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INTEREST RATE, TRANSACTION COSTS AND FINANCIAL INNOVATIONS

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Abstract

Capital Market is - must be - imperfect in the sense in which economists use this term; for, it involves a relationship in time between the lender and the borrower in the context of uncertainty. However, it does get progressively integrated, widened and deepened with economic and financial evolution. How does this come about is the question I discuss in this paper.

The crucial variable in this context seems to be transaction costs (both administrative costs and default risk). Financial innovations reduce these costs and thus lower the costs of lending and borrowing (not completely represented by the interest rate) and narrow the interest rate differentials or the "gap" as Hicks terms it. This has saving, investment and output effects. Such is the broad theme of this paper.

In the literature, not much attention is paid to the role of financial innovations and transaction costs; the discussion is dominated by the interest rate question largely because a large part of monetary and banking theory involves what Pesek calls "factless theorising" and a macro-approach; to identify financial innovations and their impact on transaction costs requires a micro-approach and reliance on micro-economic data.

Interest Rate, Transaction Costs and Financial Innovations

The fragmentation of the capital market in the LDCs is generally attributed in the literature to the interest rate policy pursued and it is argued that with a high interest rate, these imperfections would be removed and their saving and investment would be greater than what they are. This diagnosis and this policy advice rest on a theoretical model that is, by and large, irrelevant for analysing the problems of economic evolution. The real question to be posed is: how and through what mechanisms the capital market gets integrated and thus help the process of economic development.

It is not possible to tackle this problem without some understanding of the process of economic evolution and the role of innovations in this process. How financial innovations tend to integrate the capital markets through reduction of transaction costs is discussed in Section I. Section II deals with the actual evolution of the credit market in a specific rural set-up; it is shown how further development of this market could have favourable impact on saving, investment and output. The final section indicates the nature of financial innovations that are essential for such a development on the basis of an actual case study of a commercial bank.

I. Financial Innovations and Economic Development

Limited Relevance of the Theoretical Model: The theoretical model, on the basis of which advice with regard to development strategy and policy is offered by economists, is in fact not equipped to deal with basic problems of development. It focusses on allocation of given resources on the basis of given supply and demand schedules and a perfectly competitive market-form - in which the actors or dealers are all alike. The focus, on the other hand, of a theory of economic evolution has to be the question: how and why supply and demand schedules and the market forms change and why behaviour patterns of different actors are not the same. Economic theory does not deal with the process of economic evolution in historic time; hence however relevant its policy prescriptions may be for certain short-run situations, it is not possible to draw meaningful inferences about development strategy and policy simply on the basis of this short-run static model.[1]

Again, its concept of competition is a mechanistic concept; it does not deal with the essence of competitive behaviour - the powerful motivation to do better than the others in an environment in which the future is unknown. The concept of competitive behaviour to be meaningful implies, as it must, the possibility of attaining monopolistic or semi-monopolistic positions, and at the same time an ever-present threat of competition. The competitive markets of theory rule out competitive behaviour; they assume only adaptive responses to changes in socio-economic environment - responses that are prompt and rational and are uniform for all the actors.[2]

Economic evolution cannot take place with such adaptive and uniform responses; if changes in the external environment were the main-springs of economic evolution, there is nothing much to learn about the relationship of human behaviour with the process of evolution and no policy advice is required from economists. The essence of the processes of evolution in all spheres of human life is, however, the ability to respond creatively to changes in the external environment - the creative response which alters favourably the environment itself.[3] Hence a theory which ignores entrepreneurial behaviour and does not distinguish between adaptive and creative responses to objective opportunity can hardly be relevant for understanding the problems of socio-economic change.

The concepts of evolution, competitive behaviour and creative response to challenges - all these reflect the significance of innovations - changes in production and consumption functions, introduction of new goods and services, changes in organisation and market forms. Any theory that deals with the evolutionary processes has thus to concentrate on the impact of innovations on economic evolution. Our theoretical tools are inadequate for the purpose and so is our advice on the basic fundamental problems of development. Since the economists look at reality through their irrelevant theoretical model, their "pungent sense of reality", to use an expression by William James, has become atrophied. They have even lost the ability of direct perception - of intelligently and creatively responding to the challenge of the development problem. Hence there are no innovations[4] in economic theory and economists have become "dentists", to use a phrase by Keynes,[5] much before the age of dentistry has set in.

Finance and Development: It is for some such reason that the economists have hardly been able to appreciate the role of Finance in economic development; in fact the dichotomy of the "real" and "monetary" factors persist in spite of Keynes in the literature. And those who have tried to integrate the two sets of factors have done it on the basis of the same theoretical tool of a competitive market. Capital market is assumed to be perfect; if the resources do not flow where they should, obviously the interest rate policy - the price policy - must be defective. Once these distortions caused by policy are removed, the imperfection in the market would be eliminated and resources would be allocated "rationally". The basic policy guide-line suggested by this analysis is to have an interest rate that reflects the real scarcity of capital.[6]

Several questions arise in this connection. What is an interest rate? What is capital? Are these two "real" factors or are they "monetary" phenomena? What do we mean by "scarcity of capital"? In spite of Schumpeter, it is not generally appreciated in the literature that both "interest" and "capital" are monetary phenomena and that Finance impinges through these two factors on the process of development.[7]

The interest rate (monetary factor) has to bear some relation to the rate of profit (real factor). Unless one assumes away technical change, there is no reason to believe that the rate of profit should be higher in the LDCs than that in the developed countries. If profit rates are not different, why should interest rates be different? Again, why should the profit rate be related to "scarcity" or "abundance" of "capital"? In fact, all these three

terms are meaningless. As a matter of history, there has been no trend in the pure interest rate (corrected for price change) in the developed countries for the last two hundred years.[8] Economists need to have a sense of history to understand the process of economic evolution.[9]

Transaction Costs, Financial Innovations and Development: The real problem to be examined is quite different. One has to begin the inquiry with the question: why are capital markets imperfect, and how, in spite of the imperfections do they get integrated with economic and financial evolution?

The transaction which takes place in a capital market relates to a relationship over a period of time between a lender and a borrower. Hence the product is not merely finance; the nature of the product is also determined by the characteristics of the lender as well as the borrower. Uncertainty is of the essence of any relationship which involves time. Thus, each product is in a sense unique; it is like a custom-made product.

The supply and demand for funds in each of these markets are matched not merely by the interest rate; the terms of lending have variables other than interest rate like margin requirements, repayment terms, security, and compensating balances. Quite often there is no systematic relationship between the terms of lending and the amount to be borrowed.

The crucial variable which determines the terms of lending to each class of borrower relates to transaction costs - the administrative costs plus the default risk.[10] The fragmentation of the capital market - the phenomena of different markets for different "products" - arises because of the varying transaction costs with respect to the different classes of borrowers. The progressive integration of these separate markets is brought about through financial innovations that tend to reduce these costs. These innovations reduce the costs of lending and borrowing (cost as determined by the terms of lending) and thus bring about shifts in the supply-demand schedules for credit. It is thus that potential saving and potential investment become actual through the transmission channels provided by the integration of the capital markets.[11]

The principal variable is, of course, the risk; financial innovations tend to reduce risk. But default risk and administrative costs are related; default risk can be reduced by more information which involves administrative costs. Financial innovations tend to reduce total transaction costs; they widen and deepen the capital market.

Nature of Financial Innovations: What, then, has been the nature of the financial innovations during the process of financial evolution?

Historically, it was the trader who extended his business by financial dealings. It is the invention of money that enabled him to make a money loan in place of a goods-loan to another known trader. Here the risk was negligible; for, the trading class evolved certain rules of the game to which the members adhered. But loan to a new trader - not known to him - involved risk - the subjective risk could be very high.[12] But this risk was reduced by the financial innovation of security or guarantee - the bill of exchange with two signatures.[13] These two innovations - the code among merchant-bankers and the bill of exchange - did not require the sanction of law. The

other innovation - security for the loan - did require legal sanction. Once that was available, two kinds of security evolved - the pledge or pawn and the hypotheca (of the Roman Law) or the mortgage (of the English Law).[14]

Then followed the innovation of a financial intermediary - namely the bank. This innovation reduced risk in a number of ways. The bank had economies of scale; hence it could specialise in and standardise certain types of financial transactions and thus reduce risk through better expertise. The economies of scale accrued in another way also; its scale enabled it to pool and spread risks - the 'Law of Large Numbers', which is the basis of insurance.

