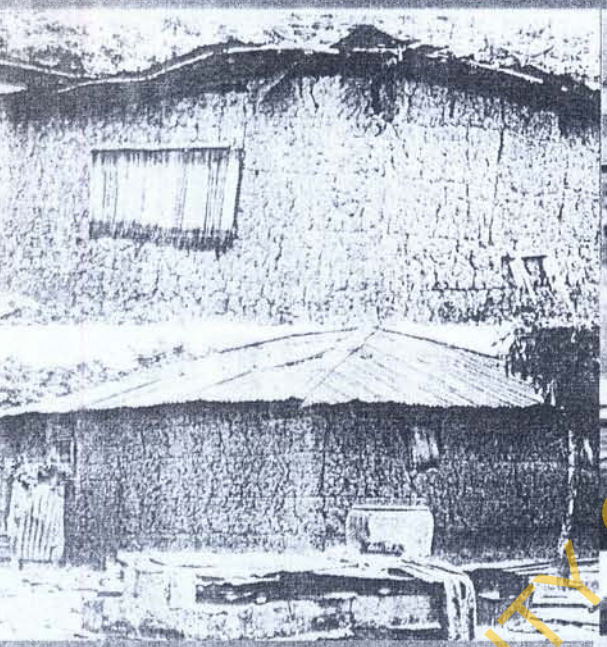
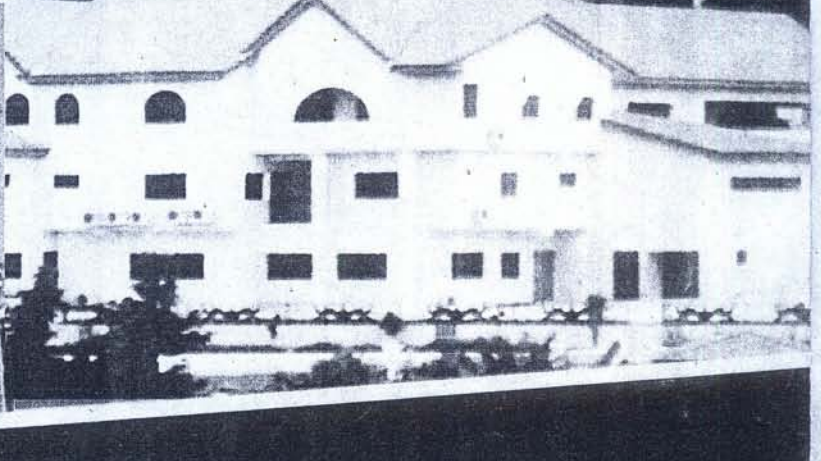
HOUSING DEVELOPMENT AND MANAGEMENT:

A BOOK OF READINGS





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CHAPTER SEVENTEEN

Housing Project Planning and Development

LEKAN SANNI and OLUSIYI IPINGBEMI

1. Introduction

Our conceptions of four key words need to be clarified right from the outset, though further explanations on them will be provided later in the chapter. These key words are: 'housing project', project planning', project management' and 'project development'. Housing project is defined by *The American Heritage Dictionary of the English Language* (2000), as 'publicly funded and administered housing development, usually for low-income families'. Of the diverse definitions of project planning that abound in the literature, the one proffered by Alexandrou (2006) is adopted. According to him, project planning is defined as the process of quantifying the amount of time and the size of the budget for a project. The output of the project planning process is a project plan that a project manager can use to track the project team's progress. Project management is defined by Wilkipedia (2006) as 'the discipline of organizing and managing resources in such a way that these resources deliver all the work required to complete a project within defined scope, time, and cost constraints'. It further defined a project as 'a temporary and one-time endeavor undertaken to create a unique product or service'. This property of being a temporary and a one-time undertaking contrasts with processes, or operations, which are permanent or semi-permanent ongoing functional work to create the same product or service over-and-over again. The management of these two systems is often very different and requires varying technical skills and philosophy, hence requiring the

development of project management (Wilkipedia, 2006). Project development, an integral part of project management, is defined as 'the process of accomplishing the stated goal of the housing project, beginning from initiation of the project to closing/maintenance of the structures constructed. Project development process usually has four stages: initiation, development, production or execution, and closing/maintenance (Wilkipedia, 2006).

