

THE COMPARATIVE COSTS BETWEEN INVESTING IN NEW TOWNS AND
THE EXTENSION OF EXISTING METROPOLITAN AREAS
OFFERING THE SAME SERVICES

By

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SUBMITTED TO THE DEPARTMENT OF URBAN STUDIES AND PLANNING ON
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ABSTRACT.

New Towns ought to deal effectively with solving some the urban problems in LDCs, in particular by absorbing the population of cities through the provision of housing. One advantage is that the concept usually entails large-scale, inter-sectorial, and economic planning which may benefit the entire country. However, they are much too expensive for LDCs. Sites and services offer a cost-effective alternative in the provision of low-income housing for poor urban dwellers and have proven a replicable strategy.

This study is concerned with the compilation of information and facts on some of the principles and premises behind the utilization of new towns and the sites and services concept, as an alternative development strategy, in the lesser developed countries' context. The advantages and disadvantages of both concept are examined to see to what extent either may be more appropriate for LDCs presently, given the scarcity of funds.

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FOCUS OF PAPER

National urban policies of many developing countries call for the creation of new towns on the out-skirts of their major or capital cities. The new towns are sometimes used as planning solutions to diffuse the growth of the "Primate Cities" in these countries, and provide badly needed housing, services, and infrastructure for the rapidly increasing urban population.

Another reason, although perhaps unique to Egypt, for the construction of new towns is the preservation of scarce fertile land for agriculture. Egypt had to study in detail the costs involved and the goals they were trying to achieve, then decide whether or not creating new towns was the best decision.

However, new towns are very expensive. Successful decentralization schemes, using new towns, usually involve massive infrastructure investments and heavy initial subsidization, requiring the kind of funds that developing countries typically lack.

In this paper I have attempted to evaluate the options of either developing new towns or just simply providing the same services [institutions, services and infrastructure] to the metropolitan area in the Developing Countries context. Specifically, I am concerned with the issue of housing for the

urban low income population, and how their needs can be best met by either of the two options. Within the context of extending the metropolitan area, by providing the services and infrastructure in-situ, I have looked at sites and services schemes. Available information indicates that they are a cost-effective way of providing housing for the urban poor [Peattie 1982]. [Extending the metropolitan area also helps] absorb the flow of in-migrants to the city.

In themselves, the two concepts [new towns versus sites and services] are difficult to compare. Effectively, new towns, at least historically, tend to be larger in physical scale and sometimes imply inter-sectorial comprehensive planning within the national context of a country. Whether or not actual examples of new towns illustrate this feeling of comprehensiveness, the point is that they should be considered only within such a macro context.

On the other hand, sites and services appear to be an immediate response to a specific and urgent problem. Which is the least cost approach in providing housing for the urban poor? This is the central question this paper addresses.

There are many ways one could compare the two, apparently opposed, strategies, I have chosen to judge them on the following criterion: efficiency, equity and political viability.

a) efficiency :

New towns, because they require high capital outlays for new infrastructure, are expensive. However, we are interested in comparing the cost to other alternatives. Therefore, the value of data on the cost of new town is in its ability to provide us with information for comparison - in this case, with sites and services which is not inexpensive either.

To the governments and institutions providing financial resources, per capita costs to the respective countries for sites and services, are also relatively high. Costs of either alternative is dependent on many factors. Choosing one will depend on the amount of funds available, more urgent priorities, and the specific urban context of the particular Less Developed Country (LDC.)

This brings us to the question of how to structure the basis for this comparison between costs. If this comparison evolves around the "cost of one alternative [new towns] as opposed to another [sites and services]" then that question is easily answered. In most cases new towns are more expensive than sites and services, and based on this assumption we can thus eliminate new towns as a possible solution.

But is that the only criteria to judge by? I believe not. New towns still offer many advantages and therefore should be

examined to what extent the disadvantages of higher costs may be overcome.

In reviewing the options I looked at studies conducted in certain Developed Countries [France and the USA.] comparing alternative urban development strategies, such as sprawl and high density interventions to new towns. The usefulness of these studies will be in their ability to provide us with information on comparison [between new towns and their alternatives] that have not been otherwise undertaken on the subject from the LDCs perspective.

One might argue that the context is not relevant to the LDC's. True, but there are certain conditions that will remain constant. For example, the cost of urban land is still more expensive than land on the peripheries, or elsewhere, both in LDCs and DCs.

Also, some of the conditions that led to new towns in DCs , in the first place, are now prevalent in LDCs, for example, congested "primate cities", insufficient urban infrastructures and services, and a large flow of rural-to-urban migrations.

Important differences are that present compositions and social structures of LDCs differ considerably. The availability of massive investment capital, where financial and capital

markets are often nonexistent, places a greater burden on local and federal governments. Other pressing needs with far less opportunity costs are higher on the list of priorities. There are, of course, other differences, such as the rates of urbanization [LDCs are urbanizing at a more rapid pace than DCs], and low prices for commodities like petroleum, sugar, and bauxite on world markets, affect adversely the once important flow of foreign exchange. Funds for development have dried up. This paper will be sensitive to these differences.

b) Equity criteria: This is based on the central question of who really benefits from either choice. Specifically, which option is better for the poor? New towns are often criticized for being biased towards the provision of housing and services for the middle and upper income groups in LDCs, while on the other hand, sites and services focus essentially on the needs of the poor.

An interesting question would be, why can't new towns address effectively the needs of the low and middle income groups, together, in an effective manner? Some may even prefer to ask the question in reverse, why can't sites and services respond to the needs of the middle and upper classes? Sometimes this is the case. There are example of schemes that have ended up in the hand of the middle-class through the process of "creaming" [Peattie 1982].

c) The political viability criteria : This will provide reasons for choosing one solution over the other, based primarily on the political viability of the options. The choice is inherently political. Decision levels in LDCs, for such projects, is usually Federal and should logically correspond to a general consensus of the electorate in the respective countries.

In many LDCs this [consensus of the electorate] is not reality. After all, how many democratically elected governments exist in LDCs? The ruling group, although they may be elected democratically, are mostly of middle class background and generally represent middle class interests. Projects often reflect this bias and may supply products and services to this group instead of to the really needy.

New towns are often cited as providing a higher standard of living for all potential habitants. However, it must be evaluated to what extent those who actually benefit from a new town solution would include the vast majority of the economically weaker sector.

Available evidence shows contrary results. Peattie points out that the poor do not despise the good standards of living and amenities that may exist in new towns but are much more worried about employment. They are aware that there may not be enough jobs in new towns that will suit their level of skills.

Structure of the paper.

This paper comprises of two sections. The first section concentrates on the new town concept while the second examines the sites and services alternative. Section 1, introduces the concept of new towns through a brief historic background and some discussions of the conditions that led to their implementation in the developed countries. I also look at why the concept was found to be relevant for some Lesser Developed Countries.

Section 1 then examines the new towns , within the Developed Countries context, through the French experience. France was chosen because of her considerable experience with new towns, most importantly with the methodology of implementation. In France a workable financial and administrative system was developed that did not short-circuit the participation of local authorities. In fact, the rapport between the local authorities and the private sector proved workable in the implementation process.

I then look at the pros and cons for the utilization of the new town concept in LDC's, examining the absorptive and employment capacities.

The comparative costs of new towns and other development alternatives are also evaluated. Analyzing the actual financial costs of new towns, by themselves, is of little importance to

this study -as stated earlier, instead comparison of cost to other options for development provide a most useful basis for evaluation.

SECTION II

Section II examines the concept of sites and services as the alternative development strategy. First, I attempt to clearly define of the concept of sites and services, demonstrating its usefulness, as well as weakness, in providing shelter for the economically weaker sector in LDCs. Effectively, sites and services is essentially a shelter-based strategy, and as such experience difficulties in providing employment for the poor.

This section also looks at the available data on possible costs of sites and services to governments, financing institutions, and the targeted low income groups; then tries to synthesize this information into a meaningful comparison of their benefits and costs.

The arguments for and against extending the metropolitan area is examined. Sites and services because of its required in-situ intervention - ie.within cities - will contribute to this extension. The advantages and disadvantages as measured by costs will be looked at. Finally, some conclusions are offered.

The main purpose of this paper though, is to provide

understanding of the basic issues concerning the development of new towns and other possible alternatives in LDC's. Ideally it should act as a "stepping stone" in the direction of further in depth research. I have no pretense to write the final chapters on a much debated issue.

