line workers and 2,93,400 support staff. It may be noted that these were 39 percent less than the Stated requirement for existing health system in place. The bureaucracy is also too huge. The central ministry of health employs over 30,000 persons. The figures for the States is also too large considering the fact that health-services are a State subject.

The cut-back in health expenditures of Centre and States did not result in reduction in staff and their salary and staff costs are the largest single item of recurrent spending. Then, it is obvious, that reduction in health expenditures be focussed on non-staff items, in which drugs

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<sup>18</sup> Health information of India (1992).

constitute a major part. In future, drug prices are going to increase rapidly because of trade liberalization and World Bank report 1993.<sup>19</sup> 'Investing in health' prescribe

"local pharmaceutical production in developing countries is likely to make sense only for intravenous fluids, which have relatively high transport costs, for local packaging of bulk imports in finishing plants, and for packaging of oral rehydration salts".

It further suggests

"Over the short to medium run, developing countries can use their scarce public resources best if government reduce or eliminate finance of basic biomedical research that generate international benefits".

In this context, one can deal with the subject of impact on drug prices. The pharmaceutical industry in India has experienced tremendous growth during the last four decades. At the time of independence, in drugs, India ranked among the highest priced nations in the world. While Indian pharmaceutical prices today are among the lowest in the world, the average absolute price level of drugs in the US is about 9 times higher than in India.

The government is forgetting that the strong presence of national companies is the single most important reason, for the low prices of medicine in India. The impact on availability and prices of medicines is far more severe in other developing countries.

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<sup>19</sup> World Bank Report - 1993, p.147.

The market share of Indian companies has grown up from 43.5 per cent in 1970 to 58.7 percent in 1990. Indian manufacturers have also contributed greatly to exports, which increased from Rs.1.400 million in 1985-86 to Rs. 15,000 million in 1991-92, an increase of 48 percent per year. It ranks among the most in the developing countries, in terms of technology and in the quality and range of medicine manufactured. All this has been possible mainly because of the patent system that the 1970 Act provided. It has been possible for scientists and entrepreneurs to develop alternative process technologies, which have helped the Indian pharmaceutical industry to produce new products in a relatively short period as is evident from table 4.19.

The Indian industry has been able to produce all basic drugs covering various therapeutic groups and thus, self sufficiency in various drugs has been achieved in the country. Quality-wise the products conform to world-standards. The Indian industry has emerged as a world leader in the production of bulk drugs like Ciprofloxacin, Dextrproxyphene, Ethambutol, Ibuprofen, Nerfloxin, etc. Significantly, out of the top 5 companies operating in the country, only one is an affiliate of a multinational corporation.

Table 4.19

**Time Lag Between Introduction of a Drug  
Abroad and its Introduction in India**

Name of the Drug	Introduction in Year		Time-lag (Years)
	World	India	
Salgutamal	1973	1977	4
Mebendazole	1974	1978	4
Rifampicin	1974	1980	6
Naproxen	1978	1982	4
Bromhexin	1976	1982	6
Ranitidine	1981	1985	4
Captopril	1981	1985	4
Norfloxacin	1984	1988	4

Source: B.K.Keayla "Patent protection and the pharmaceutical industry" Seminar paper on intellectual property right", Delhi (1993).

Further, the implications of the Dunkal draft provisions are quite severe for all sectors of the industry, mainly because of treating of 'importation' at par with 'domestic production'. Unrestricted imports would have a catastrophic impact on all sectors of the drug industry.

The consumer will be hard hit from the point of view of availability of new products of through domestic effort and will have to pay high prices for all patented drugs. There would be no competitive regime and the monopolistic regime would prevail in favour of patent laws. The prices of



medicine would go up several times, making it extremely difficult for our poor people to afford them. The following two specific examples in Table 4.20 of product marketed by MNC in four countries is illuminating.

Table 4.20

**Comparative Prices in Four Countries (Indian Rs.)  
(Marketed by GLAXO in all the Four Countries)**

Pack	India	Pakistan	UK	USA
Ranitidine, 10 Tabs (Brand name 'Zantai') costlier (Times)	29.03	260.40 9.3	481.31 16.5	744.65 25.6
Diclofenac, 10 Tabs (Brand name 'Voltaren') costlier (Times)	5.67	55.80 9.8	95.84 15.2	239.47 42.2

Source: Export-Import Bank of India 'Pharmaceutical - A Sector Study' occasional paper, No.12, Feb-1991.