This was, however, only a financial intermediation function of the bank. Its capacity to perform this function was greatly enhanced by the innovation of bank-money - its capacity to create credit. It is through this innovation that the banking system helped the process of economic evolution directly as well as indirectly through the provision of finance to other financial intermediaries specialising in forms of financing different from those of the banks. And, of course, the functioning of the government and what Hicks calls "the Administrative Revolution" would not have been possible but for this development.[15]

The bank money and the subsequently related innovations reduced the costs of real transactions and they improved the productivity of balances kept with the banks. The real yield on deposits with the banks improved - the yield which is not reflected in the interest rate on deposits.[16] This revolution in the payments mechanism has been a significant factor in expanding markets for goods and services through reduction in transaction costs. The benefit is not merely the reduction in transaction costs; it also accrues through the reduction in the requirement for money balances for transaction purposes - reflected in the increase in the transaction velocity of money.[17]

However, the banking system became much too specialised; consistent with its origin, it provided credit only for certain types of transactions - like stocks of goods. The credit for other purposes - like housing or plant and equipment - required other specialised agencies like the securities markets, which evolved in the U.K. and the U.S.A. more or less along with the banking system. In countries where the climate was not favourable for these types of credit markets, another financial innovation was introduced - the Universal Bank. After all, the other credit markets in a way developed because the banks lent finance to them through their customers as well as direct purchase of the securities traded in these markets. Why cannot the banks specialise in these functions also? And they did in France and in Germany during the nineteenth century - beginning from the famous Crédit Mobilier.[18]

The recent innovation of the Department Store banking[19] in the U.S.A. and the other developed countries has its origin in the concept of the Universal Bank. The economies of specialisation do not require separate institutions; they can be exploited by specialisation within the banks.[20] The banks have command over financial resources much larger than those with the other institutions; they can easily reap the economies of both scale and various types of specialisation.

Nature of Financial Development in LDCs: Should the LDCs pass through the same stages of financial development, through which countries like the U.K. and the U.S.A. passed, or should they creatively adapt the financial innovation of the Universal Bank, or the recent Department Store banking to their specific needs and requirements?

The real problem is that of reducing transaction costs of lending for purposes other than financing of stocks - in Industry and Trade. The sectors which require credit are small enterprises of all types and agriculture. At present, the transaction costs of lending to these sectors is quite high; they are higher than 6 percent and range between 6 percent to 20 percent in different countries. If the financial cost and profit margin are added, the banks cannot afford to lend to these sectors at a cost less than 16-30 percent. At this cost, there would be no inducement to borrow; for, the expected average rate of profit in these sectors probably does not exceed 15-20 percent per annum.

Hence the response has been specialised institutions that lend at a loss at subsidised interest rates - the subsidy to the institutions being provided by the government directly or indirectly. But these institutions lack the motivation as well as the means to reduce transaction costs; permanent subsidy cannot be a viable solution.

The banks have the means but lack the motivation. Their Agenda - to use the expressive phase of Arrow[21] - is geared towards financing trade and inventories. They on their own are unlikely to put new items on their Agenda; for, their expertise - the information and communication system - relates to financing trade and inventories and other purposes related to the growth of large scale industry.

If, however, their Agenda can be changed, it should not be difficult for them to respond creatively through financial innovations to this challenge of financing agriculture and small enterprises. The case study of the Syndicate Bank (Section III) shows that this is possible and it also illustrates the nature of financial innovations that would be required to reduce transaction costs. The Lead Bank idea which evolved in India after 1969 should probably be the governing principle for the financial evolution in the LDCs.[22] It is in some sense a creative adaptation of the idea of a Universal Bank in the context of a LDC environment.

II. Evolution of Credit Markets: The Haryana Case

How credit markets evolve with reduction in transaction costs and how they affect real output can be illustrated by the Haryana experience.[23] Haryana has been one of the three States in India which adopted the new high-yielding seeds since 1964 and experienced almost doubling of productivity per acre for wheat in less than a decade.[24]

Traders as Lenders: Before canal irrigation and the green revolution, agricultural credit was provided largely by traders.[25] The latter combined money-lending with trade. Their transaction costs were smaller than

any other credit agency for obvious reasons. Since the farmers sold their surplus output to the traders, it was possible for the latter to appraise their "credit-worthiness". Further, the recovery of interest and principal was easier for traders than it would have been for any other agency as it was possible for the latter to deduct what was due to them from the payment for the purchase of agricultural commodities from the farmers. The credit provided was largely what Schumpeter calls consumptive-productive credit[26/] required when the rains failed as also for expenditures on marriage and such other social ceremonies. The effective interest rate was probably higher than 30 percent per annum - reflecting the average transaction costs exceeding 20 percent.

With this high interest rate, it could be argued that the existing trader-moneylender would face competition from new traders. But this competition was not possible as the transaction costs of the new trader would have been even higher than those of the existing trader as the new trader would lack the expertise built up by the old one. The effective barrier to competition was, thus, the transaction costs.

Technical Change and Credit Market Evolution: With canal irrigation and the high-yielding seeds the situation changed radically. Initially, the medium and large progressive farmers adopted the innovation; but since the innovations were scale-neutral, even domr of the small farmers adopted them. The household incomes of the progressive farmers rose by more than 70 percent (see Statement I, Appendix A) and the average propensity to save also rose with incomes. With this development, Haryana experienced a new phenomenon - lending particularly by medium size cultivators to small farmers. This new class of farmer-moneylenders replaced the traders in the credit field.

How do we explain this phenomenon?

The cultivators who engage in lending belong to the class of farmers who own 10 to 30 acres (Statement I, Appendix A). The borrowers are largely small farmers owning land in the size group below 10 acres. The rich farmers (with land more than 30 acres) do not have much surplus to lend as their investment is more or less equal to their saving and borrowing from institutional agencies.

The question, then, is: why do the medium-size farmers lend their surplus instead of using it for productive investment as the large farmers do?

All the farmers use canal irrigation. However, when the rains fail, the canal system of irrigation also fails to deliver the required amount of water. Even for the second crop, the system's supply of water is inadequate. The large farmers, therefore, use both canal and tubewell irrigation and thus are able to use high-yielding seeds for both the seasons. The middle farmers, particularly in the Central and Southern regions of Haryana, use only canal irrigation for one crop only and sow a non-irrigated less remunerative crop for the second season of the crop year. Why do they not invest their savings in tubewell irrigation?

The reason appears to be the high cost of tubewell irrigation. It costs roughly twice as much to sink a tubewell in these low ground water areas

than it does in the Northern Region or in the Punjab State. Their own savings are inadequate for financing this profitable investment, and in these areas, the institutional credit is not available. The large farmers do invest in tubewell irrigation even in these areas as their savings are adequate for financing this investment. In the Punjab, institutional credit is available to the medium farmers for tubewell irrigation. The institutional credit as a proportion of total credit is much higher in the Punjab than in Haryana as credit institutions are much better developed there than in Haryana (see Statements II, III & IV, Appendix A).

It is thus that the middle farmers have come to use their surplus for lending to small farmers. They have been able to compete effectively with the traders as their terms of lending are more favourable than those of the traders; their interest rate on lending is probably in the range of 15-25 percent per annum as against the range of 30-40 percent for the traders (Statement V, Appendix A). They, thus, have ousted the traders from the credit business.

The reason for this lower interest rate is their smaller transaction costs. The middle farmers are able to appraise the income potential of small farmers much better than the traders. And for this appraisal, they do not need to spend extra time and effort as the traders have to. The small farmer is probably the neighbour of the middle farmer and the two come in easy contact for a variety of common purposes. Both know each other much better than is possible for a non-cultivator to know a cultivator's craft. Again, for recovery of interest and principal, the middle farmer is at an advantage; he does not need to spend any extra time and effort for the purpose. The trader again is not the only buyer of wheat as the government procurement operations have expanded with the increase in wheat output. And the farmer's ability to store his output has also increased with his income.

This new and relatively large source of credit has enabled the small farmers to invest in current inputs like fertilisers required for the new seeds and thus turn into progressive farmers. The middle farmers have a new source of income. Thus this evolution of the credit market has helped the process of production and investment; the nature of credit has also changed from purely production-consumption credit to a combination of such credit with investment credit. Even the small farmer's debt to the middle farmer arising out of production-consumption credit does not accumulate at compound interest; because of the possibility of obtaining credit for new inputs like fertilisers and high-yielding seeds, in a normal crop-year the small farmer's surplus is more than adequate for repaying his debts to the middle farmer - debts contracted during the season when the rains fail. The credit advanced is thus by and large productive credit; this has reduced the risk for both lenders and borrowers and thus expanded the credit market.