INTRODUCTION TO THE NEW TOWNS CONCEPT :

The modern new town concept was started in England at the turn of the century. Ebenezer Howard, the founder of the garden city, proposed that "garden cities" (new towns) be alternatives to suburban strip development and the congested central city. Howard's first garden cities were Letchworth (1903) and Welwyn (1919). Since then, the new town concept has been used by different countries for different reasons and, of course, in different contexts.

The new town concept engendered many issues. The fusion of these issues derived a concept. It is simpler to think that once upon a time new towns simply provided housing and shelter and although employment was important it was not necessarily provided in conjunction with housing and shelter. With evolution the complexity of our society obliged an integrated approach in the provision of shelter.

Howard, who wrote "Garden Cities of Tomorrow" , at the time

had very specific visions of what new towns should look like and the role they should play, as illustrated below,

"Howard called for the construction of new towns, or garden cities, on the periphery of existing urban areas. The garden cities was an isolated, self-contained community planned to be a predetermined size. It represented a "marriage" between town and country, where residents enjoy both the employment and shopping opportunities of the city and the healthy environment of the countryside. Surrounding the town would be a green belt of permanent open space to prevent sprawl and to preserve the physical independence of the garden city. The population would be recruited from overcrowded existing cities, to enable their redevelopment at lower densities. Once the planned size of 32,000 was reached, the garden city would no longer grow; further regional growth would be concentrated in additional new towns. Eventually, a system of new towns would be developed, each physically separated by a green belt but linked by a transportation system." (1)

Before the British new towns there were hardly any notable precedents. As to what circumstances or conditions led to the conception and birth of the new town concept? The passage below suggests that:

"Howard's book, written in 1898 literally as well as symbolically marked the culmination of nineteenth century concern for the implication of rapid urbanization. Nineteenth century cities were characterized by poor physical and social conditions. Residents in the rapidly growing cities suffered from diseases and a high mortality rate. Health problems were aggravated by poverty, wages were low and unemployment high. Housing was overcrowded and without running water or adequate ventilation. Crime and social disorders increased. The factories produced smoke and other pollutants." (2)

In examining the new town concept in the Developed Countries, one does not really see a drastic difference between

the contexts that existed [then] in these countries when compared to prevailing conditions in the Lesser Developed Countries today. The situation that existed was indeed similar to the LDC's. Nigeria demonstrates this:

"... currently experiencing an urban explosion as a result of an increased rate of rural-to-urban migration precipitated by rapid commercial and manufacturing growth concentrated in a few urban centres. Between 1931 and 1953 the rate of urban growth stood at about 5 percent per annum; from 1953 to 1963 the rate more than doubled and rose to 11.9 percent per annum; since the last accepted census of 1963, various estimates have put the annual rate of urban growth at between 15 and 20 percent. This high rate of growth means that most of the cities have grown remarkably, doubling, tripling and even quadrupling their population over the last two decades. Lagos, for example, doubled its population from about 700,000 in 1963, to an estimated 1.5 million in 1980." (3)

In dealing with these urban problems, the new town concept offered new ways of thinking about human existence and living. One must remember that the context was nineteenth century Europe [with specific reference to England]. The objectives at the time were to:

1 - ameliorate living conditions in existing cities by installing basic infrastructure (water and sewer systems), slum clearance, highway construction, etc.;

2 - build suburbs that permitted workers to escape from urban conditions every evening; and to construct entirely new towns without the poor conditions of the existing cities.(4)

Another reason for the new town concept was the concern for equitable regional development. They [new towns] were the new vehicles which would play important roles in the development of national urban growth policies in Britain and subsequently France. Planners at the time tried to identify means of dealing with regional disparity, where poorer regions suffered from relatively depressed economies characterized by high unemployment and declining industries.

New towns are also used directly to stimulate regional development. If "basic" or propulsive industries could not be easily attracted, employment opportunities could be provided in the region by the construction of a new town. They logically became the focus of investment in depressed regions where existing urban areas were unattractive.

Political decisions, urban problems, industrial growth, and economic development led to the concept of new towns. Some new towns were founded on a political idea - the implantation of central government. For example, the new towns of Islamabad and Brasilia serve as the seat of their governments.

The case of Ghana illustrates the context that prevailed, forcing LDCs to find ways of solving their large-scale urban housing problems. Rates of urbanization grew rapidly over the

last three decades:

"In 1948, the degree of urbanization (ie. the ratio of urban population to the total population) was 13 percent. By 1960, this had risen to 23 percent and in 1970 it was 29 percent. Allied to this was the increase in the number of urban localities from 39 in 1948 to 135 in 1970. In 1960 almost half of the country's urban population lived in the seven largest agglomerations with 40 percent in the three largest cities." (5)

The situation did not improve and the rate of urbanization continued to increase at neckbreaking speed.

"Much of the growth was due to migration. This borne out of the fact that between 1960 and 1970 the annual national growth rate was 2.4 percent whereas the growth rates for almost all the urban centres was 3 percent or more." (6)

This gives an idea of the prevailing conditions that lead directly to the considerations and utilization of the new town concept. It is interesting to observe that the above conditions are identical to the ones existing presently in Urban Areas of Lesser Developed Countries. It seems that there is a lesson to be learned from this observation.

Perhaps the conditions [of Urban Areas in LDC's] reflect a stage of development that LDC's are only now experiencing and perhaps the prevailing conditions are a necessary stage of development.

So, new towns were mostly implemented in Developing Countries to decentralize economic and population growth by absorbing

population through the provision of housing and employment, or sometimes providing new capitals for the focal point of economic development. Brasilia [seen both as an opportunity and a disaster], Ciudad Guyana, Chandigarh, Dodoma, are examples of new towns built in the LDCs context. Each was built for different reasons, under totally different social, political, and economic situations.

The new town of Abuja in Nigeria was mostly a new capital but no one will deny that it was also built for the following reasons, to:

"relieve the population pressure on Lagos, which through the massive influx of people [mostly poor, rural-urban in migrators] had suffered from scarcity of housing, unemployment, traffic problems, congestion of schools, hospitals, social facilities and at the same time created pressure on the supply of energy -- general utilities -- and other municipal services." (7)

Due to the acute shortage of housing in the nearby major city, Lagos, many of the new towns were conceived with an emphasis on housing in mind, claims Okpala. The result is that they are usually built up with residential units without "adequate thought for the provision of supporting infrastructure and social services." (8)

An unforeseen problem accompanied the construction of new towns. In general, when they were employed in developing countries, adequate provisions were not made for new municipal services, institutions, employment and recreational activities.

This resulted in the dependance of new towns -- despite their relative physical separation -- on the already existing metropolitan areas for these services and economic facilities, over taxing already strained infrastructure and service facilities. The major consequence is that high costs for maintenance of the existing facilities are incurred. In LDCs this extra cost is not shared by every one.

So new towns had disadvantages that in return created new sets of problems for LDCs but they were successful on other fronts as the French and British experience proved. The example of the French new towns experience will be closely examined.

THE FRENCH NEW TOWN EXPERIENCE

To look at how successful the new town effort has been for Developed Countries and examine to what extent lessons might be learned and applied to the LDC's context, we will examine the French new town experience, as it is generally cited as a success [Rubenstein 1978, Underhill, Brace, Rubenstein 1980]. Perhaps one of its major achievements was social integration - the creation of socially balanced communities:

"Theirs is a much greater mixture of different housing types and a balance between residential and non-residential functions. The new towns in contrast to other suburban areas, are becoming strong commercial and employment centers. They have much more jobs opportunities, stores and recreational facilities As heterogenous, self contained communities the new towns have already made a distinctive contribution to France." (9)

The French are relative new comers to the modern new town concept: the first government document in support of them appeared in 1965. Large scale construction started around 1970. But the scale of the French new town effort made up largely for its lateness.

Their program is now one of the most important and ambitious in the world in terms of housing starts and new employment. Some available statistics show that by the end of the 1970's French new towns created somewhere around "20,000 housing starts and 15,000 new jobs per year. (10)

A total of nine new towns are in advanced stages of development in France and five alone located within the Paris region. These "villes nouvelles" are being constructed on a large scale and at the turn of the present century, the nine new towns are expected to contain around three million inhabitants. Sizes of the nine towns range from 140,000 for Le Vaudreuil to 500,000 for Evry and Berre-L'Etang. The sizes of the others will be somewhere between 250,000 and 300,000.

