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Indexation - An Islamic Evaluation

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The decreasing purchasing power of money has been one of the most intriguing problems not only for the economists but also for the savers, lenders, and consumers. The inflationary tendency that enveloped the world economy after World War II and assumed alarming proportion during the seventies seems now to have become a secular trend. The economists' failure in averting this trend has not only convinced them of its weird coexistence with economic development and progress but, more than that, some of them have brought in a number of arguments to justify its existence to a certain limit and to decorate it with a constructive role in economic growth. Many countries have institutionalized it in the form of indexation by linking wages and loans etc., to cost of living or consumer prices. As the idea of indexation hinted at by Marshall, Jevons and Keynes is being sold by top modern economists like Friedman,(1) it has attracted some Muslim scholars too. Inclusion of the idea in the Report of the Council of Islamic Ideology on the elimination of interest (in Pakistan), though with a note of disapproval, is suggestive of its reach even in the Islamic circle of the economists and bankers. Abdul Mannan (pp.41-50) advocates it on the evidence of the *Shariah*. Many other Muslim economists have appreciated indexation though with reservations (Naqvi, 1980, p.32 and 1981, p. 121).(2) It, therefore, seems necessary to examine the idea carefully from the point of view of the *Shari'ah*.

A distinction should, however, be made between indexation of payments like wages, salaries, pension and social welfare benefits and indexation of loans. In Islam the two forms of payments are treated differently. Wages etc. are left free to be governed by the market forces but there is no such freedom so far as payment of loans is concerned. The following study will cover a historical survey of both forms of indexation but it will examine the *Shari'ah* position on the latter form only.

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1. Other economists in favour of the idea are: Fritz Machlup, Javier Marquez, S.C. Tsiang, etc. For others see References in the end.
2. Reference may also be made to the discussion on the subject at the International Seminar on Islamic Banking held under the auspices of Islamic Economics Research Bureau on the 15th-17th December, 1980 at Dhaka, Bangladesh. (See *Thoughts on Islamic Banking*, Dhaka, 1982, pp. 112-113). The issue also came up for inconclusive discussion in the Seminar on Monetary and Fiscal Economics of Islam, held at Islamabad, (Pakistan) in January, 1981 (*Ziauddin Ahmad*, 1983, pp. 30, 53).

Inflation has seriously affected two traditional roles of money as a store of value and as a dependable standard for deferred payment. The chances of economic growth are also reduced due to inflation. It leads to loss of competitiveness in world markets which worsens the balance of trade and causes the exchange rate to depreciate. The distortions that are caused by inflation are in some respects and to some extent removed by indexation, which may be described as linkage of regular payments to an independent measure of value.[(3)]

Techniques of Indexation

Domestic indexation may be roughly classified into advance and expost facto adjustments (or prefixed and post-fixed indexation) In countries like Brazil both adjustments are made. In the advance adjustment inflationary fluctuations in the next year (or projected inflation) are estimated in terms of percentage, and the rate is used as an adjustment coefficient. Fixed deposits, bills of exchange, debentures and convertible debentures are adjusted with this rate. Here both principal and interest are adjusted. This adjustment is understood to have served to encourage savings to a considerable extent and enliven the floating of long-term loans.

With regard to the ex post facto adjustment, an organization is entrusted with the task of checking up on the living cost and price indices which form the basis for the determination of the adjustment coefficient. The ex post facto adjustment coefficients are applied mainly to government bonds. They are also applicable to the taxes in arrears and the contribution by employers to social security. The adjustment coefficients are reviewed every month or every three months. Entrepreneurs are also obligated to reassess property in their possession. The appraisal is optional for operating funds but mandatory for fixed assets (Suzuki, pp.4,5).

Brief History of Indexation

It is difficult to trace the history of the idea of indexation although the recurrence of increase in prices has been a known phenomenon ever since the introduction of money. But the early price fluctuations were largely the effect of short term disequilibrium between demand and supply. Studies on increase in prices as a secular trend were made possible after complete data necessary for analysis were available during the last two centuries.

That Massachussetts had an issue of bonds based on a few commodities as early as in 1742 (Page and Trollope, p.46) is simply suggestive of an exceptional precedent without any follow up during the next 172 years. Theoretically, however, renowned economists like Jevons in the year 1875 and Alfred Marshall in 1886 (1926, p.7ff.) advocated the use of a standard unit of purchasing power in contracts for deferred payments and the latter reaffirmed this view in 1911. Keynes also advocated the issue by U.K. of treasury bonds of which the capital and interest would be paid not in fixed amount of sterling but in such amount of sterling as has a fixed commodity value as indicated by an index number (Finch, p. 2). According to Friedman the idea of escalator clause, a variant of indexation, dates back to the year 1707(1974, p.96).

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3. It should be noted that indexation and escalation, a variant of indexation, are often loosely used as inter-changeable terms. To be more precise, escalation clause is a contractual provision in the financial terms of an agreement that requires the payment of automatic increases or decreases in the event of certain price changes.

Indexation of Wages Etc.[4]

In the twentieth century Britain was perhaps the pioneer of wage indexation which she used extensively between 1914 and 1922 followed by Australia (1916), Belgium (1920), Norway (1921), Italy (1959), Palestine (1941), and Holland (1956). In Belgium since 1948 nearly all wage and rent agreements and social security payments have included cost of living adjustment clauses. Denmark has been linking all its wage contracts since the Second World War. Indexing in U.S.A. was introduced in 1948 by escalating social security payments, retirement benefits to federal employees, and wages of post office employees. Taxes that are expressed as fixed percentages of price or other value base are automatically escalated. The automatic escalator clauses also cover royalty payments, automatic insurance policies for repairing actual damage and fire insurance policies etc. France introduced indexation clauses in 1948 and reintroduced them after a ban on it in 1958.

