

Life insurance operations can be analysed from three broad economic angles : first, and foremost, life insurance as a product, a service, that meets a potential demand from individuals. People may decide to take out a life insurance policy because they are worried about the possibility of leaving their dependents deprived of the current income. People need security, it is a need which stems from the instinct for stability and certainty. Thus, the analysis of this particular aspect of life insurance will focus on the role it plays in meeting a basic economic need of each individual it protects.

The second economic angle of life insurance concerns its savings aspect. In many countries that form of insurance provides a welcome means of saving for many people. The success of life insurance operations, therefore, depends to a great extent on whether the conditions for saving are as attractive as those offered by other investment opportunities. This will give me the opportunity to discuss, inter alia, the question of inflation as a deterrent against the traditional life insurance programmes.

The third broad aspect provisionally may be presented in this way : what global life insurance transactions mean for the national economy is not only the sum of the services life insurance renders to the individuals it protects. Life insurance as a global set of financial transactions and as a subject of national activities carried out by life insurance companies contributes to the national product and to the national income in many ways. It has a bearing on savings and investments and on the allocation of economic resources, which in turn have an economic value per se, independently of the premiums and indemnities received and paid. Insurance institutions employ people, promote training, pay taxes and, more generally, make the national economic life richer and different from what it would be if they were not there. My lecture will end with some reflections on this subject.



I. Economic functions of life insurance at individual level

I think it might be useful to start this analysis with a small clarification. In some instances, life insurance is associated with the protection of human life; the value of the policy might then be taken as the value of a human life. It is obviously a wrong association which may give rise to a moral problem. From a philosophical standpoint, human life is endowed with a value beyond any comprehension. In this sense, to assign a given monetary value to a human life, simply does not make sense - to some this may even seem as blasphemy! Expressions such as "Mr. X is worth a million ruppees", in the strict sense, are absurd.

Life insurance is not connected with human values, but rather with the economic value of a human life, a value derived from its earning capacity and the financial dependence of other lives on that earning capacity. In that sense, it may be stated that life insurance meets a number of different economic purposes - nothing more. For insurance, life insurance may be necessary : (a) to ensure a given income for the family after the death of its head; (b) to provide for a disability and retirement income; (c) to be used as a guarantee for business purposes. The above points are important, sound and correct, and the following paragraphs are a brief elaboration on them.

(a) Income for the family

By means of life insurance a person can make sure that his wife, children and other dependents will benefit from a certain income, whether he is alive or not. In this way, he can spare his family the disruption of earnings that would result from his death and, possibly, he can leave his family in the same economic position as they would have been in had he lived. The objective of providing economic means to dependents in case of death is generally considered as the first economic function of a life insurance policy. In this respect, quantification of these means stems from two different, although very much inter-related, bases : (1) the capitalized value of the future net earnings of the policy holder; or (2) the amount that would be possible to calculate to measure the needs of the family in the event of death of the

income producer. This latter approach (the so-called "needs approach"), takes into consideration not only what the expected gross economic needs amount to, but also any resource (e.g. social security benefits, family support, other benefits) that may be forthcoming in case of death.

For the individual policy-holder, this sum seems to set the upper limit of his individual demand for life insurance. It is not to be expected that the family is economically better off without its breadwinner than with him. So that any sum of life insurance above those limits would normally mean an excess of what is normally considered as an "insurable interest". However, there are other factors related to the demand for life insurance that are not directly derived from the above considerations. Among these factors, two are of particular relevance, as follows : first, life insurance as a provider of the so-called "clean-up fund" which is meant to cover the expenses that emanate from the death of the insured and to liquidate all current outstanding obligations, such as :

- Hospital and doctors' fees connected with the last illness;
- Funeral expenses;
- Personal obligations, including unpaid debts, household bills, installment payments, personal loans;
- Cost of estate administration;
- Estate, inheritance, income and property taxes.

Second, life insurance as a provider for home mortgages redemption needs plays also an important role. In fact, home ownership burdened with a mortgage poses generally a financial problem in case of death. Mortgages are amortized over a period of years through installments out of the income of the head of the family. It is highly probable that an unliquidated balance will be still outstanding upon the death of a person with dependent children. A life insurance policy for at least that unliquidated balance has in this case a twofold function : first and foremost, by providing the funds which are needed for payment of the outstanding debt, it will reduce the amount of income that would otherwise be required to meet the basic family needs. Second, it helps obtain the mortgage itself from the financial institutions.