This chapter aims at providing adequate information on the very crucial issues of housing projects planning and development. The importance of housing project planning and development emanates from the prevailing global housing problems. Housing problems are diverse and complex all over the world. They are more acute in the urban areas of developing countries of Africa and Asia, which, at present, are experiencing one of the highest rates of urbanisation in the world. The problem is exacerbated by the fact that the increasing urbanisation owes much to mass exodus of youths from the vast rural areas to the few urban centres, where they believe they would ease access to better quality of life and better quality housing. However, most often and to their disappointment, access to better quality housing in these urban areas is more of mirage than reality. The result is the manifestation of housing problems in the form of overcrowding, homelessness, substandard housing, slum and squatter developments, etc. Apart from urbanisation, nations' populations are growing at alarming rates. For example, the population of Nigeria increased from about 31 million people in 1952 to 56 millions in 1963 [an increase of 25 million people within ten years]. It is projected to be about 153.3 million by the year 2015 [an increase of nearly 100 million within 52 years, and nearly three times the 1963 population] (UNCHS/HABITAT, 2001). Most developing nations are also at present experiencing upsurge in urban population. For instance, it is projected that, by the year 2015, more than 60 percent of

Nigerians will be residing in urban areas. Similar trends prevail in most third world nations. Considering the fact that rapid population increase and high rate of urbanization are occurring in the midst of abject poverty, fast dwindling national economy and the present inability of the various governments to provide adequate housing for the teeming population, there is a dire need for adequate planning for housing projects in the third world nations. This chapter focuses on some of the key issues in housing project planning and development. To achieve this goal, the rest of the chapter is divided into four sections. Immediately after the introduction are explanations of processes in housing planning and development. This is followed by desirable approaches to project planning and development. The third is project implementation and project acceptability. The last part concludes the chapter.

2. Processes in Housing Project Planning and Development

Steve McConnell (cited in Alexandrou, 2006) identifies nine deadly sins of project planning as:

1. Not planning at all.
2. Failing to account for all project activities.
3. Failure to plan for risk.
4. Using the same plan for every project.
5. Applying prepackaged plans indiscriminately.
6. Allowing a plan to diverge from project reality.
7. Planning in too much detail too soon.
8. Planning to catch up later.
9. Not learning from past planning sins.

Further elaboration of these 'deadly sins' is required to enable us decipher the gravity of each of them.

1. *Not planning at all:* The general dictum that 'those who fail to plan, plan to fail' is most appropriate to describe

this 'deadly sin'. When projects are not planned at all, it is not only 100 percent guaranteed to fail, but also lacks any basis to determine its level of success, if any.

2. *Failing to account for all project activities:* In carrying out any project planning, it is very crucial to identify and account for all project activities. This will provide advanced knowledge of the different materials, equipment, personnel, etc., that will be required at each stage of the project and will, thus, help avoid wastage and/or redundancy in the execution of the project.

3. *Failure to plan for risk:* Every project has some degree of risks, and a prudent project planner has to take cognizance of all possible risks that might be encountered in the life of the project. Some of the possible risks have to do with the personnel (in form of attitude to work, industrial trade disputes, etc.); the equipment (in form of failing to perform to the expected level, failing to get access to hired equipment on time etc.); legal (in form of litigations on access to the site etc.); climatic (in form of unexpected climatic changes, etc.); political (where sudden change in government policies might pose a great challenge to the project); etc. A prudent project planner must not only identify these risks right from the outset, but must also make adequate provisions for contingency plans to ameliorate the possible effects of the challenges.

4. *Using the same plan for every project:* Every project is unique and requires proper analysis and planning. The uniqueness might be in terms of the physical, social, political, ecological, climatic and other peculiarities in which the project situates. Hence, it is a 'cardinal sin' to use the same plan for more than one project, as the project's chance of not failing is very slim.