Credit Markets and Output: However, even with such evolution of the credit markets, the full production potential of agriculture is not realised. For, the middle farmers could invest in tubewell irrigation and thus increase output like the large farmers if credit were available to them to supplement their savings. Again, if additional credit were available to the small farmers, it would be worthwhile for a group of three-four farmers - if not for each single farmer - to invest in tubewell irrigation. Thus both sets of farmers could use

high-yielding seeds also for the second crop - for which the canal system does not provide adequate water. Such a development has occurred in the Punjab and it could occur in Haryana, which is more or less similar to the Punjab with regard to the agro-climatic conditions and the innovative characteristics of the farmers. And with appropriate financial instruments, this further development of the credit markets may not require, except possibly initially, any outside source of saving.

Nature of Further Evolution of the Credit System: Role of a Lead Bank: It is not difficult to sketch in broad outline the characteristics of this further evolution. There are two to three lead banks in Haryana; each one is assigned the responsibility by the Reserve Bank of India for expanding its new-work of branches with a view to mobilising deposit resources as well as providing credit for agriculture and small enterprises. This banking function is sought to be integrated with the function of technical assistance; the lead bank is supposed to coordinate the activities of various technical assistance agencies - and even to create them, if necessary, with the help of the State Government - for the purpose of identifying production possibilities and integrating credit with the promotional work. The lead bank thus is assumed to play an active role in exploiting the production-employment potential of the district for which it is assigned the lead bank role.[27]

Such a lead bank, to start with, can offer credit to middle farmers for tubewell irrigation provided they accumulated 25-30 percent of the cost of investment as fixed deposits, earning an interest rate of 10 percent per annum. Allowing for the risk premium and other transaction costs with regard to lending by this group of farmers, this interest rate would compare favourably with the rate they earn on lending. Further, their rate of return on investment, facilitated by credit from the bank, would be even higher than what they earn on lending; this is precisely the reason why the large farmers use their savings for productive investment rather than for lending. Thus this type of new deposit instrument tied to borrowing facility would indeed be attractive to the middle farmers.

At the same time, it could take over from the middle farmers the function of lending to the small farmers. This it can do initially with the deposit resources obtained from the middle farmers. This lending too can be tied with deposits; a small farmer can be assured credit in a bad year, provided he accumulated his surplus from a normal year as deposits. The attractive interest rate and the assurance of credit facility could induce the small farmers to save more than they would otherwise do. Credit for fixed investment - like tubewell irrigation - too could be tied with deposits.

The marginal propensity to save of the large farmers seem to be lower than that of the middle farmers. To the extent to which this occurs because of the lack of a suitable financial instrument - without risk and transaction costs - it would be possible for the bank to attract the potential surplus of the large farmers in the form of appropriate deposits. For example, the social expenditures of large farmers on occasions like marriage of children are quite high. Further, they invest a larger proportion of their income on children's education. Deposit schemes tied to borrowing facility for these purposes could attract the potential surplus of these farmers into deposits with the bank. Once this instrument becomes popular, it is quite likely that even marriage expenditures -

particularly for gifts and dowries - could change their composition; gifts and dowries could be given in the form of deposits rather than in the form of goods.

These new types of deposits linked to lending may suffice after the first few years to meet the credit requirements of the farmers and no injection of external resources may be necessary. In fact, the system could generate resources with increase in incomes for lending to the other sectors of the State like industry. Surpluses from agriculture thus could be mobilised for financing investment in the non-agricultural sectors.

However, for such an evolution to take place, the transaction costs of lending and borrowing should be lower than what they currently are. The bank should be able to lend at an interest rate of about 12-15 percent per annum - that is, at a rate lower than that charged by the middle farmer. For this to be possible, its transaction costs should not exceed, say, about 5 percent. For a bank, it would be possible to realise the economies of scale and spreading of risks. It would have also the backing of the resources mobilised by the bank from all over India; for the lead bank for a district is an all-India bank with lead role in about 15-20 districts. It can also borrow from the Reserve Bank of India. It would not have the type of liquidity constraints from which traders and farmer-moneylenders suffer. But the crucial element is the transaction costs. These have been quite high - in the range of 7-10 percent. The question is: through what innovations could their costs be reduced? The next Section deals with the case of an innovative bank which has been able to reduce these costs.

III. Innovations and Transaction Costs: The Syndicate Experience[28]

Till 1969, the large city-based banks in India concentrated on financing large industry and trade in the urban areas. Their transaction costs for these markets were quite low - well within the range of 1.5 to 2 percent, which Keynes indicated many years back as the level below which interest rates cannot fall.[29] They did not enter the field of small-medium enterprises in the farm and non-farm sectors. In these markets, their transaction costs would have been very high and at the terms on which they could have lent, it was not possible to widen and deepen these markets.

Characteristics of the Syndicate: For a new bank, it was difficult to compete with these city banks in their markets. It had to enter a new field - a non-competitive field - and this related to small-medium enterprises. This objective opportunity was there but to seize it required an innovative approach to banking - introduction of new "products" and "processes" to reduce transaction costs. And this is precisely what the Syndicate Bank did since its origin in 1925.

Located in a small town called Manipal (the only bank with a head-office in a rural area) and starting with an initial paid-up capital of only Rs. 8,000, its subsequent growth has been remarkable. (Appendix B, Statement I) From a negligible share in banking business till 1950, its share rose to about 1 percent in 1960 and 4 percent in 1975. Still, it was unlike the city

based banks particularly till 1969, when it was nationalised along with the other thirteen major banks. In 1968, 32 percent of its branches were in rural areas; for the entire banking system, the share of rural branches was only 22 percent. Its loans to agriculture and small enterprises constituted 30 percent of its total loans; for the other banks, such loans were less than 8 percent of their total loans. 90 percent of its deposit accounts were small accounts (below Rs. 1,500) accounting for 50 percent of its deposits; and 50 percent of its borrowing accounts related to small-medium enterprises, their share in total borrowing being 30 percent. (Appendix B, Statement II).

Its average interest rate on loans was not much higher than that of the city banks; in the fifties and sixties, it was about 2 percentage points higher than that of the State Bank of India - the largest commercial bank - and from early seventies, it has been more or less the same as charged by the major city banks. How did it, then, manage to grow so rapidly even with concentration on markets, which the city banks found to be unremunerative? Obviously its transaction costs must have been comparable to the costs of lending to large industry and trade by the city banks.

Transaction Costs and Functional Cost-Structure: We do not have complete data on the cost structure of the city banks. However, the data on establishment expenses are available; establishment expenses include a large part of administrative costs but do not include default risk (bad debt provision). The ratio of establishment expenses to total deposits for the Syndicate was slightly higher than that for the banking system in 1951 and 1961; but since then, this ratio is in fact somewhat lower for the Syndicate than that for the banking system. (Appendix B, Statement VI). Quite surprisingly, the Syndicate ratio is comparable to that of the Insured Commercial Banks in the United States. (Appendix B, Statement VI).

Much more interesting, however, would be the comparison of the functional cost structure of the Syndicate with the other city banks, who have been financing small-medium enterprises particularly since 1969. However, such data are not available for any bank in any country. Even for the Syndicate, we could obtain such data only for 1975; they were compiled by the Syndicate especially for our purposes. One other major commercial bank located in Bombay could give us these data again only for 1975.

The functional cost structure of the Syndicate and the major city bank is given in Statement IV, Appendix B. The overall transaction costs of the city bank are lower than those for the Syndicate; this was to be expected as this city bank's lending to small enterprises constitutes only 25-30 percent of its total lending, while the share of small enterprise lending in the total for the Syndicate is about 40 percent. However, the city bank's costs are more than three times those of the Syndicate for lending to agriculture and small enterprises.

Again, for deposit mobilization, the Syndicate's administrative costs are much lower than those of the city bank. (Appendix B, Statement V). The interest costs of deposits are obviously somewhat lower for the city bank as demand deposits constitute a much higher proportion of its total deposits.

Factors Accounting for Low Transaction Costs: The significant question which arises in this context is: how and through what mechanism the

Syndicate has been able to service a large number of small accounts - deposit as well as borrowing accounts - and thus provide credit to the small enterprises at a cost which is much below that of the city banks and which is lower than that in Mauritius and the Philippines (the countries for which we have obtained the data regarding the functional cost structure)? (See Statement IX, Appendix B).

Briefly, it is a new style of banking - an innovative approach to banking - that seems to explain this phenomenon: the creative adaptation of the banking technology to suit local conditions seems to be the crucial factor.

1. New Entrepreneurs:[30/] This adaptation was possible because of the characteristics of the leadership. The promoters came from a lower-middle class background; they belonged to a community which respects learning. None of them came from an industrial house; the city banks were started by promoters who had close links with large industry. Of the three promoters, one was a medical doctor, one an engineer and the third a trader dealing in hand-loom cloth.