These institutions could be reluctant to make a loan to anyone whose income might be discontinued in case of death. In that respect, mortgage insurance lowers the rate of interest and, by facilitating credit, has a positive effect upon building industry and the related trades.

(b) Retirement and disability income

A typical "life policy" provides a sum of money in case of death. There are, however, other categories of policies related to the life insurance business, that provide indemnities in case of the insured living to a certain age. The various categories of life policies will be dealt with by more competent lecturers at this seminar and I would not like to dwell excessively on the matter. The only thing I wish to single out is the need, which arises in the course of a man's life, and for which the life insurance industry has developed an adequate product in the form of annuities provided as long as the insured person is alive.

These categories of life policies "in case of life" can be also made operational in case of total and permanent disability of the insured person. In either form (whether the annuities are paid at the age of retirement or, also, in case of disability), the indemnities respond to the need of providing means for covering consumer and household expenses of those who have lost the capacity to work. In that sense, the particular category of life insurance I am referring to aims at meeting a need of a similar sort as the one described earlier. The point is that a family needs financial means, either because its head died, or because his age or health situation do not permit him to carry on his professional life, or because he is otherwise prevented from being a salary earner, or otherwise producer in the economic life.

(c) Business insurance

An economic need for life insurance arises frequently from what some authors refer to as a "key man indemnification", i.e. a sum which is intended to offset the economic loss resulting from the death of the person whose capital, technical knowledge, experience, business connections and personal

good-will were an important asset for the organization and a necessity for its successful operations. The loss of this person for the organization concerned results therefore in a loss of real assets, and a life insurance may be taken out in order to provide compensation for such loss.

What will be the value of the policy that will be contracted for that purpose? In other words, what will be the quantified volume of the demand? In most cases, the sum insured is decided in terms of the expected earnings that will be lost in case of death; it may also be based on the additional compensation that will have to be paid if a replacement of the "key man" is needed. In other cases, the basis for indemnity can easily be established when protection is required in connection with some specific research project of temporary duration. The funds invested in the project may be lost - partially or totally - if the person in charge dies, and his or her life may therefore be insured for that sum.

Another important feature of life insurance in connection with business is that it permits the continuity of existence of commercial or industrial enterprises, particularly those set up in the form of general partnership. In general, any change in the partnership of these enterprises (due, for instance, to the death of one of its partners) causes its dissolution and liquidation follows as a result. This almost invariably results in a severe shrinkage of assets, because these have to be disposed of at low prices, while good-will is lost completely. Another possibility is that the surviving partners purchase the interest of the deceased, but either way they can experience a loss, or an interruption of their income, or a need for considerable liquid funds, or all the three factors combined. Each partner may be insured, therefore, for the amount of his interest in the firm, the insurance being owned by either the partnership, or the other partners. The life insurance proceeds, in case of death of one of them, are used to purchase the interest of the deceased.

~~There is a demand for a similar sort of agreement for the shareholders~~ of a closed corporation, for whose shares no ready market exists. While the death of a shareholder does not legally dissolve the corporation,

practical difficulties may arise when it is attempted to continue operating the business. These difficulties are similar to those referred to in the above paragraph on partnership.

Another aspect of life insurance as applicable to the business life is connected with the protection of creditors. Something has already been said in this respect when reference was made to the home mortgage redemption cover. In more general terms, the argument could be applied to any credit operation where a risk of non-repayment of the debt exists in case of the debtor's death or illness. The economic advantages of insurance of the debtor's life lie mainly in eliminating a risk which would make the credit operation more difficult or more expensive. In either way, economic transactions would be affected as a result.

To overcome these difficulties, the debtor provides the creditor with a policy on his life, thus ensuring that the balance of debt outstanding following his death will be paid off immediately by the insurance company. Such a policy may also provide disability income.

II. The function of life insurance as a means of personal savings

The enumeration of the economic functions of life insurance would not be complete without a reference to its role in the institutional field of personal savings. In fact, the commercial and financial systems used in many forms of life insurance (the so-called "whole life", endowment, annuities, etc.) result in much higher savings than those built up in any other class of general insurance.

