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Domestic Financing of Communication in Developing Countries: A Preliminary Investigation of the Nigerian Case

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ABSTRACT

This a case study of the Nigerian communication situation which examined the efforts by this developing country towards the mobilisation of domestic resources to finance communication industry. The study revealed that except during the period 1981-1985, planned public investment in the communication sector has been moderately high at a level of 6.1% of aggregate ex ante expenditure.

For the period 1960-1980, actual communications expenditure as a ratio of actual total expenditure was lower at an average of 4.5%. Total sector performance measured by the degree of resistance to plan distortions was lower for the communication sector relative to aggregate performance throughout the twenty four year period beginning in 1962, except during the second development plan period between 1970-1974.

The trend in domestic public financing appears to have been dictated by two factors, namely the philosophy of economic planning and the fluctuations in economic fortunes. The oil book of the mid 1970s prompted the largest planned allocation of 9% during the period 1975-1980, although realized expenditure fell slightly below to a level of 7.2%.

The article observes that these observed trends show clearly that there does not seem to have been any strong commitment by the Nigerian government to communication services to meet the needs of a significant portion of the

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population, especially those in the rural areas, and notes that this situation is not likely to change soon due to that country's present poor economy and the overemphasis by the government on market forces.

Financement national de la communication dans les pays en développement: une enquête préliminaire sur le cas du Nigeria

RESUME

Il s'agit d'une étude de cas de la situation sur communciations au Nigéria qui porte sur l'examen des efforts des pays en développement pour mobiliser les ressources nationales en vue de financer l'industrie de la communication; l'étude a révélé, qu'en dehors de la période 1981-1985, l'investissement public prévu pour le secteur de la communication a été modérémment élévé et a atteint 6, 1% des dépenses publiques.

Pour la période 1960-1980, les dépenses reelles en communications, par rapport aux dépenses totales étaient inférieures en moyenne à 4,5%. La performance globale du secteur mesurée en terme de dégré de résistance aux distortions du plan était inférieure pour le secteur de la communication par rapport à la performance nationale sur les 24 années de la période à compter de 1962 à l'exception de la période du second plan de développement de 1970 à 1974.

La tendance en matière de financement public national semble avoir éte dictée par 2 facteurs, à savoir la philosophie de la planification nationale et les fluctuations de l'économie nationale. Le boom pétrolier de la moitié des années 70 a causé la plus grande allocation de fonds planifiée (de 9%) au cours de la période 1975 - 1980, quoique les dépenses réelles réalisées aient éte légerement inférieures à 7.2%.

L'article note que ces tendances montrent clairement qu'il ne semble avoir aucun engagement puissant de la part du gouvernement nigérian vis-a-vis des services de communcation pour satisfaire les besoins d'une partie importante de la population, notamment celles des zones rurales; il note aussi que cette situation ne changera pas dans un avenir proche en raison de la situation économique actuel du pays et de l'importance excessive que le gouvernement accorde aux forces du marche.

Introduction

In many developing countries, including Nigeria, the basic economic problem of scarcity is as relevant in the "market for information" as it is for most commodities. In these societies the quantity and quality of productive information which are exchanged are poor, while the distribution remains highly skewed in favour of inter-personal communication. Given this structure of information flow, the installation of modern communication structures would, to a large extent, tend to eliminate much of the attributes of scale economies associated with such structures such that prices paid for information become intensely over-valued.

This situation is of much concern to communication planners in post-colonial societies, given the relative pace of communication development in the industrial countries.In these industrialised countries, especially since the mid 1970s, the accelerated develop-ment in the technology of information and communication has been sufficient to fuel expectations that these countries could, in fact, enjoy the full benefits of the information society by the turn of this century. One major explanation for this optimism derives from the knowledge that these countries recognise the fundamental and strategic importance of adequate communication infrastructures as essential elements in national development and have allocated significant proportion of investment resources to communication development.

In the less developed countries the situation is different,[1] except in a few of the oil-producing ones where annual average investments of 6%-8% had been realised in the second half of the 1970s. Even in these cases, the bulk of the investment resources have been allocated to telecommunications.