Indexation of Financial Capital

In addition to indexation of wages some countries have indexed financial capital, viz. bonds, deposits, mortgages, loans and rents due. Finland in this respect is the first country to take the lead in 1945 followed by Palestine (Jewish Agency, during the last days of British Mandate), and Israel (1950). History of some loose form of indexation of bonds in France dates back to 1925 when government issues were tied to rate of exchange. Among other countries which have indexed a single bond or a limited range of contracts are Austria, Argentina, Iceland, Sweden, U.K. and U.S.A.

Among the non-market economies Hungary and China have tried to introduce indexation on a limited scale. Hungary compensates for price and rent increases by administrative action to adjust wages and other benefits. In 1950 China introduced parity deposit scheme under which deposits and loans were guaranteed in terms of four commodity units; i.e., rice, cotton fabrics, peanut oil and coal.

Indexation in Brazil[*]

Brazil is the only country which has introduced a most comprehensive form of indexation. The country has been plagued by inflation throughout its history, but during 1940s and 1950s, the rate of inflation accelerated dangerously. A concept of indexing was first introduced in Brazil in 1951 in a limited and somewhat improvised way. After 1964 a series of laws instituted indexing in a large part of the economy. The first law established indexing as obligatory for all fixed assets, permitted depreciation on the revalued base and gradually eliminated the 10 per cent tax on revaluation. Indexing was applied to back taxes owed to the federal government. The same law also authorised the issue of a new series of federal government bonds, whose principals were adjusted monthly according to the three-month moving average of the wholesale price index. Another law created a National Housing Bank to provide indexed loans and bonds. A law regulated housing rents through a different type of index. In following years additional laws were added to cover construction loans, non-residential rents, insurance, and back pay owed to employees. The principle of indexing was extended to a new

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4. In presenting this survey on indexation of wages and of capital the following sources are acknowledged in addition to those referred to in the References: Indexing Examined, Research Report by American Institute of Economic Research, December 30, 1974, p.205. "Thc Grass is Greener", *Economist*, June 15, 1974, p. 94.

* Summarised from Baer and Beckerman, 1974.

series of forced savings. The capital markets law (1965) contained wide-ranging provisions for the reform of Brazil's capital-market institutions, including various stimuli for the stock market, the long-term debt market, and the investment banks (Baer and Backerman, pp.37-38).

The indexing used was 'post-fixed'. A series of regulations from 1965 to 1967 created a new concept to be applied to the short term market: 'pre-fixed indexing'. In 1970 the government pre-indexed short term credit notes of its own in addition to its long-term bonds.

Since 1973 a new indexing scheme half-way between post- and pre indexing has been adopted for all credit instruments. The indexing coefficients are now calculated on a five-month basis, the moving average of inflation for the previous three months plus an official estimate for the next two months.

With the adoption in late 1968 of a 'crawling peg' exchange policy frequent small devaluations of the currency must be considered part of the overall indexing policy. It is a discretionary policy that can be based on factors other than Brazil's inflation relative to that of other countries. Unlike many other countries, Brazil has not indexed wages, although many wages are directly or indirectly established through guidelines set down by the government. In 1965, a formula was used which based the increase in the nominal wage for the coming year on the anticipated rate of inflation. Since the principal factors in the formula have always been anticipated rates of increase, and the government did the anticipating, wage increases in Brazil have largely been a matter of discretionary government policy and cannot really be said to have been indexed. The policy can better be described as wage control.

Most prices of goods and services, though not indexed, are subject to some direct and indirect controls. A council acts as a watchdog on many prices. If a price change is made in spite of its disapproval, it is likely that credit from the Bank of Brazil will no longer be available to the offending party (Baer & Beckerman, pp. 37-39).

It would be seen from the above history that coverage of indexation is not similar in different countries. The choice of index differs (in different countries), the most common being consumer prices or cost of living. The period of adjustment ranges from one month to one year; in some cases even three years.

Argument for Indexation

With the view of examining the economic significance of indexation it would be useful to reproduce the pros and cons of the techniques as discussed by the economists.

(1) As partly pointed out earlier the technique was primarily aimed at restoring two functions of money which are affected by inflation, viz. store of value and standard of deferred payment.

(2) The advocates of inflation compensation have seen it as an instrument which would help to secure economic stability, economic growth and equity (Robson, p. 53).

For the purpose of discussing its operation from these points of view it is assumed that inflation compensation is introduced without significant changes in nominal rate of interest from what it would otherwise have been. Argument in favour of inflation compensation as contributing to stability might be based upon its effect on savings. It is frequently suggested that inflation compensation would increase savings by way of interest effect.

Support for inflation compensation may also be derived from growth consideration. Growth will be expected if indexation resulted in an increase in the share of investment in the national income or, through its structural effect, it favoured choice of more productive investments. Marshall gave much weight to this structural effect in his advocacy of inflation compensation (Robson, p. 54).

The introduction of inflation compensation could also affect stability and growth by way of its impact on the distribution of income and capital although it is very difficult to foresee this effect on the economy as a whole, in view of its complex nature (Robson, p.55).

(3) Advocating the use of indexation in the context of U.S. economy, Milton Friedman visualizes the following merits of the technique: Indexation would temper some of the hardships and distortions that now follow from a drop in the rate of inflation. Employers would not be stuck with excessively high wage increases under existing union contracts because wage increases would be moderate as inflation recedes. Borrowers would not be stuck with excessively high interest costs, for the rates on outstanding loans would be moderate as inflation recedes. Indexation would also partly counteract the tendency of business to defer capital investment once total spending begins to decline - there would be less reason to wait in expectation of lower prices and lower interest rates. Businesses would be able to borrow funds or enter into construction contracts knowing that interest rates and contract prices could be adjusted later on in accord with indexes of prices. Most important, indexation would shorten the time it takes for a reduction in the rate of growth of total spending to have its full effect in reducing the rate of inflation (Milton Friedman, pp.174-176).