All of them were participants in the movement of socio-economic reform, initiated by Mahatma Gandhi. They had a powerful motivation for the socio-economic uplift of the community and the region to which they belonged: hard work, education and thrift - these they considered crucial for socio-economic reform. They had not merely a passion for reform. They had not merely a hard-headed business sense. They had both. And banking was considered by them as an instrument for the purpose; to serve as an effective instrument, it had to be viable and gain vitality for growth.

They were responsible for establishing educational institutions - a school in each village in their district and an educational complex, a type of university centre at Manipal - the village to which they belonged. The bank management helped the process; but, at the same time, they were conscious of the deposit potential of these institutions. The bank provided employment opportunities for the educated members of the local community; but this helped in having a dependable and dedicated staff. The bank helped the farmers and small enterprises by providing technical assistance; but this enlarged their business. The bank cultivated the habit of thrift in the community through a new deposit scheme - called pigmy deposit; but this enlarged the bank's resources.

2. Recruitment and Promotion Policies:[31/] The major factor responsible for the relatively high productivity of the staff has been its recruitment policy. It selects relatively unsophisticated persons with local contact and a rural or semi-urban background; and, unlike the city banks, it has preferred again high school graduates to graduates or post-graduates from a university. Their familiarity with the local scene and their contacts enable them to expand Syndicate business in a variety of ways; they inspire confidence in potential depositors, they are able to appraise well the soundness of projects and the credit-worthiness of borrowers and to assess the business potential of the area in which they function. The information costs thus are reduced; persons without this background would have to collect more information and spend more effort and time in appraising the soundness of borrowers and their schemes.

Since they are high school graduates, they enter the banking business at a fairly young age and thus are more adaptible. Again, since they would not have got such a job in the city banks, they consider themselves fortunate and hence are more dedicated, dependable and disciplined than the graduates. They are prepared to do considerable field work, which is so essential for attracting, maintaining and supervising small accounts. And, of course, their pay scales are lower than those for the graduates in the city banks; the Syndicate average salary per employee even now is 20-30 percent lower than that in the city banks. And their academic qualifications are adequate for the banking business. Persons with university degrees are, in fact, over-qualified for a large number of jobs in a bank; from the point of view of the institution, such persons are less adaptible, more ambitious and less disciplined than those who have completed high school education.

The promotion policy of the bank is such as to build staff morale and avoid discontent and demoralisation. Somewhat on the Japanese style, a person is promoted salary-wise and grade-wise on the basis of seniority, provided there are no consecutive adverse reports on his efficiency. But such a promotion does not mean that he would get a more responsible functional assignment. Seniority-wise promotion in a salary grade is divorced from functional promotion. Responsible positions are assigned to bright persons without affecting adversely the salary-wise promotion of others and without affecting favourably their own salary grades. Functional promotion thus is a type of reward for the really deserving; he wins recognition for his worth. The others are not discontented as their salary-wise promotions are not affected.

This divorce of functional promotion from seniority-wise promotion in a salary grade helps the bank in selecting persons for senior management positions. For the top few jobs, which are on a pure selection basis, the bank has a choice from among the persons who are really competent - those who are promoted function-wise.

There is another characteristic of the bank's recruitment policy which is worth noting. In cases where it is feasible, the bank recruits married couples. The stability, reliability and dedication of such couples have been significant - more than those of the other employees.

This recruitment and promotion policy is reflected in the productivity of the Syndicate employees. The deposit accounts handled per employee are 287 for the Syndicate, while they are only 120 for the banking system as a whole. Again, the borrowing accounts per employee are 48 for the Syndicate as against only 14 for the banking system. The Syndicate productivity differential as compared with the city banks obviously would be much greater than what is indicated by these figures for, here the comparison is with the average for the banking system as a whole. If the wage differential is considered along with the physical productivity differential, the productivity differential in financial terms would indeed be much more significant than the physical productivity differential.

3. Technical Assistance: The bank provides technical assistance to farmers as well as small industrialists. It has a special staff for the purpose. The Farm Representatives are a special cadre of young officers recruited

from the Agricultural Universities and specially trained for the banking business. Similarly, for the small industry sector, the bank has a cadre of Industrial Engineers and Technicians.

Each one of these officers looks after several branches - about 5 to 10 - depending upon local conditions. The bank's policy of opening branches in clusters in a given region helps it to spread the costs of these special cadres over a number of geographically contiguous branches.

The technical assistance provided, of course, helps the borrowers; but at the same time it enlarges bank's business and reduces its risk. These special cadres are able to appraise credit proposals in the field - they provide an effective appraisal machinery. But at the same time, their periodical field visits provide an effective machinery for supervision as well as recovery of loans.

4. Decentralised Decision Making and Avoidance of Paper Work: The volume of work involved cannot be effectively handled without decentralised decision making. The loans to farmers and small enterprises are sanctioned by the branch managers with the advice of the technical cadre; there is no reference to the head office and thus the head office costs for such loans are negligible.

Again, there is much more emphasis on field work than desk work - on local decision making and initiative than on paper work. The branch and the branch manager are judged on their overall results - the volume of deposits and the magnitude of loans and their recovery; the bank, thus, exercises utmost economy in the sphere of documenting, information and its transmittal to the head office. Such reporting procedures would increase costs and divert the attention of the branch manager from banking business to collecting and documenting such information - which is hardly relevant for decision making either at the branch level or at the head office level.

Of course, after nationalisation in 1969, these information costs have increased because of the Reserve Bank of India directives and requirements. But still, the management is alert to keep them within certain limits. The central banks and the international banks do have a craze for information and demand from the intermediary and final lending agencies type of information which may be enlightening for researchers but is irrelevant for real decision making; they still have to realise that there are costs involved - sometimes as large as 1-2 percent of the loan portfolio. Instead of reducing transaction costs, they raise them.[32]

5. Innovative Deposit Schemes: The bank has introduced a variety of innovative deposit schemes linked to motives to save. One recent example is the Farmers' Protection Deposit Scheme. In times of dire necessity arising out of crop failure, the farmer is eligible for a loan equal to double the amount of deposits outstanding in his account. This deposit earns interest at 5 percent per annum and the loan is at a concessional rate of 9 percent per annum - repayable over a period of three years. The small farmer does not save normally in the form of a financial asset; interest rate on deposits is not much of an attraction to him particularly when his transaction costs are high. But he can be induced to save in the form of a deposit if it is linked with borrowing at a time of crop failure. In the absence of crop-insurance, this is the type of saving which the farmers need.[33]

This principle of linking deposits with lending for a specific purpose has been applied by the bank in several cases. A farmer, for example, would get a loan for the purchase of a pump set if he has accumulated 25 percent of the cost as fixed or saving deposits. A small industrialist gets a loan for machinery purchase if he accumulates more than 20 percent of the cost as deposits. Such schemes help the bank in mobilising deposits as well as judging the seriousness of purpose of the borrower; at the same time because of the assurance of a loan, the borrower has inducement to save. Without such assurance, in many cases, there would not be saving enough for investment and, hence, there would be a strong temptation to use it up for financing emergencies or social expenditures.

But the one deposit scheme for which the bank is known is the Pigmy Deposit. This was introduced by the bank in 1928 and was part of the crusade of inculcating the habit of thrift among relatively poor people. At the same time, the promoters regarded it as a business opportunity. This opportunity was not seized by the other banks because of the transaction costs involved in collecting small deposits from a large number of relatively uneducated and poor customers.

The Syndicate, however, devised a scheme that proved to be financially profitable for the bank and at the same time attractive to the depositors. The principle of the scheme was simple: it involved door-to-door collection of a given amount of deposits (as low as 25 paise) at stated intervals. Quite a large number of people -workers, petty shop-keepers, vegetable vendors, hawkers, small traders - it was thought, could save these small amounts per day or week or month. But they do not have time to go to a bank and deposit this amount regularly. This potential saving was not realised as the poor had no semi-contractual obligation to accumulate. With agents appointed to collect such deposits, this saving capacity and inclination can be tapped.

And, thus, the Syndicate introduced this Pigmy Deposit to be collected periodically from the door-steps of the saver. The commission rate was linked with the amount of deposits collected and has not exceeded 3 percent per annum. The interest was 3.13 percent per annum provided the saver did not withdraw from the scheme for seven years. A depositor saving 0.12 rupees daily could accumulate at the end of the seventh year Rs. 350. Within this period, the saver could borrow from the bank against the security of his deposit.