The developing countries face the challenge of upgrading their level of commitment to increased investment in the communication sector. Such an effort is encouraged by certain peculiar features of the communication industry itself. One of such features is the inherent profitability of communication structures which, if properly organised, has enormous potential to generate considerable value-added. In addition, communication structures permit the realisation of substantial economies through their enormous capacity for technological innovation. These innovations can and do result in progressive reduction in the average cost of production and per unit price of output in the communication industry. The growing populations of the less developed countries also represent vast potential markets which can sustain the production or hard and soft-wares of modern communication industries. These positive factors could be harnessed by developing countries through worthwhile investment, but so far bold actions have been infrequent and uncoordinated. An explanation is necessary.

Problem of Technology Transfer

The transfer of information and communication technologies is constrained by a mixture of the inter-play of market and political forces in the high-tech societies and the financial and cultural dispositions in the low-tech recipient economies. One major issue relates to the conduct of transfers on a turnkey basis.[2] This process forestalls efforts of recipients of the new technology to independently replicate and improve upon the imported technology.

The developing countries are also not spared the impact of the oligopolistic structure under which high-tech communication structures are produced and marketed. Although production has increasingly become highly capital intensive, the enormous cost of promotion and distribution as diluted the benefits of capital intensity. It is in the area of these "extended" cost outlays that developing countries could have had some measure of comparative advantages [3] in domestic production of communication structures. However, multinational oligopolists can and do always segment their consumers and evolve pricing policies which erode this advantage and prevent the developing countries from entering the fast growing industry at the low end of the price range.

By far the most intractable problem in the transfer of communication technology to the technologically disadvantaged societies pertains to differences in the structure of the producing and consuming societies. The technologies developed in the former are usually designed for mass production. They also reflect the cultural values and national aspirations of these countries. In developed societies, capital is the biggest single input and more abundant in supply. Consequently, communication development is capital intensive and takes for granted the existence of certain supporting infrastructures and the stability of economic activities. On the other hand, the low-tech societies are characterized by surplus labour and usually by wide and unpredictable swings in domestic input supplies. This suggests that technological transfers to these countries must consider the character of these economies, and the risk of cultural erosion.

Finally, in most of these developing countries priority has been given to other more competing areas of demand including agriculture, education, health and such infrastructures as roads and water supply. Domestic funding of communication infrastructures whose benefits are largely misunderstood becomes less of a serious concern. An additional problem is that in most of these countries foreign exchange is scarce and development assistance unpredictable.

As developing countries gradually come to grips with the knowledge of the significance and potential of communications, these problems have produced difficult options which have greatly influenced the pattern and direction of communication development in these countries.

Options for Developing Countries

Due to the unacceptably high social cost of technological dependency, three options are available to developing countries that with to forge ahead with the development of modern and indigenous communication equipment. These options which are not necessarily mutually exclusive include provision of adequate resources for research and development, infusion of capital into the development of both hard and soft-wares, consideration of appropriate policies for manpower development and the provision of supporting infra-structures.

These impose heavy financial burdens on developing societies. Their commitment to such an elaborate programme requires solid justification in terms of concrete factual evidence of the contribution of communications to the achievement of overall national objectives. Current planned effort would, to some extent, depend on what exists based on past efforts. A record of such effort for a developing country will now be examined using Nigeria [4] as a case study. The period covered by this study is the twenty years since it attained independence in 1960.

Financing Communication Sector

Financing communication development is not only a problem of increased investment but also one which requires substantial amounts of initial capital. It is estimated that as much as 60%[5] of this investment has to be provided in foreign currency which is scarce and costly in most developing countries due to unfavourable terms of trade, falling commodity prices and sharply increasing debt burdens. The problem of financing is further compounded by the fact that a very large proportion of revenue realisable through the sale of communication services is in local currency. Nonetheless, it is reasonable to propose that every country is intent on financing a viable communication programme consistent with its social and cultural ethos with minimum disruption to its financial integrity.

Different sources of finance exist but each has its own financial, social and economic implications for the borrower. Generally, five alternative sources can be identified including self-financing, bilateral government aid, loans from domestic financial institutions, multi-lateral financial arrangements and suppliers credit.