(4) According to some economists the absence of index linking may inhibit all forms of forward planning and contracts in a period of great uncertainty about future rate of inflation and this may have harmful effect on the stability of the economy (Fane, p.43).

(5) Indexation may improve the allocation of investment by removing the return simply to luck or skill in forecasting future prices and investment funds, inputs and outputs, and by reducing the effort that must be given to forecasting such prices, it may improve the performance of the economy as resources can be used more productively (Page and Trollope, p. 54).

(6) Indexation, according to some others, imposes distributive discipline on the growth of public spending by removing the inflation generated component of government revenue. Through this it may significantly reduce the tendency of the government sector to grow more rapidly than the rest of the economy during periods of high inflation. It also increases the transparency of the tax system and helps maintain the pattern of tax distribution. (For this and some other arguments see Tax Indexation, Reserve Bank of New Zealand Bulletin, January-February, 1981, p. 4ff.).

Arguments against Indexation

It will be seen from the foregoing that the merits attributed to indexation are generally theoretical. As against it the contestants of this approach have based their arguments partly on theory and largely on the basis of experience gained in different countries of the world. Some of these arguments pertain to partial indexation as is practised in a large number of countries while some others pertain to comprehensive indexation as exists in Brazil. These arguments are summarised below:

(1) By insulating a group of people from the ravages of inflation, a purchasing power clause in government securities would reduce the political opposition to inflation and there by tend to perpetuate the evil (Finch, p.11).

(2) The introduction of index clause, not accompanied by other measures, at a time when price increases are growing, might well be taken as meaning that the government had relaxed its efforts to control the problem. This would also imply a defeatist attitude toward the problem of inflation and would weaken public support for the fight against rising prices.

(3) In some countries there may be a problem of confidence in the index that is used, and doubts about its reliability might hinder sale of government securities that contain an index clause. In some countries there may indeed be no reliable index available. Howevei; if the index is made available and is considered adequate, there necessarily remains some possibility that it would be distorted by price control and subsidy measures concentrated on certain items included in it. Another way of manipulating prices may be the levy of heavy indirect taxes on the items not covered by index, or items which carry only a small weight; thus raising the cost of living without influencing the index of prices. This is done in Israel (Rubner, p.74). Another way of juggling the index may be through giving subsidies and through artificially cheapened imports to keep the index down. All these practices are common in Israel (Rubner, p. 74), Finland, Norway, the United Kingdom and Brazil (Page and Trollope, p.49).

(4) Practically many problems would stem from the double standard implied in the proposal- the existence of one form of money, legal tender currency, side by side with another monetary unit, the unit of purchasing power used in loan contracts. This double standard will necessarily create problems of three types; first, the problem of establishing a dividing line beyond which the indexed purchasing power cannot be used; second, the problem arising from the pure accounting difficulty of converting purchasing power clauses to money terms, for payments and for balance sheet purposes; third, the problem for banks and to some extent for other firms, of obtaining a balance of assets and liabilities in the new form to avoid gambling on the future value of money (Finch, p.14).

(5) It is most important to remember that in most of the countries practicing indexation, it has been partially introduced. At home partial indexation can always protect real living standards of those to whom it is applied, but only at the expense of those who are not protected. In countries that have indexed bonds the effects of indexing seem limited to diversion of savings when interest rates were higher.

Wage indexing seems to have a slight association with steady investment in Finland, Belgium, the Netherlands, and Norway (Page and Trollope, p.56). Partial indexing necessarily implies an assumption that some income should be less subject to risks of change than other. In case where investment is indexed the tendency of indexation in practice seems to have been to improve the return on capital in relation to that to labour. This appears actually to have happened in Argentina, Brazil, France, Italy, Sweden and the United Kingdom; and the successful opposition of the trade unions to its wider adoption in Austria has been due to fears of a similar outcome there. In Chile, Canada, Colombia, Iceland, the Irish Republic and New Zealand there is too little evidence to say whether any changes are associated with indexing and in the remainder there has been no apparent effect (Page and Trollope).

(6) The co-existence of indexed and non-indexed financial assets has led to considerable problems particularly when the rate of inflation varies significantly. Private savers will draw funds from non indexed accounts to purchase indexed bonds as has happened in Brazil (Guenther, p.27).

(7) Some observers are of the view that indexing has not had a major identifiable effect on the economy in any of the countries. It does not appear to have had a significant effect on inflation either way. Sometimes it has been part of an incomes policy that has changed relative incomes but had no more than a marginal redistributive influence which seems if anything to have favoured holders of capital rather than labour, with little effect on those receiving pensions or other welfare benefits. It does not seem to have had any consistent influence on the current account of the balance of payments or on external capital flows. Nor does it appear to have affected private saving, although in combination with other policies general indexation may have encouraged economic growth by reducing the element of uncertainty for potential investors (Page and Trollope, p.46).

(8) The use of cost of living index unloads the whole burden of monetary depreciation on the debtors' shoulders.

Defects in Comprehensive Indexation

(9) As regards comprehensive indexation it is possible only if rate of inflation is much higher than the market rate of interest so that the savers get poor or negative return on their money. In case the rate of inflation is less than the market rate of interest, there is no case for indexation. Yet, it is generally believed that good time to adopt indexation is the restoration of price stability for a sustained period (Campos, 1977). But price stability for a sustained period would discard the necessity of indexation.