The cardiovascular medicine Atenolol is 11.5 times, 13.8 times and 30.5 times costlier in Pakistan the UK, and the US, respectively, as compared to India. An analysis of such price differential for patented drugs and also those drugs where patents have expired world wide, also tells the same story. The drugs which are off-patent also continue to sell at a high price in these countries as there is no competitive regime. A similar picture would emerge in our countries also, if we adopt the product patent system. In these countries, people are paying higher prices only because of the product patent regime.

There is yet another aspect which needs to be clarified and this relate to the turnover of patented drugs in our country. The Indian drug manufacturers associations had conducted a research study, based on data available from the 'Operation Research Group'. It has brought to the attention of the government, therapeutic group wise information for all 14 major therapeutic groups drugs which is as follows Table 4.21.

Table 4.21

**Percentage of Group-wise Drugs under Patent in India**

Drugs	Percentage under patent in India
Antibiotics	40.23
Antibacterials	98.80
Systematic Antifungal	25.66
Anti-Leporotics	69.96
Cardiiovascular drugs	40.18
NSAIDA	22.16
Tranquilizers	74.42
Anti-Consultants	65.93
Antiseptic ulcer drugs	655.92
Oral-Anti-Diabetics	55.30
Anti-Asthmatics	47.53
Anti-Histamines	21.42
Anti-Lackemics	32.41
Contraceptive Hormones	88.79

Source: 'The Indian Drug Manufactures Association'

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So, the extent of the problem is thus not a small one as has been made out in recent past. In fact, B. Keayla, B.K.<sup>20</sup>, estimates, if we accepted the product patent regime and liberalization of drug industry, the average turnover of patented drugs would reach over 60 percent in the first ten years, and prices of drugs will also increase several times.

This study dismisses the claim of the government, which is claiming that patented drugs are unlikely to cover more than 10 to 15% of the total drug market in India in the foreseeable future. But what the government does not say is that not only will the proportion of patented drug rise over time, it is precisely the new and improved drugs which will dominate and define the marketing trends. The government is also invoking a consulted logic to rationalise the impending threat of rising drug prices that high prices will keep down the consumption of non-essential drugs.

NCAER estimates of future demand of drugs on the basis of various assumption and taking into account the three critical variables, income per capita, per capita expenditure on health and employment in the organized sector, have estimated the demand for drugs in 1999-2000 at Rs. 159.960 million at constant 1981 prices.

It is clear from our analysis that drug prices will increase rapidly after product patent is accepted. In the situation where poverty is

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<sup>20</sup> B.K. Keayla, *Patent Protection and Pharmaceutical Industry*, A Seminar Paper on IPR, University OC Delhi-1993.

increasing and health sector expenditure is being slashed it is impossible to meet the drug's demand of India. Under structural adjustment programme the new drug policy has liberalised imports, removed restrictions on foreign companies and changes to its patent laws would only benefit multinational and increase dependence on imports with increase in drug prices.

Judging the cut-backs in central and State health's expenditure, low growth of agriculture, the reduced level of subsidies, higher prices of foodgrains, the increase in poverty and lower expenses on poverty alleviation programmes in real terms, the reduced level of cereal consumption, the increase in drug prices, and a high inflation, one is to conclude that in net terms the social cost of adjustments are unhealthy for the health sector.

## CONCLUSION

The health sector in developing countries has been adversely affected by structural adjustment policies. Macro and microeconomic theories indicate possible channels for such effects, primarily through altering income and prices broadly defined for the poorest and the most vulnerable. The analytical framework discussed in this dissertation also consider that channels of impact are complex and affect poverty and the distribution of income directly or indirectly. The indirect effects arise primarily from the linkage with macroeconomic adjustment. It tends to increase the need for both public expenditure reduction and devaluation, reinforcing the adverse impact on health sector through linkages discussed in previous chapters.

The general nature of structural adjustment, particularly the principle of 'Price should respond with market Conditions', tend to increase inequality. It implies a need to redistribute income from relatively plentiful land and labour, that is the main source of income for the poor, towards scarcer physical, financial and human capital, which are owned mainly by the rich. This may be further reinforced by devolution and the reduction in investment associated with adjustment.

The overall effects of privatisation' associated with adjustment policies, accelerate the increase in prices and reduction in wages and employment. In some areas, particularly health sector privatisation results

in higher prices for health services than would otherwise be the case. The liberalization of agricultural market benefits only a small proportion of non-poor households; poor food deficit households lose substantially, and increased producers prices may significantly increase the need for public expenditure reduction. Evidence suggest that overall impacts of cereal market liberalisatioin on the poor are decisively negative, at least in the short-run.

Systematic empirical studies suggest that most visible effect of adjustment is on health expenditure, and the one which has tended to receive most attention, is the impact of public expenditure reduction on the supply of services which effects health sector through various channels.