The French new towns represent a deviation from the original concept of new town as developed in England. French new towns are large projects with populations ranging between 140,000 and 500,000 inhabitants, while the British new towns' population was less ambitious, in terms of population and employment. They were

not to be separated from existing urban areas by "green belts". They also emphasized the notion of "centralite", or sense of place, on the development of the down town areas.

The goals of the French new towns, like most new towns, were "designed to organize large scale urban growth in an orderly manner, while at the same time achieving a socially balanced community." The French sixth national plan stipulated very well what were to be the roles of the new towns. The primary goals were:

1 - to restructure the suburbs by organizing new concentrations of employment, housing and services;

2 - to reduce the amount of commuting and ease the transport problems in particular urban regions;

3 - to create truly self-contained cities, as measured by a balance between jobs and housing, a variety of different jobs and housing, the provision of housing and supporting services at the same time and place the rapid creation of urban centers, and concern for recreational facilities and environment protection;

4 - they were also to serve as laboratories for experiments in urban planning and design. (11)

To understand the French rationale behind their new town policy, one must examine the relationship between the new towns and other planning policy. At the end of World War II many European countries implemented national planning policies and strategies. The British, for example, commenced the construction of new towns right after the war, while the French concentrated their efforts on other more urgent issues. Their preoccupation with new towns came in the second era of post war planning - in the 1960's. The two guiding principles of French post war planning were: the stimulation of national economic growth and the reduction of regional disparities.

Along with the above reasons and the inability of the city of Paris to cope with physical growth, in terms of employment and housing, the French derived and implemented the new town concept. It was evident at the time that the geographic areas of urbanization would expand and they wanted control over the processes in order to direct this imminent growth. They projected that the Paris region would grow from a population of 8.4 million in 1962 to 14 million by the year 2000.

The need to expand the Paris region was recognized and two choices were available between continuous development and isolated points of growth. The latter was ignored because "it required a sharper discipline or control than the French people

would accept." according M. Delouvrier.¹ The alternative of urban sprawl was also unacceptable. French planners had in mind continuous growth controlled along chosen axes or "couloirs".

The French provincial new towns, those not in the Paris region, were designed to decentralize national growth in an efficient manner. It is necessary to remark that in general the majority of french new towns were not for low-income groups, but eventually some like Scarcelles ended up having high populations of immigrants who were low-income.

Most urban areas in Developing Countries presently are experiencing urban growth at an alarming rate with national growth lopsided and uniquely concentrated in urban areas. The rural-urban drift factor is largely responsible, creating overloads on urban infrastructure systems. The consequences are the multiple problems of accommodation, overcrowding, congestion, employment and environmental degradation.

Their situation is not unlike the Paris region in France in the years following the second world war. However, the French problem has been an historic one that has plagued the country since the nineteenth century. In most developed countries Developed at that time, cities were growing faster than rural

¹ President of L'EDF, France. "L'Experience Francaise Des Villes Nouvelles."

areas. In France the trend was dramatic. The situation worsened after 1850 when the pattern of evenly distributed growth was destroyed by changing technological conditions, for example, the substitution of electricity for coal. Jobs and population was increasingly concentrated in the Paris region. The area then grew at the expense of the rest of the country - precisely the situation in the Lesser Developed Countries today.

After world war II national attention was focused on the imbalance in growth between the Paris region and the rest of the French territory. Nonetheless the region grew from 6.6 million in 1946 to 8.4 million in 1962. In absence of effective planning and control, the region rapidly expanded during the 1940's and 1950's in an uncontrolled sprawl - accentuating social problems. The region became divided into segregated social units.

"Pressure to locate in Paris drove out space intensive activities in favour of those requiring little space, and attracts those who are willing to pay for the location. Thus, offices are expanding in the center while factories moved out, and the well-to-do stay in the center while the poor are priced out." (12)

In LDC's the major part of investment comes from the national governments. Usually national governments are the sole providers of the financial resources needed to guide large scale projects, especially through the early stages. Perhaps LDC's can learn from the example of the French financing system, because most LDC's have strong federal or central governments making collaborative

efforts cumbersome between private sector and local government.

The French dealt with all these factors effectively. They sat out to achieve a rational distribution of the financial burden among the national government, local authorities, and the private sector. Each member of the development team was expected to make capital contributions to the venture, the local authority providing basic social infrastructure such as schools, day care centers, police security and welfare.

The French new towns were financed by local taxes, federal national grants, and loans from the national bank (CDC). The Development Corporation (EPA) conducted essential studies, purchased property, installed infrastructure and sought to attract potential developers. These activities were financed through grants and loans from the state and money from the sale of land.

The French system was relatively more complex than the British, who's system - although simpler, excluded the participation of local governments in the decision process. For the development of new towns, they used a Development Corporation which was responsible for nearly all aspects of the development process. The corporation then borrowed money from the national treasury. Loans were secured from the national government for fifty years and were to be paid back with money received from the

sales and renting of land.

The important conclusion to be drawn here is that the French financing system was successful and LDCs can benefit by adopting it to their proper contexts. As new towns cost are expensive the financial burden cannot be carried by any one entity, i.e. the state or federal government, local governments, or the private sector.

The French experience tells us that it is possible to encourage the successful participation of the private sector. The American example tells us the opposite, that the scale of new towns were much too large for the private sector alone to handle. The French model is good for LDCs to use as example because it required the harmonious cooperation of these entities, private sector, public sector, and local governments to make the experience a success.

So far, in LDCs there has been virtually no support from the private sector and all funding has been from national sources. This may be a potential source of financing for new towns or sites and services in LDCs, encouraging the replicability of both strategy. Success may lie in the ability of governments in LDCS to encourage the participation of the private sectors.

ARGUMENTS FOR NEW TOWNS IN LDCs.

In the LDCs where rapid urban growth is prevalent, large-scale and overall planning is necessary. This large scale increase in demand for services and infrastructure logically cannot be answered by just marginal increase in amenities and infrastructure. They are already overtaxed. Even if there were no problems with in-migration, additional infrastructure is still necessary to service the existing population. James Rubenstein thinks that;

"These services and facilities, which will be needed in any event, can be more economically provided by New Towns: 1 - Land is acquired at lower price - outside the city; 2 - The building of infrastructure in new towns is cheaper than adding the same level of services to already built-up areas;... " (13)

The urgent arguments for new towns in LDCs can be reduced essentially to four:

1 - The Absorptive Capacity , 2 - Provision of Employment, 3 - High Cost of Urban Land, and 4 - As a Political Symbol.

1 - The Absorptive Capacity.

The defendants of new towns argue that immigrants must be absorbed somewhere, because already existing metropolitan areas in many Developing Countries cannot deal effectively with the new influx. New towns may solve this problem, providing housing, social and physical infrastructure in an absorptive capacity.

However, scholars argue that this absorptive capacity is seriously hampered by an inability of organized efforts to solve the problem from the source. In addition, no large scale urbanization solutions can effectively address continuous growth in the metropolitan areas. In this capacity, new towns would not be final solutions, as there is no possible way they would keep up with the population growth -- even if many new towns were built.

Perhaps the contribution of new towns may be of an example-setting nature inciting private development initiatives to replicate them. However, this seems highly unlikely, under present situations, as up-front capital needed is considerable and the nature of investment is long term. The French example is of special interest to us as it succeeded in working with the private sector, public sector, and local governments.

2 - Providing Employment :

The issue of employment becomes crucial if we need to absorb this inflow of human resource in a productive manner. It is found that migrants go to the cities essentially for a better life, and his or her only hope is through employment. Attracting industries and business to new towns is not easy. Packaged deals and well studied incentives must be used as "carrots." This act is very costly to the state and local governments.

3 - The most compelling argument for creating new towns - usually away from the existing cities in LDC's - seems to be the cost of metropolitan land. Land in many cities commands high prices in free or mixed market economies. Governments are sometimes large owners of land in cities and may assemble it owing to their powers of eminent domain, for major developments.

The governments are also aware that they will not always get market price for developable urban land. The land which is usually squatted upon in LDC's, by the urban poor, is mostly prime or has the potential of being very expensive. Urban land is usually under supplied, thus commanding high prices. However, the majority of urban squatters refuse to be displaced. The governments sometimes have no other alternative but to provide low income housing on valuable land, making little financial sense but far greater social impact.