(10) On theoretical plane indexation protects certain important groups from changes in the value of money arising from changes on the money side. But this ignores adverse changes on the goods side. Suppose that in a closed economy there is an earthquake or a drought which causes the T in the old Fisher equation to shrink against a constant M; in that case, the result will surely be a rise in price caused by falling off in the flow of goods. Indeed it is a condition of equilibrium in such circumstances that such a falling off must be reflected in real incomes. In such circumstances, an index which ties money incomes to a price index is a positively destabilizing factor; it is a recipe for built in

inflation (Hinshaw, p.12).

(11) In a country like Brazil it has been a tendency to keep estimated rate of inflation at a lower level so that the rise in real wages is less than the increase in general income. This is feasible only under regimentation as exists in Brazil. In the market economies indexation cannot prevent strong trade unions with the power to blackmail the community at everyone else's expense (Suzuki, p. 93).

(12) A very strong argument that is brought forward in support of indexation is its favourable effect on the distribution of income, but this depends upon the basket of items that are included in the index. Incomes, wages and salaries are generally nowhere fully compensated for a fall in purchasing power. In practice the tendency of indexation seems to have been to improve the return to capital in relation to that to labour (Page and Trollope, p.57).

(13) Even comprehensive indexation does not neutralize inflation because indexation schemes have inevitable imperfections which are not limited to the penalty imposed on hand to hand currency. In particular all feasible indexation schemes within the domestic currency system inevitably involve a lag between the period for which a change in the price level is observable and the period in which the price level adjustment is applied to the transaction. This lag - one of the inevitable imperfections carrying the inflation of a period over into the next develops because the change in the general price level of the period in which payment is made cannot be known at the time of the payment: the transactions of the period *determine* the simultaneous movements of the general price level. Compensation for a preceding periods' inflation is not the same thing as compensation for the inflation determining the real value of the indexed payment. Indexation cannot neutralize inflation the way in which simple arguments favouring indexation often suggest (Fellner and others, pp. 23-24).

(14) Brazil's experience gives strong support to the view that the removal of distortions caused by inflation is essential if a high rate of economic growth is to be achieved. In particular where economic development has high priority, those economic variables that are important for encouraging saving, investment, and exports cannot be permitted to lag behind general price increases. The Brazilian case does not, however, provide much evidence that widespread indexing is the most appropriate way to achieve this goal. Rather, it seems to show that discretionary action by economic managers was the main element in Brazil's success, and that the indexing was highly selective, flexible and subordinate to general policy considerations.*

(15) Effective and meaningful indexation would call for an effective government control over prices, wages, financial institutions and investment opportunities. It would also require a very basic role of the government in determining the basket of commodities that are to be included in the index.** And because in a comprehensive indexation system the government is a major borrower and wage payer, it not only

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* This observation is confirmed by different observers, see, for example Guenther, p.29 and Page and Trollope, pp. 48, 49.

** According to Marshall the task of publishing from time to time the currency value of a constant purchasing power cannot be performed properly except by a permanent government department (Official Papers, p.11).

manipulates the quality of the basket but also the prices. This can be tolerable only under regimentation as exists in Brazil.

(16) While giving consideration to the relationship between pay and price it had been a tendency in Brazil to keep estimated rates of inflation at lower levels. According to a study the rise in real wages in Brazil is much lower than the increase in general income. In a way it might be said that a considerably deliberate income policy was instituted in the name of indexation, and this was feasible only under a military regime empowered to exercise absolute control (Suzuki, p.5). Another study concludes that indexation in Brazil was not designed to maintain the real incomes of wage earners but only of creditors. Hence it has not been of much help in countering the trend towards increased concentration in the distribution of income. The distributional effect which indexing has had in Brazil is essentially between creditors and debtors, not between labour and capital (Baer and Beckerman, p.46).

In other countries too, introduction of indexation of wages etc. does not necessarily mean that full play is given thereafter to market forces. Government can abandon it if dissatisfied as happened in Australia, Finland and France where import prices made it impossible to maintain real incomes any longer (Page and Trollope, p.48).

(17) It is generally observed that the government juggles the index by subsidies and artificially cheapened prices to keep it down. Similarly as indirect taxes play a considerable role in the movement of retail prices, the deliberation on what indirect taxes to impose on what commodities are influenced by the weight of the latter in the cost of living index basket; as a result the government throws the main weight of indirect taxes on those groups of products that happen not to be represented in the basket or to carry only a small weight. Similarly the government also carries out de facto devaluation by creating multiple exchange rates of an unofficial nature; the terms of the value-pegging contracts usually provide only for changes in the official exchange rate. This is actually done in Israel (Rubner, pp.74-75). Countries in which subsidies, controls, and indirect taxes have been used to regulate the index include Norway, Finland, Israel and U.K. The most extensive manipulation is, however, practised in Brazil where the main object has been to alter the distribution of income from labour to capital and so to promote development by reviving capital market. The wholesale index is based on only 92 products and its weight is not representative of the average family's expenditure. In almost all the countries where public sector wages are occassionally indexed, wages are linked to prices, but the adjustment is not proportionate except in U.K. and U.S.A. In Italy alone the tendency has been to overcompensate (Page & Trollope, p.49).

Problems of Indexation in International Trade

Indexation covering all forms of income also cannot provide a defence against external events which limit or reduce the possible growth of total real income. The technique of indexation in foreign trade and payments would imply a large number of problems relating to measurement, assignment of weights to countries and commodities, etc., which would have to be solved in a manner acceptable to all concerned.

