

C&RP 741 - Urban Sector and Project Planning for Developing Countries

Credit: 5 Hours
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Lecture Hours: Tuesday 6:30-10:00 p.m., 247 Brown Hall
Office Hours: Tuesday and Wednesday 2:00 - 5:00, 289C Brown Hall

INTRODUCTION

The purpose of the course is (1) to provide students with a working knowledge of the issues and methods involved in urban sector planning in developing countries, and (2) to acquaint students with methods of project planning, particularly as they relate to linking sector goals to project objectives. Specifically, the course deals with the following subjects:

- 1) urban economic development as it relates to employment, income, inequality, migration, and population growth; formulation of urban strategies to support national development objectives;
- 2) urban sector analysis related to housing delivery including land use and location, municipal administration and finance, construction and housing materials, infrastructure and social services, and financial intermediation;
- 3) project design and finance, including definition of target groups, design standards, technical development, affordability analysis, and determination of financial, economic, technical and administrative feasibility;
- 4) project management and implementation, including scheduling, monitoring and follow-up.

The lectures describe urban housing and service problems with a focus on low income households; they trace the sources of the problems as related to income, population growth, lack of finance, and the cost of land and infrastructure; they analyze typical but often futile government policies designed to solve the housing problem through rent control, public housing provision, regulation, and price controls; and they examine technological and design solutions including Western style prefabrication, industrialized building and alternative technologies adapted to local resources and needs.

Throughout the course, emphasis is placed on examining the actual experience of individual countries--both to illustrate the common economic thread running through the experience of different countries and to illustrate the often widely differing technological and design solutions in these countries. Students should leave the course being familiar with a wide array of low cost housing solutions running from self-help to core housing; sites and services provisions staged construction, and from squatter housing to later upgrading.

TEXTS

The following texts are recommended:

- 1) World Bank, **Housing: Enabling Markets to Work**, Oxford University Press (1993)
- 2) Buckley, Robert, **Housing Finance in Developing Countries**, St. Martins Press (1997)
- 3) Lloyd Rodwin (ed.) **Shelter Settlement & Development**, Boston: Allen & Unwin (1987).
- 4) HABITAT, **Global Report on Human Settlements**, Oxford University Press (1987).
- 5) HABITAT, **An Urbanizing World: Global Report on Human Settlements 1996**, Oxford University Press (1996)
- 6) Orville F. Grimes, Jr., **Housing for Low-Income Urban Families: Economics and Policy in the Developing World**, Baltimore: The Johns Hopkins University Press (1976).
- 7) E. Wayne Nafziger, **The Economics of Developing Countries**, Prentice Hall (1990)
- 8) Bertrand Renaud, **Housing and Financial Institutions in Developing Countries**, The Johns Hopkins University Press (1984)
- 9) World Bank, **World Development Report 1996: From Plan to Market**, Oxford University Press (1996)

- 10) World Bank, **World Development Report 2004: Making Services Work for Poor People**, Oxford University Press (2003)
- 11) World Bank, **World Development Report 2002: Building Institutions for Markets**, Oxford University Press (2002)
- 12) World Bank, **World Development Report 2003: Sustainable Development in a Dynamic World – Transforming Institutions, Growth, and Quality of Life**, Oxford University Press (2003)
- 13) World Bank, **World Development Report 2004: Making Services Work for Poor People**, Oxford University Press (2003)
- 14) von Rabenau, Burkhard, Project **Financial Analysis for Physical Planners**, 1994

I have ordered References (5) and (13) through SBX though it usually does not carry many copies. Course readings are also available for limited 2-hour check-out at the Physics and Engineering Library. None of the books are required, but all of them include important readings. You can make a copy of individual chapters of my *Project Financial Analysis for Physical Planners* if you find it useful, particularly for the interest math and mortgage finance sections of the course.

COURSE OUTLINE

The class meets once weekly as outlined below (with two topics listed per session). Class meetings are three to four hours of lecture, including discussion and the presentation of special instructional materials such as slides and videos that illustrate the situation, in particular, developing countries. An in-class exam substitutes for part of a lecture. The timing of the mid-term has been tentatively scheduled for the 6th week.