Why this is so and what makes life insurance a savings medium will surely be discussed in depth at other lectures in this seminar by more competent technicians. Therefore, I do not need to dwell much on the matter, especially as most of you are probably familiar with the particular system of life insurance that commands the payment for the risk by the policy holder long before the risk is run by the insurance company. In the first year of a twenty-year contract, for instance, the insured will be requested to pay an annual premium which is far too excessive for the risk in that

particular year but which will be partially used by the insurance company many years later, towards the end of the contract. In this way, the premium system adopted by insurance companies involves an implicit saving during the first years of the contract - a saving that the company sets aside in order to meet the obligations as and when the indemnity or the maturity of the policy so requires.

The saving thus accumulated is important for the policy holder in at least two ways : first, savings will be made available to him when his family or he himself will be most in need of it : the moment where the insured's earnings are likely to stop, either because of death, retirement or disability. Second, because the savings will yield an interest and this interest will bear upon the amount of premium. As you all know, the premium of a life insurance policy is calculated not only on the basis of the risk for the company (the amount likely to be paid out on indemnities because of premature death) but also on the basis of the interest that the company discounts from the investment of the policy reserve. A greater amount of savings and higher interest rates would result, therefore, in smaller premiums to be paid by the policy-holder or in a higher amount of the insured value.

The attraction for the public of life insurance is therefore not only related to the protection function it provides, but also to the performance of the life insurance company as a savings institution - and even to the attraction that the very concept of savings is going to inspire.

You all know that the long-term savings that are normally built up through a life insurance policy are negatively affected - as are long-term savings in any other financial system - by the phenomenon of inflation, in the same way that a bank savings account is affected by a general increase of prices. The premiums paid are nominally related to the face value of the insurance policy, but the monetary unit which is common to the two factors (premiums and indemnities) often does not keep the same purchasing power. In other terms, successive premiums of one and the same policy are paid with a currency which keeps the same name as that which is utilized for the final payment of indemnities - but has rarely also the same substance.

Hence, life insurance carrying a strong savings component is much less attractive in countries where inflation is a regular phenomenon and where people have learned to live with it. Furthermore, a kind of correlation may be established between price stability and success of life insurance plans which are endowed with a strong savings component (like "Whole life" policies, endowment programmes, but not short-term or group insurance programmes where the savings component is less important.) Therefore, the inflationary element - which is an effective deterrent for the promotion of life insurance policies - was dealt with in some countries through the indexation of face values and premiums. The principle is simple but its application is not. In fact, indexation according to rates of inflation can only be successfully carried out if companies are provided with investment outlets for the reserves they have accumulated permitting these reserves to be placed in inflation-free securities. The real problem is that this type of securities is difficult to come by. It was thought, at one time, that buildings, real estate and shares guaranteed stability. However, this concept proved wrong in many cases.

Life insurance companies, rightly, prefer to invest the amount of their liabilities in diversified securities which have a guaranteed fixed interest rate. One reason for so doing is that, as it was previously suggested, the premium they collect from the policy-holders would suffice to pay the benefits, indemnities and annuities for which the company is liable only if the accumulated reserves yield an interest as per the stipulated rate. This condition is not always met by assets which maintain their real values but have variable rates of yield. Second, companies should ensure that the amount of investments provides for the payment of matured policies and other benefits. This requirement comes before any other consideration, be it technical, commercial or financial. Now, it seems obvious that investment in real assets (buildings and shares, for instance) at the same time carry more risk of fluctuation than assets in fixed interest securities (bonds, mortgages, etc.). In other words, to the extent that the obligation for the insurance company is stipulated according to the face value, the investment policies of that company have to be drawn accordingly, even though another type, a more flexible investment

policy would be probably more rewarding to the policy-holder and to the company. The emphasis here is on "probably", meaning that the operation implies a risk (a risk of not being able to pay the nominal amount of the insurance policy) and this risk is incompatible with the security performance which is normally expected from a life insurance company.

In addition, laws and regulations which apply to life insurance companies are normally oriented towards fixed interest assets, like bonds and debentures, mortgages, government securities, policy loans, etc. In the United States of America, to mention only the country where the volume of life insurance transactions is by far the world's largest, these categories of investments account for more than 90 per cent of all investments made by life insurance companies.