5. *Applying prepackaged plans indiscriminately:* Applying prepackaged plans indiscriminately, without taking adequate cognizance of the environment in which the particular project situates, is indirectly planning for the failure of the project. A good case to confirm this is the design of prototype low cost houses adopted throughout Nigeria in the nation's Second Republic, between 1979 and 1983. These buildings were rejected in most rural settlements because their design did not conform with the need of rural dwellers.

6. *Allowing a plan to diverge from project reality:* To ensure the success of any project, it is very crucial to ensure that the plan takes cognizance of and conforms to project reality.

7. *Planning in too much detail too soon:* In most projects planning, one of the most prudent ways of minimizing risks is by not planning too much detail too soon. This has a major advantage of giving room for flexibility in planning and execution of plans.

8. *Planning to catch up later:* The attitude of 'planning to catch up later' has the tendency of leading the planner to overlook some crucial details of the plan which might prove disastrous for the success of the project.

9. *Not learning from the past sins:* The success of a project plan hinges much on the readiness of the planners to accept and learn from past mistakes made by either the planning group or by other, groups that come to their knowledge. This emphasizes the importance of up-dating of knowledge on the part of project planners to take cognizance of recent developments in their various disciplines. This is very crucial as failure to learn from previous mistakes might automatically result in repeating the mistakes.

From McConnell's list, it is seen that 'not planning at all' is identified as the first of the 'deadly sins', thus stressing the importance of planning in project planning. Housing project planning process can be divided into five phases. These are:

(i) project identification;
(ii) project preparation;
(iii) project evaluation;
(iv) project implementation; and
(v) project re-appraisal.

Although these phases, as presented above, start with 'project identification' and ends with 'project re-appraisal', housing project planning process is more realistically a cycle without a discernible end. These phases are discussed in some details below:

2.1 Project Identification

The project identification stage is a very fundamental stage of housing project planning and development. Project Identification is a repeatable process for documenting, validating, ranking and approving candidate projects within an organization (Tryon & Associates, 1998). For centrally planned economies with detailed development plans, productive targets for the various sectors serve as a basis for identifying projects. However, for developing nations, where, in most cases, detailed development plans do not exist, planners have to search for other means of identifying viable projects (Shaner, 1979) The national development plan, where they exist, together with the national goals and development strategies, often provide the starting point. These provide the main avenue of identifying the required project to embark upon to achieve the identified goals. Other sources of project identification, especially in a pluralistic democratic setting include city consultations, village meetings, community meetings, etc. Since

demand for projects will normally be beyond the resources available to execute and meet all the demands, there is need to establish a stable project identification process for approving projects for initiation. This process, according to Tryon & Associates (1998), will:

- Validate the business reason for each candidate project.
- Provide the base information for more informed financial commitments to projects.
- Establish a more objective ranking of candidate projects.
- Allow a more effective matching of skilled resources to the right project.
- Avoid over-allocating limited skilled resources.
- Anticipate future human resource quantities and skills.
- Provide a valid basis for staff training.
- Make Project Initiation faster and more efficient.

Because priorities, finances and resources may change at any time, it is essential that this process be well-defined and easy to follow. It is also important that its value is understood and supported by corporate leaders and business organizations (Tryon & Associates, 1998).

2.2 Project Preparation

Project preparation includes resource planning, land acquisition, various inputs/clearances, resettlement and infrastructure development. It involves a great deal of technical input by various specialists involved in the project. Before launching into this major undertaking, Shaner (1979) cautions that a preliminary analysis (often called 'feasibility study') is in order. The objective of such a study, according to Shaner (ibid), is to gain sufficient knowledge about the project in a relatively short time to learn if it has a reasonable chance of success. For projects passing the prefeasibility test, the specific types and amounts of costs and benefits must then be evaluated. This

process requires detailed consideration of alternative project purposes, overall approaches, functional designs, and operation methods. Information obtained at this stage serves as a major input for evaluation. It is very important that various inputs, clearances, permits etc., are obtained on time since their procurement eases procurement of finance from banks and other relevant organizations