Governments then have the alternative of looking outside metropolitan areas for the development of new towns or sites and services where the cost of land is relatively cheaper. Logically if land is cheaper, then housing units provided would also be cheaper - if other factors remain constant. Thus cost recovery can be positively impacted. If there were to be a failure in the recovery of investment costs, and this is usually what happens, governments would not have lost or tied up the use of valuable urban land.

However, most low income dwellers and squatters in urban areas are unprepared to be displaced - for valid reasons. The poor know that the jobs generally available in new towns do not suit them. There the government is sometimes left to intervene within the cities, affecting project cost and losing more profitable alternative developments.

4 - As a Symbol of the "incarnation" of national pride and economic strength :

Another pretext used for new towns in the past by developing countries was as a symbol of the incarnation of national pride and economic strength, illustrating their rise from the ranks of poor nations to elevated position of economically better-off countries. Brasilia may be one such example. However, due to current economic crisis and high foreign debts incurred, most Developing Countries cannot afford the opportunity costs to other sectors of such capital intensive projects.

Others ,Egypt for example, could not achieve its proposed broad goals through isolated interventions of sites and services programs, and looked towards a more broader solution. Taking the example of Sadat City (a New Town-Industrial Center), it was hard to see where any other solution save for a new town could pretend to accomplish what they wanted to achieve.

"Sadat City is to be a new industrial city located midway between Cairo and Alexandria on the desert road. The city is expected to have a population of at least 500,000 by the year 2000; to provide at least 165,000 jobs by that year; and is planned to physically expand to accommodate up to 1,5 million persons within 50 years." (14)

It was also to be:

"part of a national development strategy to save agricultural land,... to further the nation's economic growth, and to provide jobs and housing away from the overcrowded cities of Cairo and Alexandria." (15)

The above declaration implied that any physical development physical had to be approached from an integrative point of view, ie. physical development must be combined with economical development. There was nothing fundamentally wrong with this approach, except that the Egyptians could not afford the required expenditures and investments. However, president Sadat and the government believed that something needed to be done, as demonstrated below,

"The issues behind the development strategy are clear and compelling: limited agricultural land and a dramatic increase in population. Egyptian settlement is confined to less than 4 percent of the nation's area which consists of the rich agricultural land of the Nile river and its delta. Rapid population growth has resulted in about 8 million new residents over the past decade, bringing the population of Egypt to an estimated 38 million in mid 1976. Population density in the inhabited area is one of the highest in the world at about 1,230 people per square kilometer. This is expected to increase sharply if year 2000 population projection of 60 to 75 million occur." (16)

It became obvious that Egypt did not require a short-term solution but rather a global one that would attempt to take it

out of the ranks of dependent third world countries. President Anwar Sadat himself said,

"... I believe... it is time for drawing up a new map for Egypt. This cannot be achieved by setting up scattered projects here and there. It can be done by creating areas for population concentration and new economic activities... able to equal the pulling power of the capital." (17)

The concept of new towns was thus appropriate for these objectives.

In the utilization of the new town concept in Third World countries, it is essential to understand, what will be provided in terms of housing, who will provide it, and what are the trade-offs.

One disadvantage of the new town concept [in LDCs] is that new towns tend to service uniquely the housing and employment needs of the middle and upper income groups, leaving the economically weaker sector excluded. Efforts are not made to attract more low-income residents by providing the maze of economic activities that result in the creation of the inter-dependencies responsible for the informal sector.

Another disadvantage is that manufacturing industries and services do not necessarily relocate on the requests of governments. The process requires compensating subsidies of very high costs that contribute, in the end, to the expensiveness of new towns.

However, let us assume that we could somehow get industries to relocate in new towns. The level of relocation would have to be very high to produce the necessary economic conditions conducive for their [low income groups] existence. Perhaps new towns could be conceived in phases that would allow the poor to be integrated continuously and at later stages, when the necessary conditions for employment and shelter would have been created. However, this process is a long term one. And the poor need housing and employment immediately.

In the development of residential units by the private sector, efforts to attract the low income group is given less importance, because the flow of profit will be assured if developers target high income groups. This contributes to the back-logs in low income housing supply. If low income housing is to be provided successfully in LDC's, they must be targeted with the help of the government.

Another argument frequently used against new towns is that their "per capita infrastructure costs are excessively high" [Wheaton and Shishido]. They suggest that in fact, the unit price or cost of a given level of infrastructure is roughly equivalent in both new towns and the current urban fringe. However, the level of infrastructure normally proposed for most new towns is higher than current and planned infrastructure around existing urban areas. They [Wheaton and Shishido] think there is no

technological reason why new towns should be so expensive and they thus argue that "high standards may be a necessary form of subsidy which reflects a different kind of cost."

Levels of utilities, quality of housing, transportation, infrastructure and some social services in new towns sometimes exceed the existing quality in some cities. This may be due to a conscious effort on the part of the government to attract new settlers or labour by luring them.

Wheaton and Shishido think it is "reasonable to suggest that 'over planning' is really a form of implicit subsidization." An example is the case of Egypt, where the cost of housing and utility provided -- in one of its new towns -- is only slightly greater while "the costs of transportation, education, culture and health is ... greater." (18) This illustrates the point that an emphasis on amenities as an escalating cost factor must be taken into account.

The standards [level of infrastructure] and costs for investment in infrastructure, services and housing in some new town design are such that they impose a very heavy strain on the economy and cause many other required infrastructure investments to be forgone. For example, the estimated cost for the completion of Sadat City, 10th of May City, and 6th of October City [in Egypt] represented about 16% of the total infrastructure

investment allocated for the entire Cairo region over a period of 20 years. This heavy investment would benefit only 4.9% of the projected population of the region by the year 2000.

This cost -- requiring compensating subsidy -- of locating employment in new towns as opposed to existing metropolitan areas is high, but industries have to be attracted for employment. This often requires heavy government subsidizations - contributing to make costs prohibitive.

The question of "over-standards" in new towns for developing countries is of major concern. By "over-standards" we really mean an exaggerated high level of design for infrastructure not crucial to the proper functioning of a project. Excessive standards occur in LDC's for different reasons. One reason is that many engineers and architects of developing countries are often times trained abroad in developed countries, and as a consequence, import engineering standards of these countries, sometimes unconsciously, that are too costly and inappropriate for LDCs.

Another reason is that engineers tend to design most projects as if they will never be maintained. Sometimes poor coordination between local agencies are also responsible for the premature uses of infrastructure. For example, roads paved without thought for telephone and water supply mains or telephone lines layed

after water supply when both tasks could have been carried out simultaneously. This results in added cost for removal and replacement.

However, Carlos Brando thinks this is more of an institutional problem, and looking at the example of Egypt, believes that it will be a long process trying to convince LDCs to re-evaluate these standards. Brando also notes that the World Bank, who finances many such projects, is now opting for solutions with appropriate technology indicating that the problem may lie within the developing countries themselves. The World Bank thinks the alternative may be to invest money into less expensive systems, structures, or projects meanwhile emphasizing servicing and serviceable projects. (19)

Gakenheimer thinks that there are not many options for LDCs. He points out that, the average life span of a highway [in the United States] is about twenty-five years. It would cost a lot more to rebuild the system than it did to build it the first time. The argument excuses expensive first time up-front capital expenditure for infrastructure. These excessive standards are responsible for high costs that could have been avoided, or invested elsewhere, but it can be argued that these costs are needed to lure potential inhabitants to new towns. (20)

However, this investment strain can be reduced by increased density and land use efficiency. But even if significant reduction in standards for infrastructure, housing, as well as improved cost recovery through the sale of land, new towns may still be more expensive than incremental development, such as sites and services schemes, close to built-up areas where use can be made of existing infrastructures.

Also, in general the scope of new towns in LDCs are so large that they tax managerial and organizational skills, both for the construction and development control required. The complexity of new town planning makes it necessary to have readily available technical and managerial savoir-faire in addition to a highly skilled construction work force - preferably local - on a large scale. LDCs typically lack these skills and don't always have them in the quantity needed. Training and importing the necessary skills will contribute to costs.

The concept of new towns may still be implemented in LDCs however the concept will need revision. Given the important funds needed to implement them considerable care must be taken to ensure that they are implemented within the framework of comprehensive and inter-sectorial planning. They must also assure the supply of affordable low-income housing for the urban poor which may be done by incorporating the concept of sites and services within that of new towns.