The above can be resumed as follows : there seems to be a conflict between traditional life insurance programmes, with a strong savings element, and the inflationary process that now affects the majority of countries, both developing and developed. Effects of inflation would be overcome - at least partially - if the reserves built up by life insurance companies were invested in assets which were re-evaluated in monetary terms, as the currency devaluates in purchasing power. Investments in these assets, however, are rarely compatible with the kind of solid security performance that life insurance companies should follow under all circumstances and, also, with the current system of calculation of premiums which means that the interest rate of the investments should not - under any circumstances - fall below a specified level.

A number of countries attempted to overcome the above difficulties, for example, a system of "separate accounts" was introduced mainly in the United States, and was primarily used for group pension schemes. On the basis of this system, the insurance company invested the reserves derived from a particular contract in any type of assets that the pension buyer selected - at the latter's own risk, of course. Another system consists of variable annuities, on both group and individual basis, for which common stock portfolio is used as investment medium for the reserves. Likewise, the actuarial basis has been developed for variable life insurance contracts

in which the face value of the policies will vary according to the performance of an equity or shares portfolio.

What is the interest of these systems in the context of the developing countries which are affected by heavy inflation rates? My personal view is that anyone of these systems - or of the many variations available - has its merits in specific cases but that, in general, it is difficult to expect from any of them the fulfilment of the basic requirement of a life insurance policy, i.e. the certainty that the indemnity will correspond to a given purchasing power or a given real value. First, because the systems referred to above can only operate successfully in association with a vigorous, flexible and solid local stock market, and this condition is non-existent in the majority of developing countries. Second, because even the best stock markets in the world have failed in recent times to provide the evidence that stock, shares and other securities of this type can retain constant values in real terms.

Wellinformed opinion holds that protecting real values of life policies - and thus providing effective support to the national insurance market - can only be achieved through energetic and keen government action. Two main arguments are generally used in this connection :

1. In some countries, the governments, while promoting a policy of prudent administration of the funds invested by life insurance companies, have also provided these companies with some investment opportunities in the form of government-guaranteed, indexed, or semi-indexed securities. This means that, to a certain extent at least, these securities have monetary values that increase as the purchasing power decreases; therefore, face values of insurance policies can be increased accordingly.
2. Indexation of face values can also be achieved, as is generally the case if fixed-rate securities yield an interest rate that bears a relation to the rate of inflation, so that the former compensates the latter, at least to a certain extent. If this is so, face values would tend to adapt to inflation, in a participating (with profits) policy, provided however that a second condition is met : that a substantial part of the returns on investments reverts to policy holders. This is the condition

that governments should enforce. In many countries this has been done and it is stipulated by law that a high percentage (60 to 90 per cent) of the profits - derived from the difference between the actual rate of interest and the "technical" rate, which is taken into account in the tariff calculation - reverts to policy holders. Not all the problems that arise out of inflation are given due consideration here. The above tries only to identify some of the issues, but it is not intended to provide a full analysis. I simply wanted to draw your attention to the problem and to urge both lecturers and participants in this seminar to give it some careful consideration and to analyse it.

III. The economic functions of life insurance at national level

The last subject which I should like to touch upon briefly is that of life insurance as an economic sector contributing to the national product. The concept seems clear: life insurance activities, as all other economic activities, increase the amount of the national production, that is, it provides economic benefits to the national community. There is no doubt about this question. A little more difficult to define are the elements of the activities carried out by insurance companies which are integrated in the national production and how to quantify these elements in terms of volume of GNP.

There are at least three criteria for the analysis, which should be mentioned :

1. The first criterion is very straightforward : life insurance companies provide security to their clients. What this security means to the people, the value that they attribute to it, can be measured by the amount of money people pay for it (premiums). In other words, people give priority to life insurance rather than to anything else the money spent on these premiums could buy. The services thus provided by a life insurance contract - and the total contribution of the life insurance industry to the national economy - could therefore be evaluated in terms of money by the amount of premiums paid, or the value of goods and services thus foregone.