Such was the original scheme. Its specific features have varied after 1969 but the broad principle still remains the same.

On an average, the total cost to the bank of this long-term deposit has varied between 3-5 percent per annum, significantly lower than the cost of a 3 to 5 year fixed deposit. Even in 1975, its total cost was only 5.52 percent as against the cost of fixed deposits at 13 percent. (See Statement V, Appendix B).

The bank was thus able to seize a business opportunity without competition from the other banks till 1960. The Pigmy Deposits constituted 14-15 percent of total deposits in 1946; this proportion rose to 21 percent in 1960. Since then, its relative significance has declined with the faster growth of the other deposits and competition of the other banks. Still, even in 1975,

these deposits constituted 7-8 percent of total deposits. (See Statement VII and VIII, Appendix B). In absolute terms, these Pigmy Deposits are currently more than ten times their amount in 1960.

For the saver, such a deposit enabled him to accumulate his small saving into a fairly sizeable figure in seven years. Without this facility, very likely he would not have saved or, at any rate, saved as much. His motivation to save has been to accumulate for emergency or other anticipated expenditures rather than the inducement of earning interest. This deposit, thus, has been linked with this type of motive among the relatively poor.[34]

Even the commission paid to the agents has not been a net loss to the bank. The agent has to keep a security deposit with the bank equal to 10 percent of his commission; this is done for minimising the danger of the agent disappearing with his collection.

Central Bank Response to Syndicate Innovations: The Central Bank - Reserve Bank of India - itself has been innovative in many ways;[35] but with regard to the unconventional practices of the Syndicate, it took a negative attitude. The Syndicate till 1965 was considered as an unsophisticated rural bank and the Central Bank did not like some of its innovations. This is an instance of how central regulatory agencies - particularly when they try to imitate rather than adapt the technology of a developed country - come in the way of creative adaptation of modern technology.

1. With regard to the Pigmy Deposits, the Syndicate permitted its own employees to work as agents during their spare time. For the bank this was one of the ways of reducing its wage costs and increasing its business; for the employee it was an incentive to earn more. But in 1962, the Central Bank found this practice to be objectionable on strict banking principles and prohibited the Syndicate from engaging its own employees as agents.

2. The Syndicate wanted to set up an agricultural demonstration farm in 1964 to enable it to promote the adoption of new high yielding seeds by the farmers. The Central Bank considered such a venture in technical assistance as not consistent with healthy banking practices. Hence the Syndicate had to think of other ways. It induced the progressive farmers to set up a voluntary organisation called Syndicate Agricultural Foundation; the management in fact is looked after by the bank - the bank providing financial assistance to the Foundation through annual grants.

3. In 1960, the bank pioneered a unique investment service through its Investors' Agency Department. This service enabled the middle income group savers to invest in shares of reputable companies. The persons joining the scheme were assured of a return of 9-10 percent per annum on their saving; the bank in turn invested these sums in shares. This scheme became very popular with middle income groups in semi-urban areas - persons who were not familiar with the stock market. It was a precursor to the Central Bank sponsored Unit Trust of India. However, this service had to be withdrawn in 1965 as the Central Bank thought it could compete with the Unit Trust of India that was set up in 1964.

It is pertinent to note that since 1969 nationalisation of 14 major banks, the Central Bank has been inducing the banks to expand their branches in rural areas so as to provide credit to small enterprises in both the farm and non-farm sectors. With this emphasis on the widening and deepening of the geographical and functional scope of the banking system, the Syndicate has recently been regarded by the Central Bank as a Model Bank.

NOTES

1. See Joseph A. Schumpeter, Business Cycles, Vol. I, (New York: McGraw-Hill Co., Inc., 1939), pp. 98-99: see also John Hicks, Economic Perspectives, (Oxford: Oxford University Press, 1977), Chapters I & II; Kenneth J. Arrow, The Limits of Organisation, (New York, W.W. Norton & Co., 1974), Chapters 3 & 4.

2. See Joseph A. Schumpeter, Capitalism, Socialism and Democracy, (New York, Harper & Row, 1975). To quote:

"The first thing to go is the traditional conception of the modus operandi of competition. Economists are at long last emerging from the stage in which price competition was all they saw. As soon as quality competition and sales effort are admitted into the sacred precincts of theory, the price variable is ousted from its dominant position. However, it is still competition within a rigid pattern of invariant conditions, methods of production and forms of industrial organisation in particular that practically monopolises attention. But in capitalist reality as distinguished from its textbook picture, it is not that kind of competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organisation (the large-scale unit of control for instance) - competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives. This kind of competition is as much more effective than the other as a bombardment is in comparison with forcing a door, and so much more important that it becomes a matter of comparative indifference whether competition in the ordinary sense functions more or less promptly; the powerful lever that in the long run expands output and brings down prices is in any case made of other stuff." (pp. 84-85).

See also Paul J. McNulty, 'Economic Theory and the Meaning of Competition', The Quarterly Journal of Economics, (November, 1968).

The concept of competitive efficiency or of the optimum conditions again is not adequate to judge the results of evolutionary processes. On this, see Joseph A. Schumpeter, Capitalism, Socialism and Democracy, op. cit. To quote:

"First, since we are dealing with a process whose every element takes considerable time in revealing its true features and ultimate effects, there is no point in appraising the performance of that process ex visu of a given point of time; we must judge its performance over time, as it unfolds through decades or centuries. A system - any system, economic or other - that at every given point of time fully utilises its possibilities to the best advantage may yet in the long run be inferior to a system that does so at no given point of time, because the latter's failure to do so may be a condition for the level or speed of long-run performance." (p. 83).

See also Arrow, op. cit., "The theme to be presented is that the combination of uncertainty, indivisibility, and capital intensity associated with information channels and their use imply (a) that the actual structure and behaviour of an organisation may depend heavily upon random events, in other words on history, and (b) the very pursuit of efficiency may lead to rigidity and unresponsiveness to further change." (p. 49).

3. See Joseph A. Schumpeter, 'The Creative Response in Economic History', Essays of J.A. Schumpeter, edited by Richard V. Clemence (Cambridge, Mass., Addison-Wesley Press, Inc., 1951).

See also Schumpeter, Business Cycles, Vol. I, op. cit. To quote:
"And this is equivalent to saying that the assumption that business behaviour is ideally rational and prompt, and also that in principle it is the same with all firms, works tolerably well only within the precincts of tried experience and familiar motive. It breaks down as soon as we leave those precincts and allow the business community under study to be faced by - not simply new situations, which also occur as soon as external factors unexpectedly intrude but by - new possibilities of business action which are as yet untried and about which the most complete command of routine teaches nothing. Those differences* in the behaviour of different people which within those precincts account for secondary phenomena only, become essential in the sense that they now account for the outstanding features of reality and that a picture drawn on the Walras-Marshalliam lines ceases to be true - even in the qualified sense in which it is true of stationary and growing processes: it misses those features, and becomes wrong in the endeavour to account by means of its own analysis for phenomena which the assumptions of that analysis exclude." (pp. 98-99).

*"Those differences belong, as a special case, to the class of facts usually dealt with under the heading of Leadership." (p. 98).

4. Economists' analytic framework is congenitally incapable of handling the impact of new commodities - the vital fact about evolutionary processes. See Hicks, op. cit., pp. 192-195.

5. John Maynard Keynes, Essays in Pursuasion, (New York; W.W, Norton & Co., Inc., 1963), p. 373.

6. For such simplistic and somewhat naive presentation of this view, see Ronald I. McKinnon, Money and Capital in Economic Development, (The Brookings Institution, 1973).

7. See Schumpeter, Business Cycles, Vol. I, op. cit., pp. 123-130.

8. See Joseph A. Schumpeter, The Theory of Economic Development, (Oxford: Oxford University Press, 1974). To quote:
"There is nothing in our theory to support the old view - which with many people from the classical economists onwards has acquired the force of a dogma - that interest must of necessity display a secular tendency to fall. It may be shown, however, that the impression to that effect, which seems so strongly to suggest itself, is largely due to the element of risk, which accounts for medieval figures; and that the real rate of interest does not display any clear secular trend...". p. 210.

See also John Hicks, Critical Essays in Monetary Theory, (Oxford: Clarendon Press, 1967), Chapter 5: 'The Yield on Consols'.

9. See Joseph A. Schumpeter, History of Economic Analysis, (London: Oxford University Press, 1959). To quote:

"Nobody can hope to understand the economic phenomena of any, including the present, epoch who has not an adequate command of historical facts and an adequate amount of historical sense or of what may be described as historical experience....the fact that most of the fundamental errors currently committed in economic analysis are due to lack of historical experience more often than to any other shortcoming of the economist's equipment." (pp. 12-13).