Where possible new towns should be constructed on the outskirts, or far away from the metropolitan area, to take advantage of the inexpensiveness of land. They must be constructed on relatively cheap land to counterbalance possible high new fixed expenditures for infrastructure, without which new towns lose their competitiveness and will be more expensive than alternative developments. Intervention must also be high density in nature where possible.

The myriad problems that will accompany such a choice must be faced. One such problem is the attraction of industries and services to new towns for the provision of jobs for potential inhabitants, especially the type low-income people need. Governments will still have to contribute by offering compensating subsidies and extended periods of tax advantages. By declaring them special economic zones perhaps they will be able to compete with the already established metropolitan areas.

Finally, the problem of rural-urban migration in LDCs will not be easily solved and will remain an important factor contributing to urban overpopulation. Unless the predominant motives for migration are looked at and addressed, [and they are still economic ones], getting a job in the capital city will remain the only hope for survival and escape from the vicious circle of rural underdevelopment. Until these urgent problems are addressed the flow will continue to urban areas with their

related problems.

THE COMPARATIVE COSTS OF NEW TOWNS AND ALTERNATIVE APPROACHES IN RESPONDING TO THE HOUSING NEEDS OF LDCs.

The issue here is whether new towns are cheaper or more expensive than other forms of urban development in the provision of housing.

All new town ventures require "up-front" costs to be paid way in advance, long before the question of revenue and returns on equity are considered. Capital is needed for the acquisition of land, lay-out of infrastructures, and the development of buildings.

It is only after development is complete that they are sold, rented or leased, hopefully at prices that enable investors and developer to recuperate cost and make a profit. The fact that new towns are very large scale operations make this "up-front" expense factor very important.

However, new towns may be cheaper than other forms of urban development under special circumstances. Studies showed that because of their prominence, they [new towns] are judged unfairly as more expensive. Also, because they include all costs of urban development, at first appearance it is high, but they have no

hidden cost as do usual projects. (21)

To compare the costs of development of new towns with more traditional development projects, we must compare the cost per dwelling of land acquisition and amenities for new towns and alternative development projects in the inner and outer suburbs of the metropolitan areas in question. In the case of Paris it was found that, land for new towns were comparatively less expensive - 2,200 Francs per dwelling, compared to 13,500 in the inner suburbs and 4,800 in the outer.

The cost of direct utility connection to residents was also estimated at 4,800 Francs for the inner suburbs and 6,600 for the outer. The figures were then compared to estimates for supplying secondary and tertiary [amenities, light, gas, water, etc] infrastructure to new towns. The cost was 10,000 Francs for both secondary and tertiary utilities. The rational, Rubenstein explained,

"for comparing the cost of secondary and tertiary equipment in the new towns with just tertiary elsewhere is that in the traditional suburbs new projects often hook into existing water and sewer systems. On this basis, land and equipment cost 11,400 francs per dwelling in the outer suburbs, 12,200 in the new towns, and 18,100 in the inner suburbs. Even with the higher utility costs the new towns are still competitive with projects in the outer suburbs and they are cheaper than the inner suburbs." (22)

The same studies indicated that the cost of urban land is so high that savings on land acquisition in the new towns more than

offset the additional infrastructure expenses. For this same reason it should be more advantageous for Developing Countries to locate new towns outside metropolitan areas. In general the poor and squatters are reluctant to pull up roots and leave the city.

As seen, the high cost of new towns can be compensated for, if land on the outskirts of the metropolitan area, which is cheaper, is utilized. However, if the people are unwilling to be displaced, then that advantage will be lost. In LDC's although most governments have the power of eminent domain, they know it's a double-edged sword that can be used against them. They usually give in, reluctantly, making concession of valuable urban land for which they generally do not recuperate the cost.

Le Groupe Central des Villes Nouvelles [the body in charge of Developing new towns in France] conducted a study and found that when the total costs of new infrastructure per new inhabitant in their new towns of Evry and Cergy-Pontoise was compared with the existing cities of Orleans, Rennes, and Tours, the cost was 1,633 Francs per new inhabitant for the existing cities and only 975 Francs in the new towns.

Other studies [Golany 1976, Rubenstein 1978] in the United States compared the cost of development for a number of typical projects on the outskirts of urban areas. The projects were used to compare organized development as opposed to sprawl and high

residential density versus low density. High density urban intervention, proved cost-effective with economic advantages coming from reduced costs for infrastructure networks and transportation systems [Rubenstein 1978]. Inversely, excessive low densities will be responsible for increasing transportation and infrastructure costs -- both to citizens and governments.

The question of whether or not it is better to intervene inside or outside cities is important, as providing infrastructure and services on the outskirts of existing metropolitan areas, if they are relatively dense, will be less expensive. Important capital expenditures spent on construction and maintenance of infrastructure, for too few people, will result in overall low per capita costs.

A comparative study [Recht and Harman]to illustrate the above point, of a wide range of economic, environmental and social effects of three density type -- low density sprawl, a combination mix [of low and high density], and a high density mix -- discovered that a high density planned community costs 21 per cent less "in terms of total public and private investments to occupants, tax payers, and local governments than the combination mix of the second possibility, and 44 per cent less than the low density sprawl." The studies supported the argument that the adverse effects of uncontrolled growth [sprawl] can be minimized by increased densities and better planning in cities. It is also

demonstrated in this study that high density community significantly reduces the consumption of energy.

The above context is obviously in the Developed Countries but it fits well the Developing countries context. Usefulness may lie in the ability of these studies, in the DCs context, to provide us with information and conclusions already made on comparison between new towns and other forms of development.

James Rubenstein states that, "there is no difference between building superstructure in a new town or anywhere else." and the cost of construction materials is essentially the same. However, new fixed costs for infrastructure, such as sewerage treatment plants in new towns, raises the cost after supplying these services.

Another obvious problem with applying this assumption to LDCs, is that cost for transporting material to areas outside cities is higher. But this can be off-set by the cheap cost of labour in LDCs. However, the most important similarities are the cost of land [urban land is expensive both for LDCs and DCs], and the high new fixed costs for infrastructure, which effectively use up a large percentage of development budget. Understandable the social, economic, and political conditions are not the same.

Also alternative development strategies [sites and services,

upgrading] are relatively new social concepts for LDCs and available published data on total costs, for a significant amount of sites and services schemes, are not readily available.

Another important difference is that the alternative development strategies in LDCs are, in the majority, executed by the public sectors while in DCs, private sector involvement is considerable. The French example testifies to this while the USA proved that their scope is much too large for the private sector to undertake alone [Rubenstein,1978].

Local private sector participation, for sites and services schemes, may be a lesson LDCs could learn well from the developed countries context examined above. There is considerable burden placed on the public sector and financial institutions for their provision, as in the case of new towns. Replicability may be affected positively if the private sector is allowed to participate within a framework of clear rules.

To look at some actual numbers for costs, two projects for sites and services schemes done by the World Bank, in two different countries, are looked at. The countries are Zambia and Jordan. The Zambia projects date back to 1974, while the Jordan projects are more recent, 1985. They were chosen mainly because the information on them was readily available.²

² World Bank Reports.

The Zambia:Lusaka Squatter Upgrading and Site and Services project consisted of:

(a) "servicing 17,000 dwellings in four major squatter settlements; preparation of 7,600 residential plots in three overspill areas located adjacent to upgraded settlements and serviced to the same level as the settlements themselves; preparation and servicing of 4,400 residential plots in six sites designated for sites and services under the Lusaka Master Plan.

(b) building materials loans for house improvement/constructions;

(c) primary infrastructure (water, sewerage, roads) essential to the project;

(d) communities facilities including schools, health clinics, multi-purpose community centers, markets, and demonstration houses;

(e) technical assistance, including project unit operations, construction supervision, training of community development workers, studies and further project preparation."
(23)

The total estimated project costs was 26.2 Zambian kwacha or US\$41.2. A break-down of total costs shows site preparation and servicing was estimated at US\$8.2 million (or 20% of TPC); cost of necessary building materials (including materials loans and equipment) at US\$9.0 million (22%); primary infrastructure was US\$4.7 million and community facilities [secondary and tertiary infrastructure] US\$4 million, making total costs for infrastructure US\$8.7 million (21.2%). Technical assistance was US\$5.6 million (13.7%); land was only US\$187,000 (.5%); and physical and price contingencies US\$9.3 million (22.7%).