2.3 Project Evaluation

Evaluation, according to Egunjobi (2000), is a systematic way of learning from experience so as to improve current activities and promote further learning. It is a process which attempts to determine as systematically and objectively as possible the relevance, effectiveness and impact of activities. In other words, evaluation establishes criteria for defining success and assessing the extent to which these criteria have been achieved by the project. Evaluation can be quantitative, in which case numerical values are estimated for the net project impacts or for the cost-effectiveness ratios; or it can be qualitative, in which case the purpose is to understand and describe the way in which the project has affected and is being affected by the population who have been exposed to it.

Evaluation provides guides for designing strategies and designs to achieve the goal of the project. Various designs and strategies are proposed and evaluated to obtain the most efficient one, which is finally adopted. Various techniques are adopted in this evaluation stage, some of which will be discussed in the next section of this chapter.

2.4 Project Implementation

Once a project has been judged a good investment, implementation should follow. Prior to starting the Project Implementation Process (PIP), the project must have successfully completed the Project Evaluation Process (PEP) and must have been approved for implementation. The Project Evaluation

Process includes performing a needs analysis, architecture review, and vendor contracting. The project evaluation could result in the definition of one or more projects to be implemented. Several distinct implementation projects rather than one large implementation could limit risks and aid scope and resource management.

Some aspects of project implementation process are identified by Shaner (1979) as: selecting the organizations to administer the design and construction; identifying and sourcing, various sources of funds for the project; ensuring that current government policies accommodate the project, if the existing policies are an obstacle to its administration. Other activities in this phase include preparing detailed engineering designs, making provision for engineering supervision, land acquisition, worker training, establishment of corporate and patent rights, etc.

2.5 Project Reappraisal

Project reappraisal is required to be undertaken as a logical step in decision making. The review provides a feedback mechanism to maintain high standards of performance for the project itself and serves as a basis for project planning in general (Shaner, 1979). Shaner (1979) laments that, unfortunately, reappraisal is seldom undertaken. He adduces three reasons for this failure to undertake reappraisal. The first is the pressure of time and limited staff, which do not allow for such review. The second is that conditions assumed to exist during the project life often change, sometimes drastically, so that effective reappraisal requires taking into account the situation that would have prevailed had the project not been undertaken, which is not an easy task. The final reason is that the maturity date of some projects is so long, conditions are so changed, and original staffing is so altered that much of the value from performing the reappraisal is lost.

3. Desirable Approaches to Project Planning and Development

Major desirable approaches to project planning and development are discussed below:

3.1 Appropriate Pricing

The cardinal goal of the housing project will play a very significant role in arriving at the appropriate price tags to be ultimately attached to each housing unit. This is very crucial in the sense that a housing project embarked upon with an open market orientation will attract higher price tag than the one constructed for welfare. Whatever the main goal of the project, the ultimate price that will be attached will be influenced by the affordability analysis of the would-be occupiers.

3.2 Affordability Analysis

Generally, affordability is a measure of ability and capability of consumer to pay for goods and services consumed. In a market economy, price will not only allocate quantity; it will also allocate the quality of goods and services that each household will consume based on their level of affordability (Babatunde, 2007). According to (UNCHS/ HABITAT, 1991), housing affordability is an assessment that relates a particular housing solution to the amount that can be paid for without unduly stretching the payer's resources. This view of affordability is of wider applicability, as it is applicable to renters, as well as those who want to buy their house without recourse to mortgage facility (HABITAT, 1991). According to Arthur, *et al* (2002), housing affordability is difficult to define. According to them, it involves the capacity of households to consume housing services. Specifically, it involves the relationship between household's incomes and housing prices and rents.