Leaving aside the purely administrative problems that an international system of indexation would create, the question may be asked whether indexation by overcoming the fear of future price increases reduces the pressure for further price increases or does it not equally engender a feeling of comfort whereby commitment to financial discipline, essential even in an index-linked regime of prices, gets gradually eroded. These are not trivial matters and there are no satisfactory answers. On a somewhat more abstract level indexation is bound to create problems in the crucial area of structural changes in the world economy. It would seem that the short-term advantages that indexation would bring about would lead to rigidity in the long-term. Indexation would make impossible for the world system of relative prices to function properly. Current scarcities and gluts would get frozen for a period of time and the incentives for innovations would disappear. If price changes emanating from natural phenomena were to be institutionalized in indexation, this would itself contribute to further inflation. Future planning would become difficult. A country's earnings would depend upon the rate of inflation in the advanced countries which is beyond its control.*

It might not be wrong to suggest that compared to overcoming inflation which is itself a highly complex phenomenon and where all kinds of solutions have already been tried with unimpressive success, indexation would be vastly more complicated to devise and operate. As to its chances of success we have to be entirely agnostic. According to some economists it is a recipe for built-in inflation (Hinshaw, p.12). According to a Finance Minister of Brazil "whatever use escalator clauses may have from the point of view of avoiding long-term distortions, they always create an automatic mechanism of inflationary feedback" (Page and Trollope, p.52). Thus indexation would mean living with inflation (Baer and Beckerman, p.37), not doing away with inflation.

The *Shari'ah* Approach to Indexation

The pros and cons of indexation as adduced by contemporary economists have been briefly dealt with in the above lines. In ultimate analysis indexation would mean that someone has to indemnify the damage caused to the purchasing power of money or for decrease in its value. This indemnity may be payable by the government, the employer, the borrower or the banker. In order to examine if the *Shari'ah* justifies such a payment by any of these parties we shall have to apply the Islamic law of compensation or the law of guarantee to these transactions.

Some scholars may interpret the Qur'anic verses like "So give full measure and full weight and wrong not mankind in their goods . . (7:85) to imply that the import of these verses calls the government for avoiding inflation (Khalid M. Ishaque, p.71) and stabilizing consumer prices. The significance of equilibrium as implied in the verses cannot be overemphasized but interpreting them in terms of monetary phenomena is far-fetched; if not distorted. Even though there may be no verses or traditions to directly touch upon the subject, the objectives of economic policy that were set and pursued by the Prophet and the pious Caliphs would recommend price stability in what we now call wage goods.

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* Summary reproduction of pp. 14-16 of the article entitled "International Economic Trends and Inflation Indexing" in *B. C. C. I. Review,* London, January, 1976.

Basically the accepted rule of the *Shari'ah* as reported in a Hadith is that no damage should be borne nor any should be caused (*la darar wa Ia dirar*) (Ibn Maja, Vol.2, p.57), and that a damage should be redressed (*al-darar yaza1*) (infra). But in the case under reference the question would arise as to who would be required to redress the damage caused to the money in the hand of the recipient. Thus it would be in the fitness of things to first examine the factors which are responsible for inflation or a rise in prices. In other words, we have to study the causes of inflation and determine the party or the person responsible for creating this situation.

With a view to determining the responsibility of inflation we have to analyse its causes to apply the *Shari'ah* arguments. It will, therefore, be advisable to shun the terms generally used in technical discussion of the subject. Thus during the course of this discussion we shall not mention the "aggregate excess demand" or excess supply factors nor "demand pull" or "cost-push" aspects of inflation. The analysis should proceed in simple language so that the principles of the *Shari'ah* can be applied to them.

Causes of Inflation

(1) A very important cause of inflation is monetary expansion which may take place as a result of rising public expenditure often through deficit-financing.* The responsibility of this expansion lies on the *government*. Another reason may be too much bank finance for which the *banking system* may be accountable for. Another cause that exists in countries like Pakistan is foreign remittances which become inflationary if these are spent on consumption rather than on investment. In such a case it is the *consumer* who can be held responsible for monetary expansion and inflation.

(2) Inflation also occurs as a result of disequilibrium between demand for and supply of goods. In addition to the factor of foreign remittances discussed above this increase in demand also occurs due to increasing population or urbanisation. It is the *society* on the whole that is responsible for a rise in price in such situations. Scarcity of supply may be yet another factor causing a rise in prices. This may be actual or contrived. In case the scarcity is caused due to physical constraints nobody except the *natural factor* is responsible for it. Temporary shortage of supply arising due to time lag between adjustment of supply to the demand can be remedied but the responsibility of this temporary shortage cannot be put on anybody's shoulders as the adjustment has to take its natural course.

(3) It may occur due to rising cost on account of excessive wage increases or due to heavy indirect taxes imposed by the government or due to exorbitant profits charged by the traders. *Trade Unions* are responsible for rise in prices in the first case. In the second case, the responsibility lies on the government while in the last case *the trader* is accountable for the increase.

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* According to some observers inflation in underdeveloped countries has nothing whatever to do with money supply. It depended upon the way money was spent no matter how the financial resources may have been raised. If total national investment was distributed between inflation creating and inflation dampening investment, price level would be kept under control (Extract from proceedings of a Conference held by International Economic Association at Kandy, Ceylon; 1970, p. 363).

(4) Inflation sometimes occurs as a result of devaluation. This is largely an *international factor*.

(5) It is sometimes imported.

Thus no single factor is responsible for inflation.