10. See John Hicks, Critical Essays in Monetary Theory, op. cit. To quote:
"It is implicitly assumed, in Walrasian analysis, that there is no cost (in terms of effort and sacrifice) in the making of transactions: but this, though a fair simplification for many purposes, is hopelessly misleading when our subject is money....There is the same incentive to find ways of reducing transaction costs as of reducing other costs; one way of looking at monetary evolution is to regard it as the development of even more sophisticated ways of reducing transaction costs." (pp. 6-7).

11. See John Hicks, Capital and Growth, (Oxford: Clarendon Press: 1965), pp. 289-291. To quote:
"The beginning of a process of expansion might occur because of real factors (inventions and the like) raising the real (prospective) rate of profit. But it might also occur because of financial improvements, diminishing the size of our 'gap'; thereby permitting access to funds, for improvements which could have been made earlier, if the necessary funds had been forthcoming. It is not savings only that are required, but a channel of communication between potential savings and potential real investment." (p. 290).

12. On this subjective risk see John Maynard Keynes, The General Theory of Employment, Interest and Money, (New York: Harcourt, Brace & World, Inc., 1964). To quote:
"Two types of risk affect the volume of investment....The first is the entrepreneur's or borrower's risk....a second type....we may call lender's risk....Now the first type of risk is, in a sense, a real social cost, though susceptible to diminution by averaging as well as by an increased accuracy of foresight. The second, however, is a pure addition to the cost of investment.... Moreover, it involves in part a duplication of a proportion of the entrepreneur's risk, which is added twice to the pure rate of interest....For if a venture is a risky one, the borrower will require a wider margin between his expectation of yield and the rate of interest at which he will think it worth his while to borrow; whilst the very same reason will lead the lender to require a wider margin between what he charges and the pure rate of interest in order to induce him to lend....This duplication of allowance for a portion of the risk has not hitherto been emphasised, so far as I am aware; but it may be important in certain circumstances." (pp. 144-145).

13. There is an interesting story about the origin of these two signatures. See E.J.T. Acaster, 'Banking With the Laboucheres', The Three Banks Review, (Issue No. 100, December, 1973). To quote:
"In the 1790s the distinguished Amsterdam banking house of Hope & Company had some business to transact with that rising English banker Sir Francis Baring and entrusted the mission to a young French clerk of the name of Labouchere. During his stay in London the clerk fell in love with Sir Francis' daughter, Dorothy, and asked her father for permission to become

engaged. Permission was refused. 'Would it make any difference to your decision if you knew that Mr. Hope was about to take me into partnership?', asked the young man. Sir Francis confirmed that it would."

"On returning to Holland, therefore, Labouchere mooted with his employer that he should be promoted to the partnership. Unfortunately for the proposer, the idea was not well received. 'Would it make any difference to your decision if you knew that I was engaged to the daughter of Sir Francis Baring?', asked the clerk. 'Well, yes, it would,' admitted Mr. Hope. Then and there the young Pierre César clinched the deal, laying the foundation for his family's fortune by stating his engagement to be a fact, and by the next London mail he was able duly to confirm to Sir Francis that his entrance to the partnership of Hope had become a reality." (p. 29).

14. On financial innovations, see John Hicks, A Theory of Economic History, (oxford: Oxford University Press: 1969), Chapters V & VI.

15. See Schumpeter, Business Cycles, Vol. I, op. cit., pp. 111-112. See also Hicks, Economic Perspectives, op. cit., pp. 78-79. What Schumpeter calls innovations and Hicks calls impulses require credit creation; the latter is, as Schumpeter observes, the 'monetary complement of innovation'.

16. See Boris P. Pesek, 'On Post-Robertson Monetary Theory', Journal of Economic Literature (Volume XIV, Number 3, September 1976), pp. 856-881. Pesek also shows how important parts of monetary and banking theory rest on theoretical and empirical assumptions that are indefensible and they lack a sound micro-economic base.

See also John Hicks, The Crisis in Keynesian Economics, (Oxford: The Camelot Press Ltd., 1974), pp. 48-49.

17. See Pesek, op. cit.

18. See Alexander Gerschenkron, Economic Backwardness in Historical Perspective, (Cambridge, Mass., Harvard University Press, 1962), pp. 11-16. To quote:

"In particular, the story of the Crédit Mobilier of the brothers Pereire is often regarded as a dramatic but, on the whole, rather insignificant episode.... It seems to be much better in accord with the facts to speak of a truly momentous role of investment banking of the period for the economic history of France and of large portions of the Continent....But more important than their slavish imitations was the creative adaptation of the basic idea of the Pereires and its incorporation in the new type of bank, the Universal Bank which, in Germany, along with most other countries on the Continent, became the dominant form of banking. The difference between banks of the crédit-mobilier type and commercial banks in the advanced industrial country of the time (England) was absolute. Between the English bank essentially designed to serve as a source of short-term capital and a bank designed to finance the long-run investment needs of the economy there was a complete gulf. The German banks, which may be taken as a paragon of the type of the Universal Bank, successfully combined the basic idea of the crédit mobilier with the short-term activities of commercial banks.... the banks acquired a formidable degree of ascendancy over industrial enterprises, which extended far beyond the sphere of financial control into that of entrepreneurial and managerial decisions." (pp. 12-14).

19. See R.W. Goldsmith, 'Some Reflections on the Past, Present and Future of Financial Institutions', (Mimeo. 1974). To quote:

"There are two tendencies at work here which have already operated since the early history of financial institutions, tendencies which you may call the specialty shop and the department store principle. A specialty shop in finance holds, essentially, one type of financial instrument and raises most of its funds also by one, though a different, instrument. At certain times and certain countries, the one or the other system has prevailed. England was, during most of its modern financial history, a financial specialty shop country, as were the United States. Germany, on the other hand, has always been more of a financial department store country, France being generally in the middle. In the last decade, however, there has been a definite tendency, in virtually all countries, for the department store model of finance to gain, particularly in the field of deposit banking....Finally, something happened during the fifties and the sixties. It probably became obvious to bankers that, if they continued to do business as before, they would continue to lose in importance. This trend soon became worldwide, partly because it is much easier to transfer financial technology from one country to another than to do so in the case of industrial technology....This movement towards financial department store operations is, I think, one of the most important trends to watch in developed countries in the next generation....It has always been present to some extent and is particularly pronounced in less developed countries." (pp. 82-84).

20. See Hicks, Capital and Growth, op. cit., p. 292. Hicks emphasises the point that the efficiency of a financial system should be judged on the basis of the narrowness of the gap between the lowest and the highest interest rate. The function of the non-bank financial intermediaries is to narrow this gap. But Hicks notes: "An alternative possibility, that the 'contact' (which I have ascribed in the above to financial intermediaries outside the Bank) might sometimes be established by specialised departments within the Bank (or banking system) itself, should not be overlooked. It would certainly need attention in a more extended treatment." (p. 292).

21. See Arrow, op. cit., pp. 47-57. To quote:

"In classical maximising theory it is implicit that the values of relevant variables are at all moments under consideration. All variables are therefore agenda of the organisation, that is, their values have always to be chosen. On the other hand, it is a commonplace of every day observation and of studies of organisation that the difficulty of arranging that a potential decision variable be recognised as such may be much greater than that of choosing a value for it." (p. 47).

22. See V.V. Bhatt, Structure of Financial Institutions, (Bombay: Vora & Co., 1972), Chapter I. To quote:

"This problem is now being tackled by giving a new radical orientation to the commercial banking system....To provide the agriculture-small industry orientation to the banks' policies, a new and potentially fruitful concept of a lead bank in a district has been evolved....This lead bank scheme is likely to be more effective than a new district bank scheme; for, the lead bank would be much more viable financially because of its nationwide operation and, further, for the same reason, it would have at its disposal much larger resources than a small district bank."

"The main functions of a lead bank would be to: (a) identify places in a district for branch expansion; (b) prepare a phased program for branch expansion

in the district so as to bring banking services within the reach of the entire area; (c) estimate the current requirement of credit and prepare a phased program to meet it by supplanting the non-institutional moneylenders type of credit purveyors; (d) identify the potential areas of agricultural and small industry development and to induce local entrepreneurs to undertake such development; (e) identify the major bottlenecks in the development of the district and induce the appropriate agencies to take remedial action; (f) goad the local entrepreneur in agriculture and small industry to improve progressively his productive efficiency; and (g) devise such schemes of deposits and financial investments as would prove attractive to the local people and effective for the purpose of mobilising as well as raising the rate of saving in the district."