However, in a mortgage-based housing delivery system, housing affordability can be conceives as the ability and

capability of households to meet their periodic mortgage obligations without jeopardizing their health or reducing their family nutrients intake (Agbola, 1990; Olatubara and Agbola, 1992). Measurement of affordability is problematic, as what individual household can afford is often underestimated. An often quoted rule of thumb is that household should not spend more than between 25-30 per cent of their income on housing unless they choose to do so. Agbola (1990) avers that statistical studies of what individual household can afford often considerably underrate the ability of these households to improve their housing circumstances. This, according to him, is because of the admitted restrictive assumptions underlying the calculation and the snapshot image of household's income, which disregards the income and family life cycles through which households tend to pass. Thus, in most cases, a household's affordability is based on current level of income, neglecting the income growth possibility that may be glaring. Also, only the income of the breadwinner is relied upon, disregarding the income of other members of the household that are working and who are often willing and able to contribute towards house ownership of their family.

It is, therefore, very important that adequate affordability analyses of the would-be occupiers are done to ensure that right and affordable quality of housing is provided at the right place at the right time.

3.3 Profitability Analysis

The profitability of a housing project depends on a number of factors, primarily the choice of city and location. The business concept applied for the project is another important factor. Work on business concepts includes selecting the appropriate target group, design, form of access and price. Another approach is the total-package approach, which generates many benefits, including environmental and quality gains. It also provides potential for improving profitability.

3.4 Cost-Benefit Analysis

Cost-Benefit Analysis is one of the analyses used in the monitoring and evaluation of a project. It considers comprehensive accounting of all the real costs and benefits associated with a project (World Bank, 1996). Cost-Benefit Analysis (CBA) has most often been applied to questions relating to large or medium scale land-use development projects. According to Shaner (1979), four general approaches are followed in Cost-Benefit Analysis, depending on the nature of the costs and benefits. First, if benefits and costs can be quantified in monetary terms, a project is acceptable when benefits exceed costs. Second, if benefits exceed costs and are the same for all alternatives, the alternative with the least cost is the best solution. Third, if benefits and costs vary with the alternative but benefits cannot be measured in monetary terms, a cost effectiveness approach can be taken. Finally, if some of the benefits or costs can be measured in monetary terms and others only in physical terms, then monetary 'weights' can be assigned to the physical units so as to arrive at equivalent monetary values. It is, thus, clear that CBA provides appropriate ways of including intangibles in the evaluation (University of West England, Bristol, 2002-2003).

3.5 Cost-Effectiveness Analysis (CEA)

A subset of Multi-Criteria analysis is the cost-effectiveness analysis (CEA). CEA compares the cost of interventions with their intended impacts. CEA is widely used to appraise investments in the social sector. It is used in a situation where the benefits of a project cannot be measured in monetary terms, or where measurement is difficult. However, the objectives of the intervention must be clearly stated and are part of wider objectives of the programme and the intervention represents the least-cost way of attaining the stated objectives (Shaner,

1979; FAO, 1987; Leger and Kennedy, 1990; World Bank, 1994; Kahn, 1996; Cummings *et al*, 1999; Olsen, 2000)

4. Project Implementation and Project Acceptability

The project implementation strategy to be adopted, and the degree to which the plan is generally accepted owe much to the degree of success attained in the planning process phases. If these are well done and well coordinated, project implementation and acceptability will be easily accomplished. The implementation strategy adopted could enhance or stifle the lofty dreams of the project. It is, therefore, pertinent to briefly review some of the existing project implementation strategies.

4.1 Project Implementation Strategies

A housing development project, no matter how well planned, will never be able to achieve the desired goals unless and until it is implemented. So, project implementation is the crown of the planning process. Various strategies of project implementation abound in the literature. Our discussions in this chapter will centre on the three most prominent ones, which are: Top-Down Approach, Bottom-Up Approach, and Flexible Approach.