Note: Because of scheduling conflicts, at least one class may be re-scheduled, with a date and time to be agreed on during the first or second week of class.

| Week | Topic |
|--|---|
| National Urban Development | |
| 1.1 | Introduction |
| 1.2 | Urbanization and Economic Development |
| 2.1 | Income and Employment Analysis |
| Urban Sector Analysis and Housing Delivery | |
| 2.2 | Housing: Existing Situation |
| 3.1 | Urban Finance I |
| 3.2 | Urban Finance II |
| 4.1 | Physical Infrastructure |
| 4.2 | Social Services |
| 5.1 | Construction Sector and Technology |
| 5.2 | Land Delivery and Development |
| 6.1 | Mid-Term Exam |
| 6.2 | Local Government and Administration |
| 7.1 | Project Definition and Target Group Selection |
| Project Design and Finance | |
| 7.2 | Design Standards and Costing |
| 8.1 | Urban Project Typology |
| 8.2 | Financial Feasibility Issues |
| 9.1 | Economic and Social Feasibility Issues |
| Project Management and Implementation | |
| 9.2 | Project Scheduling and Disbursement |
| 10.1 | Beneficiary Dealings |
| 10.2 | Project Monitoring and Evaluation |

COURSE GOALS

The student is to understand the purpose and goals of the typical urban sector study as commonly employed in the developing countries context and is to obtain a working knowledge of the analysis and methods required in producing such a study.

The student is to learn about the full range of housing projects and policies implemented in developing countries and is to obtain a working knowledge of the methods and analysis used to make all major project decisions as they relate to the project program, design and standards, technology, finance, costing, schedule and implementation.

COURSE OBJECTIVES

Upon completion of the course the student should be able to:

- 1) define terms and state important principles and facts with regard to the following areas covered by readings and lectures:
 - the urban labor market, including formal and informal subsectors;
 - job-residence relationships in developing countries and their impact on land use, zoning, residential location, and availability of housing finance;
 - urbanization, its principal sources and reasons for urbanization growth; relations to national development strategies;
 - housing finance, including formal and informal sector finance; problems of low income households; methods to increase access to housing finance low income households;
 - housing construction, including alternative technologies, prefab and industrialized housing; informal construction; policies to improve the building material and construction sector;
 - land delivery, including problems related to lack of land tenure; methods to improve delivery;
 - housing market assessment, including indicators of housing need and demand, and quality of stock;
 - municipal finance and administration, including the principal forms and problems of local administration; sources of finance and methods of municipal resource mobilization;
 - physical infrastructure, alternative and intermediate technologies for water, sewer, solid waste disposal and streets; design standards and methods of cost recovery;
 - social infrastructure, its design standards and methods of cost recovery;
 - land development practices, including land invasions, staged development and sites-and-services.
- 2) define terms, state and apply independently important principles, methods and facts related to the following areas covered by readings and lectures:
 - derivation of an income distribution and target population for urban projects;
 - derivation of mortgage instruments suitable for different levels of inflation, housing durability, and household labor market participation;
 - derivation of affordable housing program (housing and plot size, installment plan) under alternative financial assumptions, including variable interest, variable terms and graduated installments;
 - derivation of net and gross rent burden;
 - cash-flow analysis at the household and project level;
 - derivation of cross-subsidization and self-help schemes;
 - derivation of project cost at financial and economic prices;
 - determination of project foreign exchange requirements;
 - derivation of project implementation, disbursement and repayment schedules;
 - assessment of project financial, economic and administrative feasibility;
 - assessment of project risks;
 - project implementation and monitoring studies.

EVALUATION

The evaluation will be based on class attendance, plus the student's performance relative to other students enrolled in the course in meeting course objectives. The final grade is determined by a mid term and homeworks contributing each 45 percent to the final grade, plus 10 percent for class attendance. The mid term exam covers materials up to and including the 5th week of classes. The exam is closed book and lasts

2 hours and 48 minutes (it requires a calculator with power function). The homeworks use spreadsheet analysis on a computer of your choice. Formulas will be given, except as indicated in the lectures.

The points received in the exam and homeworks will be added together for a potential of 1000 points. Grades will be assigned as follows. Upward deviation from this schedule will be possible.

900 - 1000 = A

750 - 899 = B

600 - 749 = C

450 - 599 = D

Less than 450 = E

ACADEMIC MISCONDUCT

All students are held responsible for following and abiding by the University's policies on plagiarism and academic misconduct.

COURSE OUTLINE READINGS

1.1 Introduction: Survey of planning issues in LDCs; typology of developing and developed countries; purpose and methods of sector and project analysis.

Read: Global Report 1987, Chapter 1-4
Nafziger, Chapter 3-5

1.2 Urbanization and Economic Development: Sources and reasons of urbanization; relationship between urbanization, industrialization, and income growth; government urbanization policies; impact of population growth on scope of urban and housing problems.

Read: Global Report 1996, Chapter 1-2
Nafziger, Chapter 8-10

2.1 Income and Employment Analysis: Methods of income and employment analysis for urban sector analysis and project development; formal and informal labor markets; relationship between employment and housing delivery.

Read: Global Report 1996, Chapter 3
Nafziger, Chapter 6, 7, 11

2.2 Housing: Existing Situation: Overview of the housing delivery system including land availability and cost; existence of property rights and registry; formal and informal construction methods; financial institutions and informal housing finance; construction industry and construction methods, etc.