2. A second criterion implies a more restrictive approach : the real contribution to the national product is valued not according to the premiums, but the net expenditure made by the community of policy-holders. This community accepts to spend money on the services it expects from the companies, but the net expenditure includes not only premiums but also, added to premiums, the interest on investments foregone and, deducted from premiums, indemnities, maturities, policy-holder dividends, plus the life reserves that are put aside for the purpose of future indemnities and maturities. In short, what the people pay to insurance companies and what constitutes a monetary value of the services the people receive is what the companies would call their "gross income". This, roughly, would be the contribution to the national product (or GNP). On the other hand, contribution to the national income - conceptually equal to that of the product - is the total amount of salaries and commissions, rent and dividends to share-holders paid by the life insurance companies. The aggregate amount of these disbursements would coincide, roughly, with the amount of gross income (see above). This concords with the usual basic definition of "product" and "income" in the national accounting system : the volume of financial resources which consumers contribute to firms (payment for goods and services) equal to the income of production factors, paid by the firms.

3. A third, and more realistic interpretation, would take into account a variety of factors other than those set out above. As Dr. R.M. Crowe pointed out in an article published in 1966 ^{1/}, the real contribution to the national economy includes "quantifiable contributions" of different sorts. In principle, three main categories may be identified :

- Direct injection of income into the country's economy through the payment of both living benefits and death benefits to policy-holders and their beneficiaries;

^{1/} Dr. Robert M. Crowe, Professor at the University of South Carolina : "The life insurance industry and the South Carolina Economy", in Business and Economic Review, University of South Carolina, Feb. 1966. Dr. Crowe is, at the time of writing, my colleague in the UNCTAD secretariat.

- Revision of income to the national economy (business, individuals and governmental institutions) through purchases by the life insurance industry of a variety of goods and services and through payment of taxes. This item includes taxes, licence charges and fees paid to the state and municipal governments; salaries and commissions paid to employees and agents; dividends paid to national share holders; office equipment and supply; medical examination and inspection fees; payment of fees for accounting, actuarial, legal and investment services; and miscellaneous expenditure for many other purposes. (This item would correspond, roughly, to the concept of GNP as set out above.)

- Provision of venture capital for use on various investment projects. For example : purchase of homes and farms; loans to public institutions for housing, health, educational and other projects; construction of office buildings, shopping centres and other commercial properties; expansion of public utilities, railroads and industrial firms.

A complete picture of the contributions of the life insurance industry should also include the so-called "intangible factors". Difficulties of measuring or quantifying these factors should not be an excuse for leaving them aside. These intangible contributions include such factors as the encouragement of saving among policy-holders; the decrease of uncertainty and worry which would reduce their efficiency; the increase of credit-worthiness of the insured; and, the preservation of health through the efforts of life insurance in the field of medical research and other types of loss prevention.

Another related unquantifiable factor should bring into the picture the balance of payments effects derived from the existence of a national market for life insurance. In other words, the national benefits derived from the existence of a national market should take also into consideration the costs in foreign exchange which would result from its non-existence. Presumably, the people who need cover, and have adequate financial resources, but could not buy this cover on domestic market, would turn to foreign markets.

These operations on foreign markets would generally affect the country's balance of payments position in a negative manner.

Another factor of difficult quantification refers to the nature of the investments made by life insurance companies, a concept beyond the mere question of the volume of these investments. Savings derived from life insurance operations are in general of long-term nature; in fact, the longer the duration of the policy, the higher also the amount of savings, so that the global amount of investments made by the insurance companies may be planned on a long term approach. This has manifold effects. For instance, it helps reduce inflation. Also, it contributes to investment in infrastructure and industries, activities where short-term savings are generally not suited and also where massive foreign capital would otherwise be necessary. Here again, life insurance transactions may influence favourably the conditions of the capital market, and even balance of payments and national indebtedness.

The setting up of efficient domestic companies to meet the national demand for life insurance is therefore, for a variety of reasons, part of the measures in the field of economic development that should be given strong consideration by policy-makers in developing countries - and by referring to "efficient domestic companies" brings me back to the main purpose of this seminar. Making companies efficient invariably means helping the national economy and every individual who is part of it. And after all, is not this seminar, as well as the entire UNCTAD educational programme for Asia and the Pacific, what it's all about ?

NOTE :

A number of books and manuals of general interest are available on the subject of economics of life insurance. The preparation of this paper owes a great deal to the following two works :

- "Life and health insurance handbook", edited by Davis W. Gregg and Vane B. Lucas, 1973, Richard D. Irwin Inc., Homewood, Ill., USA.
- "Life Insurance", by Dan H. McGill, 1967, Richard D. Irwin Inc., homewood, Ill. USA.