4.1.1 Top-Down Approach

Until recently, the top-down approach has been the most prominent strategy adopted by government ministries, parastatals and agencies, in most developing nations of the world. This usually take the form of 'experts' in government offices thinking and planning for the various communities without any due consultations with, or any input from, the would-be beneficiaries. Government is, therefore, perceived by the people — the target beneficiaries — as a faceless entity, and the facilities/amenities provided by this approach are rarely maintained by the beneficiaries, since they do not have any sense of ownership. Many projects implemented via this

approach have failed because the target beneficiaries and local communities were not involved in the planning process. Since these constitute the people whose lives will be directly and indirectly affected by the project, the plan, no matter how plausible it may appear, will not be successfully carried out without their support or participation. Another major flaw of this approach is high rate of abandonment once the regime that initiated the project is no longer in power. The countless abandoned projects that litter every part of Nigeria are testimonies of the failure of the top-down approach to project planning and implementation.

4.1.2 Bottom-Up Approach

The observed failure of the top-down approach necessitated the advocacy and evolution of another approach tagged the 'bottom-up approach'. Unlike the former, peoples' participation is the bedrock on which the approach rests, and is encouraged throughout the planning process, from conception to monitoring.

Several ways can be employed to involve the target beneficiaries in the planning process. For instance, existing community organizations can be included in the survey and planning body. Local committees can be organized for planning and implementation purposes. Involving villagers and communities for planning roads and other infrastructural needs are also part of the scope of the bottom-up approach. During such planning processes government policy and the community's needs can be fully discussed. For housing project planning to be useful and workable, they should be well understood and accepted at the grass-roots level.

4.1.3 Flexible Approach

A housing project plan is not like a blueprint of a bridge. A housing project plan should be considered as a starting point

and should be kept under constant monitoring and adjustment. This is very necessary to cope with unanticipated challenges that might evolve in the life of the project. Some of these might be structural, legal, environmental or human in nature. Therefore, learning by doing is a very important process any such plan should be kept flexible.

Flexibility means leaving rooms for future adjustment, modification, or revision. Consequently, a monitoring and evaluation process should be built into the plan for this purpose. This also means that the planned targets should be progressive, i.e. smaller at the very beginning and gradually expanding with the added experience.

4.1.4 Project Monitoring

Monitoring, as an integral part of the project cycle, needs to be planned for in terms of identification of what to be monitored, who to do this (i.e. who should be responsible), how and what use to make of the exercise. Monitoring, according to Egunjobi (2000), will follow this course:

- *Decision on what to be monitored:* This is the first essential component of monitoring exercise. It is dependent on the aim, objectives and targets of the project. These have to be reviewed with a view to understanding *what* has to be monitored.
- *Selection of Indicators:* The next stage in the monitoring process is the selection of the measuring instruments to use. These are referred to as indicators with which progress, achievements and impacts will be assessed. For instance, in the case of housing construction, the indicators could be housing cost per unit; housing quality; number of family housed; etc.
- *Data Collection:* The third stage of monitoring process is collection of information required to provide the

evidence with regard to the progress made and ultimate achievement of the project. Sophisticated methods involve utilization of quantifiable management tools, such as the Critical Path Analysis (CPA), Project Evaluation and Review Technique (PERT) and Cost-Benefit Analysis (CBA).

- *Comparing the Results with the Target or Objectives:* Having collected and analyzed data in respect of what is observable in the field, the next stage in the monitoring process is comparing what has been collected with the project objectives.

- *Judgment:* After the data collection stage, the next stage is making judgment based on the comparison between what is expected and what is observed. This is in terms of whether, and to what extent, the objectives have been met.

- *Decision:* Finally, a management decision has to be made consequent upon monitoring. Decision may take one of these three alternatives: one, to continue the project if all expectations are met and there are no obstacles and constraints; two, to change or modify the project in the light of new developments that were not envisaged at the initial stage; and three, to stop the project if signs point to some insurmountable obstacles or if the envisaged benefits of the projects might not be realized for one reason or the other (Egunjobi, 2000).

A vital decision that has to be made is who should carry out monitoring? Should it be done in-house? Should it be contracted to any of the followings: outside consultants; programme and staff managers; community leaders; poor groups in the community; academics and research staff (Egunjobi, 2000).