"The lead bank obviously cannot perform these functions in isolation: it would have to solicit the active support of other banks in the district....and other State-level financial institutions as also of the various official and non-official agencies. The role expected of a lead bank is not merely that of purveying credit and deposit mobilisation, it has to provide entrepreneur and managerial guidance to agriculture and small industry." (pp. 16-17).

See also Reserve Bank of India, Annual Report and Trend and Progress of Banking in India: 1975-76, (Bombay, 1976), pp. 59-60.

23. It is not possible to identify the impact of innovations on the basis of aggregative or semi-aggregative data, however sophisticated the econometric techniques are. See Schumpeter, Business Cycles, op. cit., p. 144 and Pesek, op. cit. Hence the emphasis in this article on actual case-studies of financial innovations.

24. Unless otherwise stated, all information with regard to Haryana is taken from:

G.S. Bhalla, Changing Agrarian Structure in India, (Delhi: Meenakshi Prakeshan: 1974).

25. See Sheila Bhalla, 'Agricultural Growth: Role of Institutional and Infrastructural Factors', Economic and Political Weekly, (Volume XII, Numbers 45 and 46, November 5-12, 1977), pp. 1898-1905.

26. See Schumpeter, The Theory of Economic Development, op. cit., p. 103.

27. See V.V. Bhatt, op. cit.

28. This section is based on information specially obtained from the Syndicate Bank of India. The latter made available to the author even their confidential data. Again, the author had the benefit of detailed discussions with the top management of the bank. Of course, the grasp of the bank's actual functioning would not have been as sharp and authentic but for the fact that the author happened to be a member of its Board of Directors during 1969-1972.

The document prepared by the bank is published in the Domestic Finance Studies series of the World Bank. See N.K. Thingalaya, Innovations in Banking: The Syndicate's Experience, (World Bank: Development Economics Department: Domestic Finance Studies, No.46, 1978).

29. See Keynes, op. cit., p. 208.

30. For the characteristics of the promoters of the Syndicate Bank, see Selden Menefee, The Pais of Manipal, (New York, Asia Publishing House: 1969).

See also Schumpeter, Business Cycles, Vol. I, op. cit., pp. 93-97. Syndicate's experience supports Schumpeter's hypothesis that innovation is generally introduced by the rise to leadership of New Men, setting up a New Firm and with New Plant (in this case, a new organisational principle).

31. See V.V. Bhatt, op. cit., Chapter 2.

32. See V.V. Bhatt, Division of Public and Private Finance: Research Program and Its Rationale, (World Bank: Development Economics Department: Domestic Finance Studies, No.43: 1977), pp. 13-15.

33. See V.V. Bhatt, Structure of Financial Institutions, op. cit., Chapter 4.

34. ibid, Chapter 4.

35. See V.V. Bhatt, Some Aspects of Financial Policies and Central Banking in Developing Countries, (World Bank: Economic Development Institute: EDI Seminar Paper No.11: 1974).

APPENDIX A

Statistical Statements: The Haryana Case

I. Saving, Investment and Household Income: Cultivators in Haryana: 1969-70.

II. Branches, Deposits and Advances: Commercial Banks: 1976.

III. Deposits by Cultivator Households With Financial Institutions: June 1971.

IV. Cash Debt Owed to Different Credit Agencies by Cultivators: June 1971.

V. Debt by Cultivators at Various Interest Rates: 1971.

APPENDIX A

STATEMENT I

SAVING, INVESTMENT AND HOUSEHOLD INCOME: CULTIVATORS IN HARYANA

MEAN VALUES PER HOUSEHOLD IN RUPEES: 1969-70

(P = Progressive*, NP = Non-Progressive)

Operational Holdings	Household Income		Investment		Saving (Cultivators)		Borrowing (Cultivators)		Net Lending (Cultivators)		Ratio
	P	NP	P	NP	P	NP	P	NP	P	NP	P. to Non-P.
5 Acres or less	2,791	1,887	592.25	583.03	-560.47	-779.54	222.03	332.63	-930.69	-1,029.94	1.38
5-10 Acres	5,959	3,083	1,956.28	934.17	1,791.93	-1,057.55	511.59	667.08	347.24	-1,324.64	1.90
10-20 Acres	10,235	5,143	1,889.23	1,777.72	4,289.08	72.88	542.27	617.44	2,934.12	-1,087.40	1.76
20-30 Acres	13,247	8,699	2,617.58	2,505.19	4,861.02	2,664.88	665.85	770.73	2,909.29	930.42	1.34
Above 30 Acres	17,612	12,348	7,435.30	2,974.69	4,804.55	4,174.18	2,786.95	107.57	156.20	1,307.66	1.64
Average	7,708	4,472	2,008.70	1,349.11	2,293.98	35.23	614.58	530.35	899.86	-773.53	1.66

Source: G.S. Bhalla, Changing Agrarian Structure in India, (Meenakshi Prakashan, Delhi, 1974), pp. 46 and 77.

*A Progressive Cultivator is defined as one who uses improved seeds.

APPENDIX A

STATEMENT II

Branches, Deposits and Advances: Commercial Banks: 1976

	Punjab	Haryana	All-India
1. Bank offices per 100,000 population	7.4	4.7	3.4
2. Per capita deposits with banks (rupees)	341	133	178
3. Loans per capita by banks (rupees)	205	146	130

Source: Centre for Monitoring Indian Economy, Basic Statistics Relating to the Indian Economy, Vol. 2: States, (Bombay, November 1976); Tables 9.1 and 9.2.

APPENDIX A

STATEMENT III

Deposits by Cultivator Households with Financial Institutions: June 1971

		Punjab	Haryana	All-India
1.	Deposits with Financial Institutions Per Household (rupees)	321	61	93
2.	Deposits with Financial Institutions Per Reporting Household (rupees)	1551	1070	1453
3.	Deposits as a Percentage of Total Assets	0.5	0.2	0.6
4.	Proportion of Households Reporting Deposits	20.7	5.7	6.4

Source: Reserve Bank of India, Assets of Rural Households, (Bombay, 1976), p. 103.

APPENDIX A

STATEMENT IV

Cash Debt Owed to Different Credit Agencies by Cultivators: June 1971

(Percentages)

	Punjab	Haryana	All-India
1. Cooperative Societies/ Cooperative Banks	32.0	23.1	22.0
2. Commercial Banks	4.9	2.7	2.4
3. Landlord	11.0	10.4	8.1
4. Agriculturalist Moneylender	9.3	19.8	23.0
5. Professional Moneylender	5.8	21.0	13.1.
6. Trader	12.3	6.2	8.4
7. Relative/Friend	14.8	10.8	13.1
8. Total Institutional Agencies	43.9	30.6	31.7
Total	100.0	100.0	100.0

Source: Reserve Bank of India, Indebtedness of Rural Households and Availability of Institutional Finance, (Bombay 1977) pp. 33-35.

APPENDIX A

STATEMENT V

Debt by Cultivators at Various Interest Rates: 1971
(Percent to Total)

	Interest Rate		
	Below 13%	Below 19%	Above 19%
Punjab	66	71	29
Haryana	42	62	38
All-India	49	57	43

Source: Reserve Bank of India, Indebtedness of Rural Households and Availability of Institutional Finance (Bombay, 1977), Section 6.

APPENDIX B

Statistical Statements: The Syndicate Experience

I. Syndicate Bank and the Commercial Banking System

II. Syndicate Bank and the Banking System

III. Structure of Costs: Syndicate Bank

IV. Cost-Structure: Loans and Advances: 1975

V. Cost-Structure: Deposits of Syndicate Bank: 1975

VI. Establishment Cost As a Proportion (Percent) of Total Deposits

VII. Structure of Deposits

VIII. Growth of Pigmy Deposits: Branch Category-wise

IX. Cost-Structure of Some Institutions: Philippines, Mauritius and India

APPENDIX B

STATEMENT I

Syndicate Bank and the Commercial Banking System

		Percentage Share of the Syndicate Bank in Total Commercial Banking Sector			
		1960	1965	1970	1975
1.	Deposits	0.9	1.8	2.6	4.0
2.	Loans and Advances	1.0	1.7	2.6	3.9
3.	Branches	2.9	3.3	4.1	3.8
4.	Borrowing Accounts	-	15	-	12

Source: N.K. Thingalaya, Innovations in Banking: The Syndicate Experience (World Bank: Development Economics Department: Domestic Finance Studies No.46: 1978).