To deal with fluctuation in prices [excluding land, building materials, and technical assistance] contingency costs were

estimated the highest (22.7%), followed by building materials (22.2%), infrastructure (21.2%), site preparation and servicing (19.9%), and technical assistance (13.7%)

The total costs for upgrading slums and four sites and services schemes in Jordan [Ruseifa 2a, Ruseifa 2b, Naquab, and Um Nowara] is estimated at 35.4 million Jordan Dinar (JD) or US\$88.5 million. This cost reflect provision for all contingencies.

The financial plan for obtaining the 88.5 million dollars shows the World Bank providing US\$28 million, in the form of loans; the local Housing Bank (HB) US\$22.3 million (25%); the Jordanian Government US\$20 million (23%); beneficiaries themselves US\$17 million (19%); and the Low Income Revolving Fund (LIHRF) US\$1.2 million (1%).

Of the five sources only one [the World Bank] is external, showing that local financial mechanisms are bearing most of the costs, US\$60.5 million (68%). Furthermore, the funds from the World Bank are not grants and must be repaid. In actual fact, Jordan is financing the entire project, indirectly.

However, to get meaningful pictures of what the figures mean, one should calculate the total project costs for the entire scheme, as percentage of the country's gross national or domestic product, then examine them with the same numbers for investments

in different economic sectors of the country in question.

While GNP or GDP figures are not available for respective years for both countries, there is reasonable evidence [World Bank,1985] to suggest that this cost is relatively high. In the case of Jordan, for the period between 1976-1980, substantial local resources have been mobilized for housing which represented 6% of GNP. The current five year plan [1981-1985] allocation was US\$825 million or "8.8% of total public sector investment for public housing."

Also, for an idea of cost to government, and beneficiaries, one might derive per capita costs (total costs divided by number of beneficiaries) then compare this cost to their disposable income. In Amman the entire scheme was to benefit a total of 28,200, people at a cost of US\$88.5 million. Per capita costs for beneficiaries would be US\$3,120 or 1,248 JD which is quite expensive considering that up to 26% of households in the Amman urban region have incomes below the World Bank-defined urban poverty threshold of JD140 per month. [World Bank,1985] It is only after a period of 8 to 12 years that per capita costs is reduced to US\$1,767 or JD706 when the total number of beneficiaries will be around 50,000.

Costs to major lending institutions are important. They have attached considerable value to the concept of sites and services

in its ability to house the urban low-income. The World Bank, for example has underscored the importance of sites and services approaches by adopting it as their official loan and technical assistance for countries seeking help in low-income housing, [World Bank, 1975]. This importance was measured by the total cost commitment of the World Bank in fifteen different countries in 1975.

"In 1972, the World Bank formally adopted sites and services as its official loan and technical assistance outlet for new low-income housing and squatter upgrading. In 1974 USAID began to incorporate sites and services programs into its mortgage guaranty program for developing countries. Since 1972, the bank has assisted in about 149,000 new home sites, and upgraded 742,000 squatter plots in 17 countries, with loans exceeding 1,029 million dollars." (24)

THE CONCEPT OF SITES AND SERVICES.

In trying to understand how sites and services may contribute, one must understand the prevailing conditions that made the concept imperative and immediate.

Over-population in third world cities due mainly to the phenomenon of in-migration taxed the supply of affordable housing, which was already scarce, laid the foundation for many squatter settlements. The prominent place held by in-migration in LDCs' urbanization process meant that household formation has been rapid, ahead of the provision of urban facilities like housing, the result has been the build up of slums and a constant

shortage of adequate housing with no absorptive capacity. With these rates of urbanization, most cities were, and still are incapable of meeting minimum requirements for the newly arrived inhabitants of the cities. Inevitably slums are the outcome.

These factors were the major forces that lead LDC's to rethink the solutions they hoped would impact positively the unprecedented urban growth.

For the economically weaker sector, affordability and financing is a major concern, as sometimes even the smallest contribution toward ownership cannot be met. Most cannot afford the cheapest government subsidized housing, and in light of these prevailing economic conditions, sites and services projects, along with urban upgrading schemes, were considered feasible alternatives, both for governments and international Aid Agencies alike. The World Bank applauded the concept because it attempted to house a large sector of the population in acceptable accommodations at relatively lower costs.

Peattie puts it this way, "if the current studies of such population show anything, it is that individual families have very different strategies for economic survival; ... land and housing is generally the largest single element in such strategies..." (25)

The concept of sites and services looks at a viable means of housing the urban low income in LDC's. Conventional subsidized low income housing have failed for inability to pay even minimum contributions. There is a high percentage of low income (mostly rural-urban migrants) dwellers in the cities which implies global and large scale operations to provide shelter. To acknowledge the scale of such a provision of housing stock, at relatively low costs, sites and services are relevant.

The central concept of [sites and services projects] is a shift of focus from providing houses to providing serviced lots. The attempt is to develop a policy instrument capable of meeting the needs of families at the lower end of the income spectrum, and to harness the energies of the occupants themselves in producing a low income housing stock. (26)

The concept of sites and services can offer many advantages. After reviewing literature on the subject, [World Bank, 1974; Van Huyck, 1971; Peattie, 1981 and Grimes, 1976], some of the main advantages are outlined below.

Sites and services may provide dwelling environments at minimal financial costs. This can be achieved by making it possible for potential inhabitants to help themselves in the actual construction by providing equity in the form of energy - otherwise known as "sweat equity." This allows for savings on

costs that would not have been otherwise possible.

Costs are further minimized by attaining economies of scale through the large scale laying of infrastructure not possible with more expensive conventional housing projects. Consequently sites and services are less expensive therefore more affordable by the economically weaker sector. This lower unit cost ensures a more equitable distribution of government funds, ensuring horizontal and vertical equity. By horizontal and vertical equity we mean providing more benefits among the most low-income and lessening the differences between the rich and the poor.

It is believed that by spreading smaller investment costs per unit over many more households, sites and services can lower investment risks [Beardmore,1978] making them more viable economic instruments. Investors thus see "cost-recoverability" with a different eye - as more realistic. In return cost recovery and inexpensiveness makes replicability possible.

"if schemes are designed to be within the occupants' capacity to pay, there will be little or no element of net subsidy and hence projects will self-liquidating. Replicability is a necessary criterion if the strategy is to have any long term impact on the problem of providing the low-income with access to urban services. Replicability facilitates the massive application of the concept with beneficial effects on the stability of the low-income rental housing market." (27)

From a social point of view, we can argue that the sites and services concept can be applicable to all income groups, which

may foster social integration through spatial integration. It may make it easier for different income groups to come together, create and develop communities of different economic priorities.

The approach is adaptable. Programs may be designed with different types and availability of services at varying intervals. As peoples' needs change constantly they can be accommodated for when income is available. This is an important factor as income is mainly intermittent among the low-income. Loans for construction and materials will also benefit local markets through new sources of capital. A "multiplier effect" can thus be created within the community by the availability of this credit affecting positively various local sectors.

From an administrative point of view implementation is simpler. When investment decisions concerning housing is placed in the hands of the people concerned the process is facile and removes some of the burden from local governments. It also has the added advantage of giving potential dwellers more control over their destiny.

Sites and services also have drawbacks. Some scholars³ claim that the selective process for participating in schemes base on income and the ability to pay for shelter, produces some adverse effects. "Creaming" by further stratifying society along the

³ see page 46.

lines of income will produce more disadvantages than benefits. Furthermore, by separating the financially better-offs from the extremely poor creates negative ripple effects, destroying economic "symbiotic" relationships that existed beforehand.

Peattie suggested that there are very closely knitted relationships that exist, a sort of economic "eco-system" between people in squatter settlements. The network if disturbed could lead to economical alienation of the weaker sector among this group. The relationship is economically symbiotic and vital. In suggestions on short-run implications for relocation, a paper on sites and services mentions,

"It appears to be of great importance that sites and services projects are designed so that they do the absolute minimum damage to economic relations that bind those most likely to be interested in a sites and services program to the income groups just below them, and dependent upon them for livelihood." (28)

Those left behind may be prone to social and economic stagnation.

Sites and services are accused of contributing to the spatial contribution of wealth within and between regions. Inter-regional disparities will emanate from the inability of government to control and direct schemes in the hands of the targeted population and not of other regions. This results in the out flow of investment capital from one region to another - especially from rural to urban.