The Shari`ah Law of Repayments

In the *Shari'ah* return on labour contribution and on financial contribution is governed by two different sets of rules. The former is assigned a fixed share of remuneration. The government may, if necessary, fix a minimum rate of remuneration and leave the maximum to market forces. On the other hand, financial contribution in the form of a loan or a debt is to be repaid exactly in the same kind and quantity; any excess over and above the sum lent would become interest and is strictly prohibited. This fact is borne out in the Qur'an, "Wrong not and ye shall not be wronged": (2: 279), the Prophet's traditions, and the detailed discussion by all the jurists of all the schools of thought *without any exception*.

The Muslim jurists are so particular about this Qur'anic prohibition that they have disapproved this practice in all those transactions where deferred transfer of commodity or money is involved. This covers not only loans and debts but also credit, barter, exchange of currency, and debasement of currency, payment of remuneration after devaluation or revaluation, indemnity and change in the unit of currency at the time of redemption of loan.

There is no difference of opinion among the jurists that any increase stipulated to be paid on the amount originally lent out is interest and is prohibited. In the earliest days of Islam dinar and dirham were the currency. Before standardization of the coins during Abdul Malik's reign the value of the coin depended on the weight of gold or silver it contained. The two coins, and for that matter even gold and silver, were also acceptable as medium of exchange by weight, not by counting only. Guided by the Hadith that loan of money or commodity should be paid back in the same kind and quantity the jurists have opined that in case dirhams or dinars are lent out by counting, they will be paid back by counting not by weight. Similarly in case they are lent out by weight they will be returned by weight not by counting (Ibn Qudama, Vol.4, p.318; Sahnun, Vol.8, pp.131-132). This opinion was given because counting expressed the characteristic of money while weighing of gold or silver made it a commodity.[*] This distinction was made by the jurists in view of the Hadith that a fungible good is to be returned by its like (*mithl*). In respect of the loan of a commodity it is further provided by the jurists that it should be returned in the same kind and quantity irrespective of any change in its price at the same time of return of the loan (Al-Jaziri, Vol. 2, pp. 680-681).

An interesting issue involved in payment of sale price is change in the unit of currency in which the price is quoted. A Hadith disallows deferred payment of dirhams for dinar and vice versa, or silver for gold and vice versa. This should be exchanged on the spot immediately (Ibn Qudama, Vol.4, p.48). As a result the jurists have opined that

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* Some jurists observe that the prohibition of increase in such transactions has enjoyed consensus in the first century of Islam. Any decree given by any Court of law violating this prohibition is null and void. (Al-Sarakhsi, Vol. 14, p. 20).

in case of a credit sale, payment shall be made in the unit of currency quoted by the seller. Payment in terms of other currency than the one quoted by the seller cannot be deferred and will have to be effected without delay at the exchange rate prevailing *at the time of sale*. (Ibn Qudama, Vol. 4, p.48).

Another interesting discussion occurs in *fiqh* literature on the position of repayment of a loan in terms of a currency which has become debased, demonetized, or unpopular. This situation generally arose in the case of token coins like *fulus* but not gold dinar or silver dirham which were full-bodied money. The words used to indicate these situations are *kasid* and *fasid*. The word *kasid* implies demonetization or unpopularity. *Fasid* being a broader term than *kasid* implies the sense of debased or defective too. The question is: what will happen in case token money (*fulus*) which is lent out is demonetized. The answer to the question as given by (Ibn Qudama, Vol. 4, p. 325) is as follows:

> "In case the amount of loan is in terms of *fulus* or smaller pieces of a dirham (*mukassara*) which the government (*sultan*) has banned and which have become out of currency the creditor will take its price. He will not be compelled to accept this coin..., because the defect has occurred when the coin was in the borrower's possession... *The price of the fulus will be fixed as was prevailing on the date of borrowing* and the creditor will take it irrespective of the degree of decrease in its value. But in case the coin (*fulus*), inspite of demonetization, is still in currency and popular, the creditor shall accept the same."

This approach is based on a general principle that in the case of loan of fungible goods the creditor will be paid the same quantity of identical goods irrespective of whether the value of such goods increases, decreases, or remains unchanged during the period of loan.

The same approach has been made by the jurists in the case of payment of outstanding wage remuneration. According to Abu Yusuf (Alamgiri, Vol. 7, p. 147) the worker will be paid his contracted amount of remuneration even though the value of this money has changed before he is paid his due.

Another situation that causes liability is unlawful occupation of somebody's property (*ghasb*, usurpation). The usurper (*ghasib*) is called upon to return the goods or, in the case of destruction of goods, its price whenever the court orders him to do so. The problem arises as to the responsibility of indemnifying the owner in case the property in question is destroyed or the price of the property has decreased. According to *Majalla* (Article 900) the owner does not have the right to refuse from taking back his property even though the price of property has declined while in possession of the usurper. This is because of the fact that all fungible goods are to be compensated by similar fungible goods, not by price. The same principle will apply in the case of money. The same amount and kind of money as usurped will be payable to the owner without any consideration to its value at the time of payment. The usurper will not be required to indemnify the loss caused to the value of the property or money as a result of a fall in its price (Ibn Qudama, Vol. 5, pp. 221-222). (Alamgiri, Vol.6. p.399) upholds this opinion with the help of another example. According to it if a person who takes a good in his possession without the permission of the owner and sells it shall indemnify the owner with the price prevailing on the day of its sale (not on the day of claim or court decree) provided the good cannot be returned to him intact.

Differences arise among the jurists only when the usurped property loses its value absolutely or is destroyed. As to the question whether the price payable to the owner is the one ruling on the day of usurpation or the price ruling on the day property was lost or the day it was claimed by the owner, different jurists have decided the issue differently without violating the injunctions on interest (Al-Marghinani, Vol.2, p 356).