Loans from domestic financial institutions and suppliers credit are characterised by short maturities and high interest payments. These constitute serious bottlenecks for communication projects which usually have long gestation periods. Bilateral government loans and grants generally flow from the developed to the under-developed countries and, more frequently, are based on the political interests of the former. They are also normally project-tied and, therefore, allow the recipient little flexibility in resource management. Multilateral finance is relatively more generous and takes into account the peculiarities of the recipient country but the size and scope to multilateral financing is hardly considerable enough to meet the critical demands of developing countries.[6]

Domestic financing, if available, has the advantage of being the most economical and one that can be allocated in response to the real needs of the developing country. Direct investment in communication by private producers is hardly discernible in these countries mainly because of legal constraints which restrict private participation on a substantial scale. Even where an open door policy exists, it is doubtful if private investment can be fully mobilised because the market structure and pricing policy that could emerge may conflict with certain social goals designed to integrate the rural communities with the rest of society and preserve culture. Public monopoly and financing thus become inevitable.

In Nigeria, public financing has grown rather slowly and has reflected fluctuations in economic fortunes and planning philosophy. During the first national development plan (1962-68), public policy sought to "eliminate subsidies to private and government subscribers"; it was believed that "the system has reached the level where it must not only pay for itself but must also begin to generate some of the resources required for its own expansion".[7] What this meant was that much of the resources for communication development should be derived from consumers of sector services at prices, ostensibly, to be dictated by market forces. The organisation of communication development in response to market mechanisms provides largely for urban and commercial demands as well as administrative needs of government institutions. The inelasticity of demand by these consumers justifies a pricing policy that puts the market value of communication services far in excess of the utility valuation by a sizeable majority of the people. The scale of operation must of necessity be meagre.

Table 1 shows public investment in communication for the period 1962-1985. In the first development planned

TABLE I Expenditure on Communication Development in Nigeria: Percentage Distribution

Development Plan	KE (P&T) KE*	KE (In) KE*	KE (C) KA*	KA (P&T) KA*	KA (In) KA*	KA (C) KA*	KA (P&T) KE (P&T)	KA (In) KE (In)	KA (C) KE (C)	KA (E) KE (E)
1962 - 1968	4.4	0.5	5.0	2.1	1.7	2.9	36.8	127.8	46.7	79.3
1970 - 1974	3.7	0.7	4.4	5.8	1.9	7.6	103.4	190.4	116.3	66.8
1975 - 1980	8.1	0.9	9.0	6.0	1.1	7.2	50.4	87.1	54.0	68.8
1981 - 1985	2.8	0.9	3.7	NA	NA	2.6**	NA	NA	49.6**	71.4

Source: Derived from National Development Plans: Various Issues; Central Bank of Nigeria, Annual Report and Statement of Account; Various Issues

KE* - Total Estimated Capital Expenditure

KE - Estimated Capital Expenditure

KA* - Total Actual Capital Expenditure

KA - Actual Capital Expenditure

P&T - Post and Telecommunication

In - Information: Radio and Television

C - Communication - P&T Plus In

E - Aggregate Economy

** - Derived from related data

allocation to communication was about 5.0% (column 3) of aggregate resources expected to be available. Out of which 4.4% and 0.5% respectively was allocated to posts and telecommunication and Radio and Television. This clearly demonstrates a strong bias for the point-to-point media structures and a reinforcement of the pattern of expenditure during the colonial administration plan (1955-61)[8] which had a corresponding allocation of 8.3%l and 0.7% respectively for both sub-sectors.

The total planned allocation to the communication sector during this period points up an encouraging desire to stimulate investment in this sector but what is significant is the actual expenditure resulting from the numerous distortions during plan implementation. It can be observed from column 6 that expenditure in the communication sector at the end of the plan period declined to 2.9% of aggregate actual expenditure. In fact on a disaggregated basis, the mass media sub-sector performed better as actual percentage expenditure rose to 0.7% while in the posts and telecommunication sub-sector, actual expenditure was 2.1% of overall expenditure.

Resistance to distortion in plan implementation can be measured partly by observing changes in the relationship between planned and actual allocations. These are shown in columns 8, 9 and 10. For the economy as a whole, performance was 79.3% while the aggregate for the communication sector was 46.7%. This implies low resistance to outflow from this sector to other sectors of the economy.