It has been argued that the overall process of adjustment has a significant impact on the health needs of different sections, through its effect on nutrition, the allocation of household time and living and working environments. At the same time, where a households income declines or its working time increases as a result of adjustment, its ability to translate its needs for health services into effective demand will be reduced.

Cost recovery has been widely proposed as a means of combating the reduced supply of health services resulting from lightening resource constraints. However, empirical studies reviewed in Chapter 3, suggest, that its potential to generate revenue is much more limited than was previously supposed, and that its impact on access to health care is much

more serious. The presumption that cost-recovery will increase efficiency is also questionable, in that the concept of efficiency used is unduly narrow, and excludes a number of important aspects, particularly access to health services, distributional efficiency and economy of scale, which may be seriously affected by cost recovery.

However, the indirect effects of public expenditure reduction are of substantially greater importance in the context of poverty and health. In particular, the reduction of public sector employment and investment may result in substantially lower employment in the formal sector as a whole. This increases the supply of labour to the informal sector as a whole, at a time of declining demand, thus depressing real incomes for many poor urban households. There are also knock-off effects to the rural poor, for whom remittance from urban relations are often an important source of income and a wider regional effect, through the reduction in demand for locally-produced goods and services, in areas where public employment is an important source of income. A further negative impact may arise from the potential reduction in public sector efficiency resulting from lower real wage levels.

Tighter monetary and credit policies increase real interest rates; they reduce demand and economic activity, discourage investment, compound the reduction in demand and real prices for non-tradable goods associated with devaluation, and reduce employment and real wages. The

most direct health effects of unemployment have led to a broad spectrum of health problems, higher IMR and increase in mental illness, etc. due to associated psychological, economic, and social conditions.

Food subsidies are one of the important part of social expenditure and of direct relevance to health. Pinstруп-Andersen study reviewed in chapter 3 surveyed existing impact of food subsidies on poor households in terms of real income, food consumption, and nutritional status. The overall implication of his findings is that reductions in budgetary allocations for food programmes may worsen poverty and decrease nutritional well-being.

In the case of India, my analysis of the impact of adjustment on health sector is restricted to health sector expenditure prices of food drugs. This was selected in view of the evidence that the impact of structural adjustment policies is most visible in these areas.

On analysis of health expenditures of centre and the states shows that the levels of public spending for the two years following adjustment, declined significantly. The actual values of health expenditure are lower than the values forecast at both levels, centre and the states. The declines are particularly large for the states. Our analysis confirm that the burden of health expenditure cuts has been borne mainly by the states, rather than by the centre. That fact, incidentally, suggests that it is primary health care, rather than the frequently national - level curative, higher education and medical education services, that have taken the most strain.



Analysis for impact of structural adjustment on food production, distribution and prices also confirm that the raising of agricultural product prices are considerably less beneficial to the poor.

The main reason for the increase in the prices of agricultural products has been due to the decline in fertilizers and food subsidies and increase in procurement prices of paddy and wheat. Our analysis of the impact of structural adjustment on food production, distribution and prices also confirm that there has been no significant decline in the food production; rather on the contrary food prices has increased significantly. As a result of increase in the prices of agricultural products, the real beneficiaries are big producers, who also happen to be big farmers, because of that the fact, the concentration of marketed surplus is in their hands, Consequently, poors due to increase in food prices, are bound to spend more on food items and reduce the level of consumption.

Substitution elasticity of food items, especially in the case of cereals. These factors are contributing to significant increase in poverty, because expenditure on cereals by those in lower end of income distribution, constitutes 80 per cent of their total expenditure. This would lead to increase in the health risks for poor people due to undernutrition or by the reduced capacity to spend more for health services.

The implications for drug prices are also serious. Prices of drugs in India are low because of drugs price control, and mainly because of the

patent system that the 1970 act provided. But after liberalisation, opening of the pharmaceutical industry and implications of Dunkel proposals would have a catastrophic impact on prices of drugs.

Overall, our analysis confirms that the health sector appears to have been the most vulnerable to the expenditure constraints imposed by structural adjustment policies. In fact, adjustment policies has failed to protect health expenditure. The result of reduced expenditure on public health services has been both to reduce their availability and their quality, as well as shortages of basic supplies in the health sector. In addition to its direct effects on the effectiveness of treatment, the reduced quality of health services have an important effect in discouraging their use. It leads to unbridled growth of private sector in health services. According to 'The State of India Economy' (1994-95) by Public Interest Research Group, the rapid privatisation has only succeeded in making the health facilities to the poor, a distant dream.

Finally, the increased vulnerability of India's health sector raises serious issues for the long term sustainability of public health services.

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