The above discussion leads to the fact that our *fiqh* literature is not unfamiliar with the concept of linking loan money or commodity with its purchasing power or future value. The approach to linkage as made by our jurists is very clear and consistent. The same consistency exists in case liability of deferred payment arises not as a result of a transaction of loan of money but even when it arises as a result of barter, demonetization, debasement, devaluation or revaluation, remuneration and compensation and indemnity. In all these situations a loan is to be returned in the same unit of currency and the same amount, irrespective of any change in its relative value in terms of other goods or currency. Any violation of this principle would be a violation of the Qur'anic prohibition of *riba* and of the Prophet's injunctions. The jurists are so strict on this point that they do not relax the principle even in the case of redemption of the liability of dower to a wife. According to *Alamgiri*; (Vol.2, p.205) the amount fixed for dower will be payable to wife without any regard to increase or decrease in the value of currency on the date of payment In the event of demonetization of the unit of currency (fixed at the time of marriage) the value of dower will be readjusted on the basis of its price in terms of legal currency as prevalent on the date of demonetization (not on the date of payment).

The Elements of Jahl and Gharar

Other objectionable points from the Shari'ah angle are the elements of ignorance (*jahl*) and uncertainty (*gharar*) that are observable in indexation. In the *Shariah* one condition of a contract of deferred payment is precisely determining the liability just at the time of making a contract. Ignorance (*jahl*) from this liability renders the contract void. In indexation the extent of liability is known only on the date it becomes due. In order to solve the problem of time lag between the period for which a change in the price level is observable and the period in which the price level adjustment is applied to the transaction, some countries have accommodated *projected inflation* also in the index. This means a provision to accommodate for a situation which may or may not arise at all. And if at all it arises, the nature and the extent of this situation is uncertain. Such conditions are termed as *gharar* in Islamic law. Thus while post fixed indexation involves an element of ignorance (*jahl*), projected inflation involves the element of uncertainty (*gharar*) too that make a contract null and void.

Rational Arguments Versus the Spirit of the *Shariah*

While the principle of linking loans and debts to purchasing power cannot be justified on textual grounds as discussed above, there may yet be some arguments to adduce for indexation on rational and logical plane. We may examine these arguments in the following lines:

(1) Some may argue that the phenomenon of world-wide inflation causing hazards in economic life of man was never experienced before. The degree of fall in purchasing power of money mainly during the seventies and afterwards has brought about

unmanageable distortions and deprived money of many of its characteristic functions. It is therefore imperative to do *ijtihad* and not stick to opinions formulated at a time when the situation prevailing in the later part of the twentieth century could not be conceived.

The answer to this argument is that *ijtihad* is done only where *nass*. does not exist. And because this problem is guided by *nass* (i.e., textual law), *ijtihad* is out of question.

(2) The Prophet has said that no damage should be done nor any should be borne, *Ia darar wa Ia dirar*. On this basis the jurists have observed that a damage should be redressed, *al-darar yuzaI* (Ibn Nujaym, p.58). Inflation is a damage to the purchasing power of money and is badly suffered by the creditor and the saver. Indexation is a redress against this damage.

In order to answer this question we shall have to examine the applicability of the Islamic law of indemnity in context of indexation. The law provides that a person responsible for inflicting a damage should indemnify the sufferer. And we have already observed in the above pages that inflation which is often the source of this damage is caused either by government, or by the society itself, or by consumers, or by natural constraints or by trade unions or traders or by international factors. In a larger number of cases all the factors taken together are responsible for inflation. The question will arise as to which of these factors will be made to indemnify the sufferer. In case trade unions are responsible for a cost-push inflation how a bank can be justified in making the entrepreneur indemnify the fall in value of its loan money? Will it not be a double punishment to the entrepreneur through paying higher wages to the labour and higher cost of loan to the bank? Similarly why a borrower should be made to pay for a fall in value of money that occurs due to demand-pull inflation?.

In some countries indexation is limited to government bonds. It means the government indemnifies only the bondholders. The question is: is it fair to indemnify only those who can spare their savings for long periods and leave the other inflation stricken classes? Another question would arise as to on whose expense bondholders are being indemnified. Public treasury is mostly financed by public taxes. In other words it is the society which is indemnifying the bondholder although everybody in the society is the sufferer. All these facts lead to the conclusion that indexation is not a just technique for punishing the main culprit and redressing injustice.

(3) It can be advocated that the government should index all its taxes and in return all its payments at least to the extent it is responsible for causing inflation through deficit financing and indirect taxes. While it is not possible to precisely determine the extent of responsibility of inflation in case of non-government sector; it is not equally impossible to ascertain the government's share of responsibility. Even otherwise, the government, by virtue of being guardian of the interest of the people (*wali al'am*) may indemnify the people of their loss in the purchasing power of money whether or not it is responsible for inflicting this loss. In this respect the guiding principle is "*al-darar yuzal*" (a damage is to be redressed). It is therefore the duty of the government to relieve the people of their financial hardship through indexing its bonds and securities.

The answer to this plea is that the principle of *al-darar yuzal* is applicable with some conditions, for example the rule is applied only when one is sure that a damage will not be replaced by a (bigger damage or a similar damage (*al-darar la yuzal bimithlih*). Another condition is that minor damage will be endured to get rid of a serious damage (*al-darar al-ashadd yuzal bil-darar al-akhaff*). The third condition is that a particular damage may be tolerated to redress a general damage (*Yutahmmal al-darar al-khass Ii daf al-darar al am*) (Ibn Nujaym, pp.58ff.).

Before applying these rules of law to indexation the reader is advised to recapitulate the discussion on the pros and cons of indexation in the foregoing pages. It has been pointed out that according to observers "indexing is a mechanism which is very much complicated to devise and operate". The question will arise whether we would choose to resort to a more complicated mechanism in place of a simple routine without expecting any check on inflation.