"In addition sites and services are charged with relegating the poor to the periphery of the cities where large parcels of land are cheaper and more easily available than in the cities."
(29)

There are also examples of projects that have ended up in the hands of the middle class, and not those they were intended for. The middle class some times ends up controlling certain project specific factors of productions like land and capital along with supplies of construction materials and technical assistance. Other times sites and services schemes end up being too expensive for the targeted population indicating that some form of government subsidy is necessary.

They are sometimes criticized for being too large in scale, and low in density. Their inability to come up to acceptable aesthetic levels of traditional subsidize low-income houses has made come under attack for being "planned slums." And after all which government wants to be accused of creating slums. [Peattie, 1980]

Other attacks leveled against them are, the expensiveness of project administration and scarceness of technical assistance. The latter is very important and can affect replicability. The inability to form administrative and technical personnel will affect large-scale implementation of sites and services. Inadequate mechanisms for addressing cost-recovery has resulted in large-scale defaults of monthly payments contributing to

financial failures of many schemes.

Their choice seems to be dictated by urgency, cost, and economic conditions while new towns seem to be of global dimensions. Sites and services is a solution born out of financial necessity and the inability of planners to solve the difficult and sensitive issues of clearing slums in the cities.

Many scholars think that the sites and services alternative is the only feasible solution to an immediate problem. They have been proven cost-effective and replicable, but at the same time, they are seriously hampered by problems of cost-recovery. Perhaps issues here should not be one of comparison, but one of appropriate choice -- the sites and services concept (because of its cost-effectiveness) seeming more feasible at present. This choice, of course, will depend on the country in question, its economic and financial capacity, and the overall context.

Finally sites and services should be considered as vehicles of progressive change at an early stage of development, and as such, should be transitional points in upward social mobility, for the majority of poor urban dwellers. Furthermore we can perceive it to be a form of progressive development implying that people should do with what's available until economic conditions allow more ambitious plans and goals.

ARGUMENTS FOR EXTENDING THE CITY :

These arguments favour sites and services. One imply that addition or intervention to the already existing metropolitan area can have some positive consequences. The argument infers that large cities can be beneficial in many ways if particular attention is paid to the problem of high density intervention when new development is being considered.

Effectively, large cities are generally felt to have greater productivity and that is why they usually attract business firms and industries. This in return will create the necessary conditions for the jobs low income groups are qualified for. The many explanations for such phenomenon all seem to converge by suggesting that "output per unit of input increases with city size. Therefore factor payments should as well." The fact that income and wages are generally higher in cities, than in rural areas, support the above claim. Large cities in LDC's will also offer agglomeration economies for most types of economic activity. However, the law of diminishing returns suggest that their is an optimum economic level above which these advantages will be lost.

The question of their social costs is not solved and how serious they [social costs] are, is debatable. It is found that social costs will affect the poor while agglomeration economies

tend to benefit industries. This poses the question of "trade offs" between opportunity costs -- in some respects what is bad for households in Developing Countries may be good for business firms. If one accepts the "mirror-model" theory of development for Developing Countries they could be compared to most capitals in Europe during the industrial revolution where social costs were completely ignored.

Some economists argue that the presence of poverty, pollution, inadequate housing and other symptoms [in large cities of LDC's] should have no direct impact on the attractiveness of cities to business. Therefore it is not unnatural for industries and large firms to want to remain in the large cities. Local and state Governments are therefore less likely to respond to complaints about the extent of social costs.

The physical and human capital that is already available in urban areas is a valuable source for economic growth -- commercial and industrial expansion. Thus letting existing cities continue to grow can stimulate economic growth by taking advantage of the economies of scale.

Recent studies [Alonso,W.1972] infer that large metropolitan centres produce more benefits than costs and that their development can be beneficial to the national context. There is debate as to the usefulness of optimum city size but it is

suggested that size should occur somewhere between 100,000 and 1,000,000, with 250,000 being the most popular [Wingo L.,1972]. Perhaps LDC's should ignore the notion of optimum city size.

Walter Bor thinks that, "much of this is academic, since people flock into cities in vast numbers, regardless of whether authorities regard this as desirable or not." Governments in Developing Countries will have to continue to face such problems. There is much more need for intersectorial investment, in order to make the most effective use of scarce financial resources, than for worries about optimum city size and in-migration. This argument lends force to the idea that rural-urban migration does not necessarily have to hurt the growth of Third World cities, but it is tacitly accepted that the growth must be controlled and directed. Thus letting metropolitan areas expand may also be an alternative.

POSSIBLE COSTS OF EXTENDING THE CITY.

Available evidence does not support the inference that urban concentration is economically more advantageous than urban deconcentration -- referring to population and necessary services. Thus the question of whether it is better to decentralize or concentrate activities at an acceptable cost needs to be examined.

The literature that exists on urban growth emphasizes increase in urban costs as population increases. In practice, the costs examined are the direct costs to public authorities of the particular services. Cost per capita of the urban population varies widely between cities of the same size because of its composition rather than size of population which is likely to determine both costs and products eg. a city, with a majority of its population showing high rates of unemployment is unlikely to present the same characteristics as one with a low percentage. Service, manufacturing, and heavy industries, high employment among the population are among the factors that contribute to the tax bases of the cities. Logically their absence will spell varying degrees of "poverty" to cities.

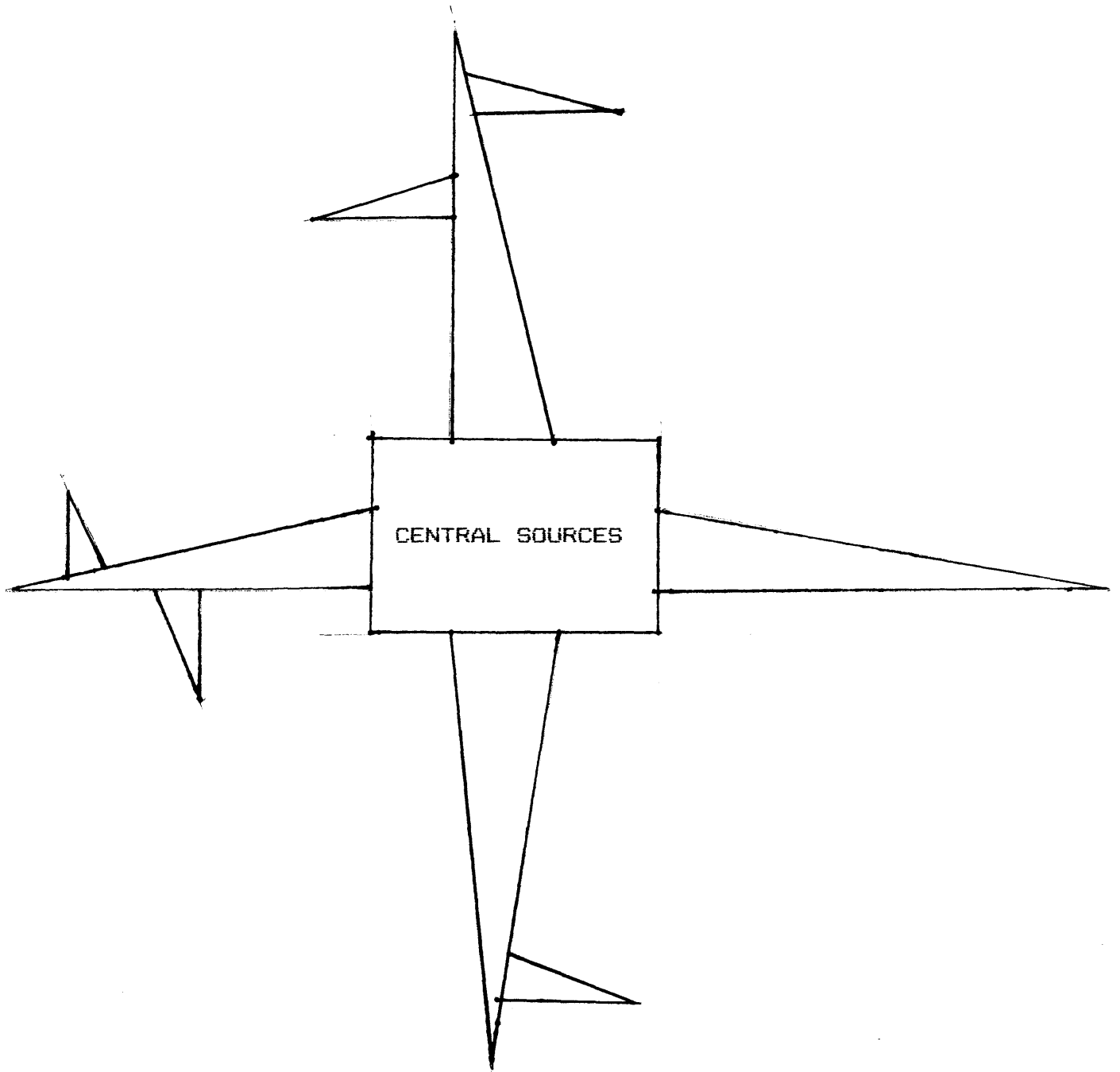
Nigel Haris suggests that "net marginal product per head", rather than mere population size, seems more likely "to offer a better guide on optimal sizes [for cities] than the movement of costs." However, "even if we accept the unreality of the exercise, it is by no means clear that the marginal costs of public services per urban dweller increase significantly over a range of city size nor that cities [according to the theory of the firm] face a u-shaped cost curve." (30)

In the case of the United States though, it was found that even where per capita municipal expenditures increased this was not clearly attributable to increasing population. Save for a few

exceptions, variation in per capita expenditures are not strongly associated with population size, but rather with some measure of per capita income -- fiscal capacity, "available resources" or per capita productivity [Harris,N.1978].