Conclusion

In this chapter, the authors have provided useful information on the crucial issues involved in housing projects planning, stressing the importance the planning process and public participation in the ultimate success or failure of the project. It is hoped that policy makers will make use of the contents of the chapter to ensure maximum returns from future housing project planning and developments in the country.

References

Agbola, T. (1990). "Affordability and Cost Recovery in Shelter Projects: the Case of Nigeria" *Third World Review* 12(1), 59-74.

Arthur, C.N., Ralf P., Casey, J.D. and J.K. Geritf (2002). *The Link Between Growth Management and Housing Affordability: The Academic Evidence* New York: The Brookings Institution Centre for Urban and Metropolitan Policy.

Babatunde, J.A. (2007). 'The Effects of Subsidy on Housing Consumption of Public Servants in Osun State, Nigeria' (Unpublished M,Sc. Dissertation, University of Ibadan, Ibadan.

Cummings, Jean L. and DiPasquale, Denise. "The Low-Income Housing Tax Credit: An Analysis of the First Ten Years." *Housing Policy Debate 10* (1999): 251-307.

Fao (1987).
file://localhost/E:/FLASH%20DISC%202/MEE/HOUSING%20PROJECT%20PLNG%20AND%20DVT/APPROACHES%20TO%20PROJECT%20IMPLEMENTATION/FAO%20Document%20Repository+++11.htm
Downloaded from
http://www.fao.org/docrep/006/t0165e00.htm#cont
on 23/04/2007.

Kahn J.G. (1996). The Cost-Effectiveness of HIV Prevention Targeting: How Much More Bang for the Buck? *American Journal of Public Health*. 86: 1709-1712.

Leger, Mireille L. and Kennedy, Stephen D. (1990). *Final Comprehensive Report of the Freestanding Housing Voucher Demonstration. Volume 1 & 2*. Cambridge, MA: Abt Associates Inc.

Marios Alexandrou (2006) 'Project Planning Definition'. Downloaded from http://www.mariosalexandrou.com/definition/project-planning.asp on 10/12/2006.

Olatubara C.O. and S.B. Agbola (1992). "Cost Recovery in Nigerian Public Housing" *Habitat International*, Vol. 16 No. 1. pp. 83-94

Olsen, E.O. (2000). 'The Cost-Effectiveness of Alternative Methods of Delivering Housing Subsidies' Downloaded from EOO@VIRGINIA.EDU on February 21, 2007.

'Preparation of the Project' (n.d.) Downloaded from http://powermin.nic.in/bidding_n_tenders/preparation_of_project.htm on May 8, 2007.

'Project Implementation Process' (n.d.) Downloaded from www.mc.vanderbilt.edu/infocntr/implement/pip.html on May 2, 2007.

Shaner, W.W. (1979). *Project Planning for Developing Economies* New York: Praeger.

The American Heritage Dictionary of the English Language, Fourth Edition (2003) Houghton Mifflin Company.

Tryon & Associates (1998). *Project Identification Version 1.2.* Downloaded from www.tryonassoc.com/pdffiles/Project%20Identification%20PD.pdf on March 8, 2007.

UNCHS/HABITAT (2001) *Cities in a Globalizing World Global Report on Human Settlements,* Earth scan Publication Ltd. London.

University of the West of England, Bristol (2002-2003) file://localhost/E:/FLASH%20DISC%202/MEE/HOUSING%20PROJECT%20PLNG%20AND%20DVT/DESIRABLE%20APPROACHES%20TO%20HSG%20DT/Sampler%20topic%20-%20Cost%20benefit%20analysis-3%20CBA%20and%20housing.htm

World Bank (1994). *Operational Policies 10.04: Economic Evaluation of Investment Operations.* Washington DC: The World Bank.

World Bank (1996). *Economic Analysis in Transport Project Work.* World Bank Transport , Economic and Social Policy Thematic Group. Washington DC: The World Bank.