This would mean that we are replacing an easier procedure by a more difficult one. This would be a violation of the first condition of the rule as mentioned above.

There is no doubt that an Islamic state is supposed to redress the hardships of the people. This is particularly necessary in case the policy of the state itself is one of the main causes of this hardship. Monetary expansion brought about by rising public expenditure through deficit financing is treated to be a policy that often causes inflation even if no other factors responsible for this situation are combined. But the question will arise why the government resorts to monetary expansion. The answer is that the government does so for overall development of the community, the whole country and the posterity. Inflationary policies create infrastructure for overall growth and employment opportunities. Rejection of this policy would mean rejection of creating infrastructure and employment opportunities. It is not logical to accept the one and reject the other. Nor does it seem practicable to restrict the effects of the policy only to plus points. Confining the government expenditure to regular budget and neglecting the major development programmes involving huge expenditure can, for some time, save the people from the hardships of inflation. But at what cost? In the present day world at the cost of economic and political survival. This will mean protection from a minor damage at the cost of a serious damage to the community. This will violate another condition of the principle which says that a serious damage will be redressed by a minor damage.

Moreover, development programmes and defence preparations may be withdrawn in favour of the purchasing power of the present generation but this may be done only at the expense of freedom and the economic prosperity of the posterity. Thus a particular damage. *al-Darar al khass* will be avoided by exposing the country to a general damage, *darar'am.* This will be the violation of the third condition of the principle of *al-darar yuzaul* which says that a particular damage will be endured to redress a general damage. Thus the application of indexation cannot be justified on this basis.

(4) Another argument that may be adduced in support of indexation is that during inflation trade unions succeed in increasing their wages and the contractors also often add an escalation clause providing for an increase in the amount of their quotation in

case prices of their supplies rise in the market. If such increases are permissible in the *Sbari'ah* on the ground of increase in prices how indexation, which is a more sophisticated device of adjustment, can be treated to be unjustifiable.

It is a fallacious analogy because in the *Sbari'ah* remuneration for a service or price of goods is governed by a different rule than repayment of a loan, as noted above.

It will be found from the above lines that indexation fails to enjoy the sanction of the basic rules and the spirit of the *Shari'ah*. There are two alternatives before a saver: the savings may be invested or lent out. In the former case they will have to undergo the entire drill that investment in trade, industry, agriculture or transport go through. In none of these investments, profits or the purchasing power of the capital is ensured. In case these savings are lent out the lender would expect a reward in the hereafter in the light of the Prophet's saying that all loans are *sadaqa*. He should also incline to do what the Qur'an lays down: "If the debtor is in straitened circumstances then (let there be) postponement to (the time of) ease; and that ye remit the debt as *'sadaqa'* would be better for you if ye did not know (2: 280)". On the part of the borrower, however, its full return within stipulated time would be obligatory. The amount lying with the borrower would then be treated as if the same is lying with the owner. And lying with the owner does not guarantee the future purchasing power of the savings. This is as much logical as to return a loan of 1,000 kilograms of sugar with the same quantity of sugar irrespective of the relative change in its value over the period. No other standard of repayment is more equitable and least defective than this.

There are also some other rational grounds for rejecting the idea of inflation.

(a) "Value of money" is a relative term. It does not necessarily represent the intrinsic characteristics of money. The intrinsic characteristics of money are its role as a medium of exchange and as a unit of account. During an inflationary situation these intrinsic characteristics of money retain their role, remaining unchanged. What does change and is affected by a host of developments is the future value of money i.e. in terms of exchange value. The basic question is who is responsible for this change in the *relative* characteristic of money'? Obviously this change is not inherent in the money.

Again a change in the prices of individual commodities is generally not uniform and the relative value of money would vary with the magnitude and nature of change in prices. It means there are some other factors than money that prompt these available changes. And these factors are changes in the volume of money and its velocity, supply and demand of individual commodities, market imperfections, rigidities and expectations etc. All these factors, play a role in determining the prices which broadly reflect the value of money in terms of each commodity and transaction, but not the intrinsic role of money which remains intact with its inherent characteristics. Thus it is not the money that requires indexation; it should be something else than money that needs to be remedied.

(b) The choice of an index which represents the basket of consumer goods and their weights is also problematic. The index represents the consumption habits of an *'average person*,' which does not represent the overwhelming majority of actual persons.

Moreover, the basket will either represent the expenditure in the whole country/region or a fresh basket will have to be devised for each economic region representing a different mode of living, consumer items, price structure, substitutes, traditions, habits and such other factors. Another distinction will have to be made classwise. If a single basket is made to represent the expenditure in the whole country it will become unjust. If consideration is given to any single "representative" basket of goods it would not be fair for all people. Using many baskets of indexes, on the other hand, will become too unwieldy.

(c) The entire discussion on indexation seems to assume a permanent inflationary situation, but wisdom demands a consideration of the reverse situation also. If indexation is accepted as a fair mode of deferred payment what will happen in a protracted deflationary situation. Applied during high rate of deflation or during a recession indexation will result in a rising trend of purchasing power of money with ruinous psychological reactions. It will not need many weeks to the collapse of the whole monetary system and possibly a chaotic situation in international trade and payments.

Inflation is admittedly an evil, but rather than trying to cure it through a dubious device, every effort should be made to fight it by means recognised by the *Shan'ah*. One may point out the recent experience of Chile in this connection. Chile was able to control inflation by drastic reductions in public expenditure and adjustments in the exchange rate of the currency leading to increased imports forcing down prices at home.

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