Read: Global Report 1987, Chapters 7 and 8
Global Report 1996, Chapter 6
Orville Grimes, Chapters 1-3.
World Bank, **Housing: Enabling Markets to Work**

3.1 Urban Finance I: The finance problems of shelter and urban services; types of housing finance; types of mortgage instruments; inflation and impact on housing finance; formal and informal sector finance.

Read: Global Report 1987, Chapter 9
Bertrand Renaud, Chapters 1-4.
Robert Buckley, **Housing Finance in Developing Countries**, Part I
Rabenau, Project Financial Analysis for Physical Planners (1993) Chapter 4-7

3.2 Urban Finance II: Principles of financial analysis; computation of installment and cost recovery schedules under alternative assumptions; economic benefits and costs of land development projects; affordability measures.

Read: Global Report 1996, Chapter 11

Rodwin, Chapter 7

Bertrand Renaud, op. cit., Chapters 5-7

Rabenau, Project Financial Analysis for Physical Planners (1993) Chapter 8, 10

4.1 Physical Infrastructure: Urban conditions with regard to water, sewer, roads, electricity, and waste disposal. Pricing problems; cost recovery issues; problems with maintenance, administration and service expansion. Alternative technologies and affordability.

Read: Global Report 1987, Chapter 11

Global Report 1996, Chapter 8

Rabenau, Project Financial Analysis for Physical Planners (1993) Chapter 11.

4.2 Social Infrastructure: Social services including health, education, security, fire, and welfare; typical standards and costs; problems of maintenance, operations, administration and finance.

5.1 Construction Sector and Technology: Construction, building and subdivision standards and their cost; alternative technologies for shelter and infrastructure; the organization of the construction and building material sectors; possible problems of the industry; informal construction sector and productivity.

Read Global Report 1987, Chapter 12

Global Report 1996, Chapter 10

Rodwin, Chapter 4

Grimes, op. cit., Chapter 4-6.

5.2 Land Delivery and Land Development: Land cost and land speculation--possible problems; timing of development; typology of development processes; different forms of land ownership; lack of ownership and associated problems; cadastral survey and land registration.

Read: Global Report 1987, Chapter 10

Global Report 1996, Chapter 7

Rodwin, Chapter 5

Grimes, op. cit., Chapter 4, Section on "Land".

6.1 Mid Term Exam

6.2 Local Government and Municipal Administration: Alternative models of government organization; typical functions of local government and private sector; the budgeting process; the implementation process; evaluation of administrative capacity; government resource mobilization and self-financing.

Read: World Bank, **Urban Service Delivery: Finding the Right Incentives**, Washington, D.C.: Working Paper (1994)

World Bank, **WDR 2004: Making Services Work for Poor People**

Ashoka Mody (ed), **Infrastructure Delivery: Private Initiative and the Public Good**, for Economic Development Institute, World Bank (1996)

Global Report 1996, Chapter 5

7.1 Project Definition and Target Group Selection: Typical urban sector projects; integrated projects and their advantages and disadvantages; problems of project identification; selection of target groups in theory and practice.

Read: Global Report 1996, Chapter 9

Rodwin, Chapter 11

Grimes, Chapter 7.

7.2 Design Standards and Costing: Methods of costing; derivation of affordable design standards; design standards for water, sewer, and roads; foreign exchange requirements and their computation; financial vs. economic cost; treatment of inflation.

Read: Rodwin, Chapters 12, 13

8.1 Urban Project Typology: Sites and services vs. upgrading, types of self-help, sector vs. integrated projects; core housing; evaluation of project types; review of experience.

Read: Rodwin, Chapter 14

8.2 Financial Feasibility Issues: Financial feasibility for different agents, including households, land development agency, utility companies, municipality; derivation of prices, taxes for cost recovery; cross-subsidization, its problems and feasibility; interest during construction; determination of minimum revenue requirements.

9.1 Economic and Social Feasibility Issues: Economic benefits and costs of urban projects, with a focus on land development; land values and measurement of benefits; shadow pricing; economic vs. social feasibility; assessment of project risks.

Read: Lyn Squire and Herman van der Tak, **Economic Analysis of Projects**, The Johns Hopkins University Press (1983).

9.2 Project Scheduling and Disbursements: Scheduling of project tasks; derivation of disbursement schedules; cash flow analysis; development of revolving funds.

10.1 Beneficiary Dealings, Project Monitoring and Evaluation: Settlement promotion policies; land sale strategies; plot allocation process; methods of project monitoring and evaluation.

10.2 Review and Future: Assessment of the Urban problem and its solutions; assessment of sector and project strategies; the role of international organizations and foreign assistance; assessment by world region and country type.

Read: Michael Bamberger, "Evaluation of Sites and Services Projects," World Bank Staff Working Papers Number 549, Washington, D. C. (1982).
Global Report 1996, Chapter 13