APPENDIX B

STATEMENT II

Syndicate Bank and the Banking System: Some Indicators - Percentages

	Syndicate Bank		Banking System	
	1968	1975	1968	1975
1. Rural Branches/ Total Branches	32	39	22	37
2. Rural Deposits/ Total Deposits	-	12	-	8
3. Agricultural Advances/ Total Advances	12	13	0.3	10
4. Advances to Small Industry/ Total Advances	11	14	8	12
5. Advances to Small Business/ Total Advances	7	14	negligible	8
6. Share of 3+4+5 in Total Advances	30	41	8.3	30
7. Borrowing Accounts under 3, 4 & 5/Total Borrowing Accounts	50	65		
8. Deposit Accounts under Rs. 1,500/Total Deposit Accounts	90	89		
9. Deposits for Deposit Accounts under Rs. 1,500/Total Deposits	50	50		

Source: Same as in Statement I.

APPENDIX B

STATEMENT III

Structure of Costs: Syndicate Bank
(Proportion - Percent - of Total Assets)

		1950	1955	1960	1965	1970	1975
A.	Operating Costs	5.03	4.76	5.69	6.40	8.0	10.01
B.	Deposit Costs	3.05	3.39	4.30	4.39	5.39	7.39
	(a) Admin. Costs	1.53	1.55	1.64	1.59	1.64	1.66
	(b) Interest Costs	1.53	1.85	2.66	2.80	3.75	5.72
C.	Total Cost of Loans and Investments	0.73	0.66	1.13	1.90	2.46	2.46
	(a) Admin. Costs	0.60	0.49	0.96	1.73	2.17	2.20
	(b) Default Risk	0.13	0.17	0.17	0.16	0.29	0.27
D.	Cost of Excess Capacity*	1.25	0.70	0.25	0.11	0.15	0.15
E.	Total Cost (B(a) + C(a) + C(b) + D) (Other than Interest Cost on Deposits)	3.51	2.31	3.02	3.60	4.25	4.27
F.	Total Earnings	7.84	5.75	7.46	7.52	8.30	10.23

*Note: Cost of excess capacity represents the losses of new branches during their gestation period. The gestation periods for different branches are given below:

Area	Years
Rural	4
Semi-Urban	2
Urban-Metropolitan	1

Source: Estimates based on material given in the Syndicate Study referred to in Statement I.

APPENDIX B

STATEMENT IV

Cost-Structure: Loans and Advances: 1975
(Cost as Proportion - Percent - of Total Under Each Category)

Sector	Syndicate Bank			Large Metropolitan Bank (Bombay)		
	Administrative Costs	Default Risk	Total	Administrative Costs	Default Risk	Total
1. Agriculture	0.80	1.00	1.80	6.06	1.39	7.45
2. Small Industry	0.85	0.79	1.64)	5.18	1.86	6.04
3. Other Small Enterprises	2.75	1.00	3.75)			
4. Total: Loans and Advance	2.24	0.52	2.76	1.70	0.70	2.20

Source: For Syndicate Bank, estimates based on the Syndicate Study. For the large Metropolitan Bank (Bombay), the data were given by the bank concerned; it does not want its identity to be revealed.

APPENDIX B

STATEMENT V

Cost Structure: Deposits of Syndicate Bank: 1975
(Cost as a Proportion - Percent - of Total Deposits Under Each Category)

Deposit Category	Current	Pigmy	Savings	Fixed & Cumulative	Total Deposits
Cost Item:					
1. Interest Costs	-	0.48	4.30	11.70	6.86
2. Incentives & Commissions	-	3.94	0.09	0.01	0.14
3. Administrative Costs	0.20	1.10	2.57	1.30	1.55
4. Total	0.20	5.52	6.96	13.01	8.55

Source: Estimates based on the Syndicate Study.

Large Metropolitan Bank (Bombay)	Interest Costs	6.50
	Other costs	3.29
	Total	9.79

Source: Estimates obtained from the Bank.

APPENDIX B

STATEMENT VI

Establishment Cost as a Proportion (Percent) of Total Deposits

Year	Syndicate Bank	Banking System	United States - All Insured Commercial Banks
1951	2.27	1.70	
1961	2.12	1.80	
1971	2.80	3.00	
1975	3.02	3.06	2.90

Source: For Syndicate Bank, the same as in Statement I.
For the Banking System in India, Centre for Monitoring Indian Economy, Basic Statistics Relating to the Indian Economy Vol. I: All India (September 1977, Bombay), Table 19.1.
For the United States, Federal Reserve Bulletin (Number 7, Vol. 63, July 1977).

APPENDIX B

STATEMENT VII

Structure of Deposits

	Current	Pigmy	Savings	Fixed	Total (Rs. Mill.)
1950	7.0 (19.0)	6.9 (18.7)	7.0 (19.0)	16.0 (43.4)	36.9 (100.0)
1955	9.0 (13.5)	15.5 (23.2)	15.0 (22.5)	27.2 (40.8)	66.7 (100.0)
1960	20.3 (10.8)	39.1 (20.7)	35.7 (18.9)	93.6 (49.6)	188.7 (100.0)
1965	104.0 (17.6)	93.6 (15.8)	124.3 (21.0)	269.2 (45.5)	591.1 (100.0)
1970	258.7 (15.4)	154.3 (9.2)	396.1 (23.6)	868.4 (51.8)	1,677.5 (100.0)
1975	892.1 (16.6)	397.3 (7.4)	1,322.4 (24.6)	2,754.2 (51.3)	5,366.0 (100.0)

Note: Figures in brackets represent proportion (percent) of the Total.

Source: Same as in Statement I.

APPENDIX B

STATEMENT VIII

Growth of Pigmy Deposits: Branch Category-wise (Rupees 000's)

Year	Rural	Semi-Urban	Urban	Metropolitan	Total	Branches (Number)
1950	510 (7.4)	2,869 (41.4)	2,447 (35.3)	1,107 (16.0)	6,933 (100)	79
1955	1,142 (7.4)	6,129 (39.5)	6,116 (39.4)	2,119 (13.7)	15,506 (100)	93
1960	1,961 (5.0)	14,519 (37.1)	12,957 (33.1)	9,678 (24.7)	39,115 (100)	139
1965	7,360 (7.9)	32,102 (34.3)	30,976 (33.1)	23,136 (24.7)	93,574 (100)	204
1970	14,198 (9.2)	50,156 (32.5)	45,681 (29.6)	44,292 (28.7)	154,327 (100)	461
1975	49,050 (12.3)	121,150 (30.5)	110,420 (27.8)	116,680 (29.4)	397,300 (100)	778

Note: Figures in brackets represent proportion (percent) of Total Pigmy Deposits.

Source: Same as in Statement I.

ANNEXE B

STATEMENT IX

Cost-Structure of Some Institutions: Philippines, Mauritius and India
(As a proportion - percent - of total assets under each category)

	(1) Administrative Cost	(2) Default Risk	(3) Total	(4) Profit	(3+4) Total
A. Small Industry					
Philippines: Private Dev. Banks	3.8	1.5	5.3	1.0	6.3
Private Dev. Corp. of the Philippines	3.0	1.7	6.7	-1.9	4.8
Dev. Bank of the Philippines	3.0	2.5	5.5	-3.1	2.4
Mauritius: The Dev. Bank of Mauritius	13.0	2.1	15.1	-15.1	-
B. Medium Industry					
India: Gujerat State Financing Corp.	1.50	0.44	1.94	0.61	2.55
Korea: Medium Industry Bank	3.50	0.80	4.30	0.20	4.50
Colombia: Corporacion Financiera Popular	6.30	4.00	10.30	1.20	11.50
C. Medium-Large Industry					
Philippines: Private Dev. Corp. of the Philippines	0.2	2.3	2.5	2.3	4.8
Dev. Bank of the Philippines	0.4	1.3	1.7	3.3	5.0
Commercial Banks	1.0	1.7	2.7	1.9	4.6
India: Industrial Dev. Bank of India	0.40	-	0.40	1.60	2.00
Industrial Credit & Investment Corp. of India	0.40	-	0.40	2.60	3.00
Korea: Korean Dev. Finance Corp.	1.70	-	1.70	4.60	6.30
Korean Dev. Bank	0.50	0.10	0.60	0.60	1.20
Mauritius: Mauritius Dev. Bank	0.84	0.50	1.34	2.65	3.99
D. Agriculture					
Philippines: Rural Banks	3.5	1.2	4.7	2.2	6.9
Private Dev. Banks	5.0	3.2	8.2	-1.7	6.5
Dev. Bank of the Philippines	3.9	3.4	7.3	-8.5	-1.2
Mauritius: Mauritius Dev. Bank	4.2	1.9	6.1	-2.2	3.9

Source: Estimates based on data directly obtained from the various institutions.