In the second national plan (1970-74), government policy moved in the direction of supply-led programme for development of communications. The development of communications, it was emphasized "should move in step with, indeed *ahead of* industrial, commercial and administrative efficiency".[9] In spite of this apparent willingness to commit more resources to the expansion of the communication sector, there was, in fact, a reduction of planned expenditure from 5% (1960-68) to 4.4%. There was a slight increase in the allocation to the mass media sub-sector (0.7%), while a reduction was evident in the postal and telecommunication sub-sector. However, in terms of actual expenditure, the policy to boost communication development was operationised. Actual expenditure on communication as percentage of total expenditure in all sectors rose from 2.9% in the previous plan period to 7.6% during the current plan period. In both sub-sectors, it rose to 5.8% for posts and telecommunication and 1.9% for radio and television. During this period distortions in plan implementation were biased in favour of communications. The evidence shows that while, overall plan performance was 66.8%, the communication sector recorded a performance of 116.3%. This period could be regarded as the golden years of communication development in Nigeria.

The oil boom, which became very visible in the mid 1970s, was expected to provide steady state steam for sustained development in all sectors of the economy. For communication, this meant a 9% allocation during the third national development plan (1975-80). At the end of the plan period actual expenditure was 7.2% of total aggregate expenditure. Again, radio and television exceeded planned allocation by 0.2% while posts and telecommunication declined from 8.1% to 6%. Unlike the trend in the previous plan period, actual net inter-sectoral flows were negative for the communication sector as a whole as performance in terms of planned expenditure was 54% against over economy performance of 68.8%.

The fourth national development plan (1981-88) was designed to consolidate existing projects in the sector, and provide supporting infrastructure. The Nigerian economy during this period had suffered serious stagnation and the communication sector was overly affected. Overall planned allocation was 3.7% of total planned government expenditure. Although the mass media held on to a constant proportion of overall sector allocation, the share for posts and telecommunication declined to 2.8%. However, figures available show that in terms of actual allocation, the communication sector was worse off as it attracted 2.6% of aggregate expenditure. Columns 9 and 10 give a picture of sectors resistance to distortions during the period. Again, the net inter-sectoral flow of funds was negative for the communication sector during the period.

Conclusion

The domestic financing of communication structures in Nigeria has been low-keyed except during the decade 1970-1980 when an average of 7.4% of actual expenditure was devoted to this sector. Thereafter, efforts to generate more public investment declined. The trend has reflected the direction of public policy and fluctuations in the level of economic activities. There does not appear to have been any discerning evidence that points to a strong commitment to provide communication services to meet the needs of a significant portion of the population, especially those in the rural areas. This attitude is not expected to change soon as the economy continues to wobble and emphasis placed on market forces.

Notes

1. Investment in communication facilities in developing countries has in recent years been about 0.3% of GDP and this is considerably less than half the average for the industrial countries. See Robert J. Saunders and C.R. Dickenson, "Telecommunication Priority Needs for Economic Development", *Telecommunication Journal*, Vol.46, No.9, 1979, pp.567-568. Also ITU, "The Missing Link", *Report of the Independent Commission for World Wide Telecommunication Development*, 1984, Table VII.

2. Sometimes the amount of information embodied in the transfer is a matter of political decision in the producing country. Usually, it is market strategy designed to maintain technological dependence. Such dependence places the whole attribute of national sovereignty in jeopardy.

3. Technology changes conditions but doesn't necessarily determine comparative advantage. However, as its significance grows, comparative advantage becomes increasingly man-made rather than determined by historical circumstances and geographical position. For details of comparative advantage in communications

see Rada Juan, "Appropriate Informatics for Developing Countries", *Informatics & Industrial Development*, Tycooly International Publishing Ltd., Dublin, 1981.

4. Nigeria is an oil-producing country and could not be considered a "typical" developing country. However, its foreign indebtedness which consumes as much as a third of foreign exchange earnings, puts it in a financial bind which parallels that of any other *typical* developing society.

5. I.T.U., *Op.Cit.*, p.57

6. World Bank lending for communication development declined from $166 million in 1984 to $50 million in 1986 in spite of increases in its overall lending from $15 billion to $16 billion. See Stephen Pare de Got, "Innovative Financing Techniques with Emphasis on Asia", *Telecommunications for Development: Exploring New Strategies*, Proceedings of a conference held in New York, October, 1986.

7. Federal Ministry of Economy Development, *National Development Plan*, 1962-68, p.83.

8. The first was a ten-year plan, 1946-56. This was revised in 1951 and was followed by a similar programme for 1955-1961.

9. Federal Ministry of Information, Second National Development Plan, 1970-74, p.209.