However, per capita productivity and income both appear to increase with population size [four times faster] in comparison with those examples where per capita local government expenditure increases with size [Harris,N.,1978].

Many municipal systems are based on one or very few central sources, for example, a simple sewage treatment plant, a single electric generating station, gas source or central telephone exchange. Therefore distribution lines to all parts of the city emanate from these central sources according to Hufbauer and Servern. Their diagram attempts to demonstrate the costs associated with providing these services.



Schematic utility distribution system when urban area is an important cost factor according to G.C. Hufbauer and B.W. Servern.

As the illustration suggests, distribution lines are represented by isosceles triangles. We can consider the tip of the triangle to be at the fringe of the service area while the base is at the central source. G.C. Hufbauer and B.W. Servern advance that, "service capacity of the distribution system is proportional to the summed width of the distribution lines at their base." (31)

They proposed that, "... capital and operating costs of the distribution system, on the other hand, are proportional to the surface areas of the distribution lines." (32) Therefore the larger the surface area, the greater the quantity of pipe or cable which must be employed -- with obvious implications for cost. Since the area of a triangle is the base times the length [or height] times one half, the surface area of the distribution lines will increase with length, when the base-width [and hence overall service capacity] is held constant. The correlation here is that when development is disperse cost will be augmented, while the opposite [high density development] is advantageous.

Hufbauer and Servern ingeniously argue that if the "total length of distribution lines is proportional to the urban geographic area, it will follow that capital and operating costs will increase with area." This economic model, if it could be borrowed for a moment, then applied to any Developing Country would also logically hold true. Other research has pointed also

in that direction.

Ludlow advanced some twenty years ago that, "Sprawling urban growth at the fringes, strung out along highways or scattered in haphazard and partially built subdivisions, is exceedingly costly to service with streets, utilities, schools and other public and private facilities."

Ludlow's study also showed that higher building densities imply lower utility and service costs when the complete utility system is laid down [in a "package"] at the time of neighboring constructions. This would suggest that if sites and services projects were to be implemented, extra attention should be given to global planning and phasing, piece-meal development and planning would be costly. The same can be said of sewage disposal systems, which are found to be cheaper per dwelling unit to provide service for a high density subdivision than a low density subdivision. The study further suggested that the cost of other municipal systems might also increase with greater geographic dispersion.

The total cost of municipal services for a fiscal year divided by the total number of population gives the average cost of services per capita in a city. The average [cost] will, of course, differ widely according to whether the region is developed or under-developed.

Understandably, if a region is poor the average cost [on paper] for necessary services would be the same but the charges would differ significantly. Therefore one would have to be heavily subsidize by government while the other will be more self-sufficient.

On the other hand, analysis of local costs of services per capita, which is the relative comparison of a region with its nation, found that municipal costs in large cities are relatively higher than those of smaller cities. When considering the efficiency of municipal services in relation to city size, the experts agree that their efficiency should increase with increasing city-size to a point of diminishing returns, with an optimum size somewhere between the extremes.

Municipal costs per capita are related to costs of individual public services. Individual Public Services Cost vary widely between Developed and Developing Nations since standards of living, quality of services required, and tax bases differ.

Golany advanced that "a region can give its habitants an adequate range of [commercial] services when the population of its principal city is somewhere in the neighborhood of 100,000 to 200,000." (33) Since the significance of the Costs of Public

Services per capita and the efficiency of these services related more to city size than any other factor, such services would constitute a small part of a city's economy, and are not major economic forces in a self sustained city with a sound economy.

Another factor that contributes to high municipal costs is crime. Big cities have a larger proportion of crime than small ones. This makes the cost of social infrastructure [police or other security services] required in large cities proportionately higher than in small ones, this number will increase incrementally with city sizes. Golany also wrote, "it may be generalized that the large city not only experiences a greater relative amount of crime, but also pay proportionately more heavily for it." (34)

Finally, it should not be argued that there is a optimal city size for Lesser Developed Countries because each country's geographical region has its own particular scale and criteria and are a synthesis of cultural, social, functional and economic factors.

CONCLUSIONS

New Towns are more expensive for LDCs than their sites and services alternative but perhaps the argument should not be one of mutually exclusive choices [between sites/services and new

towns], but a lesson drawing comparison offering the best of both concept. A composite solution may be the answer.

However, they appear much too expensive relative to other options available to LDCs, such as sites and services at present. Another important reason usually cited for their considerable costs is high standards over planning. It would seem that LDC's want to build new towns better than their counterparts in the developed countries. Another is a disappointing lack of job opportunities because of the difficulty in attracting industries there. They are also very expensive in the provision of infrastructure, because new fixed expenditures are costly. The benefits they provide in the short-run have positive repercussions of too few people.

Their planning tends to be sectorial with little emphasis on inter-sectorial planning. The leverage of massive funds for new towns investments make them costly for Developing Countries. It is therefore a great financial burden to bear at their early stages of development and the opportunity costs are great.

However, fact remains that new towns can be effective tools in comprehensive planning and should not be totally ruled out in the long run. The case of Egypt provides a good example of an absolute necessity for new towns. If employed, they should be placed far apart, encouraging "lateral physical expansions of

both the older city and the new satellite towns involving heavy infrastructure cost and diseconomies."

New towns should be a part of decentralized inter-sectorial planning for LDCs. They may offer effective means of absorbing the growing urban population through the provision of housing, both for the middle and low-income. They may also provide relief from the congested bigger cities. If they are constructed on the outskirts of metropolitan areas, or elsewhere, where land is cheaper, they may off-set some of the high costs that are associated with new fixed expenditures for new towns. This cost may be the single most important expenditure that is responsible for the excessive out-lays necessary to build them.

The building of new towns when not comprehensively conceived and well-planned, may worsen the situation -- sometimes unexpectedly -- rather than improve on the problems they were meant to solve.

Presently, LDCs can only afford well planned and consolidated expansion programs for sites and services and not new towns. Sites and services seem a cost-effective way of dealing with the increasing urban population and the little available data demonstrate their relative inexpensiveness [World Bank, 1974]

Sites and services offer many advantages. They provide shelter for the poor at minimal costs which can be further lowered by attaining economies of scale through the large-scale laying of infrastructure. This low cost ensures a more equitable distribution of government funds assuring some form of upward mobility for the poor. Sites and services may also be applicable to all income groups. The approach is flexible and may be designed with different types and availability of services at varying intervals.

Perhaps the ideal solution, if one there is, should be the incorporation of the comprehensive planning implications of new towns with the cheapness of sites and services. A redefined version of new towns, a composite of two otherwise independent solutions, sites and services schemes with the concept of new towns. The strength of this combination will come from the low cost approach of sites and services, targeting low income groups, and the comprehensive macro economic planning that should be inherent in new town planning. This solution would target essentially urban low income groups who are often unemployed, and have no collateral or capital build-up for an investment in permanent housing.

In planning such a composite new town, considerations would be given to all economic strata and their interdependencies, examining them carefully at microlevels, then incorporating them

in economic development strategies. Essentially the sites and services aspect within the new town concept could work as currently executed, i.e., serviced lots provided with basic amenities and the future inhabitants working towards the construction of their own shelter as a function of available income and time.

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