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Rural-Urban Interlinkages

A Case Study Based on
Nepalese-Swiss Development Experiences

This study was funded by the Swiss National Research Foundation within its research programme Nr. 28 "Economic and Development Cooperation Policies of Switzerland".

Cover Photo: Vegetable production in the suburban area of Kathmandu has substituted former grain production. The vegetables are transported by bicycle, bus and truck to the markets in Kathmandu. Source: HIMAL Visual Archive.

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Rural-Urban Interlinkages: A Challenge for Swiss Development Cooperation

A Case Study Based on Nepalese-Swiss Development Experiences

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ABBREVIATIONS

ADB/N	Agricultural Development Bank of Nepal
CBS	Central Bureau of Statistics
HMG	His Majesty's Government
IHDP	Integrated Hill Development Project
IDA	Interdisciplinary Analysts (Consultancy firm, Kathmandu)
IRs	Indian Rupee (28 IR = approx. 1 US $ in 1992)
LJRP	Lamosangu-Jiri Road Project
NGO	Non-Governmental Organization
NRs	Nepali Rupees (45 NRs = approx. 1 US $ in 1992)
PDP	Palpa Development Project (successor of TWP)
SDC	Swiss Development Cooperation
SLC	Secondary Level Certificate
UDLE	Urban Development through Local Efforts
UMN	United Missions to Nepal
TWP	Tinau Watershed Project (1980-1988)

FOREWORD AND ACKNOWLEDGEMENTS

In 1989 the Swiss national research foundation launched the research programme No. 28 investigating the topic "Switzerland in a changing international environment - International trade and development cooperation as a challenge". Within the framework of studies commissioned in the field of structural adjustment and development cooperation policies, INFRAS has been mandated to conduct this study on rural-urban interlinkages by focusing on Nepal as a case study area. INFRAS has entrusted Mr. D. Gyawali and Dr. I. Thappa (from Interdisciplinary Analysts in Kathmandu) with direct field investigations. Dr. Joanna Pfaff has contributed insights on rural-urban aspects obtained from another study. Sushma Bajracharya cooperated with the research team on the basis of a special assignment given to her looking at the role of women in rural-urban interlinkages. Their efforts in the field and support in analyzing and finalizing this report are highly appreciated. The authors gratefully acknowledge the invaluable support by the programme, especially by Prof. O. Landmann and Dr. K. Korner. Thanks are also due to Dr. A. Schild (Intercooperation) and Dr. A. Melzer who participated as active discussion partners and Dr. W. Meyer (SDC) for his contributions.

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We would also like to express our thanks to Mrs. B. Ikin for the proof reading of this study.

This report is the result of a process. The first inception discussion took place in November 1989. The work was started in Nepal in fall 1990 and went on through the stage of various drafts and several steps of discussion interaction till November 1992.

INFRAS, S. Mauch Zürich, 15. November 1992

SUMMARY

Background

The study of rural-urban interlinkages in the development process attempts to examine three decades of intervention in rural development. While having some positive effect, rural development has not been perceived as fulfilling all the expectations that were present at the start of the exercise. Rural impoverishment has not been banished and rural to urban migration continues unabated. This study is an attempt to gather some new insights in the process of rural-urban interlinkages in South Asia and to examine their implications for efforts in development intervention.

Objectives and Methodology

In the past, Swiss Development Cooperation has focused rather exclusively on rural development in order to improve the living conditions in poor rural regions and countries and thus to prevent rural to urban migration. The rural development approach followed in many "integrated rural development projects" was based on the hypothesis that investment in sectors such as infrastructure, agriculture and cottage industries could induce a self-supporting economic growth in rural areas. It seemed easier to implement and manage the processes of interaction within an administratively delineated area of intervention such as a rural district by channelling interventions through government institutions. This has led to a neglect of the role of small towns, their problems and the potential for synergistic development inherent in rural-urban interlinkages. The key question postulated at the beginning of the study centres around the question whether development cooperation should change its focus from an exclusively rural one to one with a more balanced rural and urban approach.

Two alternative frameworks are described in the study. Basically a framework was chosen in which the interlinkages between rural and urban subsystems are equally vital both in non-tangible areas such as information exchange and value changes, as well as in tangible areas such as goods exchange and migration. The methodology applied makes intensive use of the primary data collected during field visits and interviews with key informants in the areas of fruit and vegetable marketing, metal trade and migration. The comparative analysis is based on a comparison of case study areas in Nepal, namely Kathmandu-Dolakha, Palpa-Butwal and Bajhang. The latter case study traces migration linkages from Bajhang down to Bangalore in south India.

Case Study Findings

The interlinkages in the production of metal goods and fruit/vegetables were chosen as the primary items of the the rural-urban chain to illustrate micro-economic and other relevant factors in decision making. The case studies document the factors which motivate people to take risks and to adopt new technologies, the crucial role of kinship and informal interlinkage arrangements and the poor performance of state institutions to act as facilitators and to absorb large risks. Natural resource endowment and the accessibility of a region define the relevance of migration out of that region. Observations in Bajhang and to a certain extent in Dolakha indicate that the rural economy and the social system are defined by migration. Migration to urban centres is the prevailing social strategy to increase income levels in those areas.

The case study findings indicate that the categories "rural" and "urban" exhibit a continuum rather than a strict compartmentalisation and that they are open rather than closed systems. According to the analytical framework developed during this study, six key aspects characterise the dynamics of rural-urban interlinkages:

Exchange of goods: All rural areas show significant imbalances in the balance of trade (imports clearly predominate). Where small towns show intensive rural-urban interaction (Palpa-Butwal), more agricultural produce from the rural hinterland find their way to urban markets.

Technology diffusion: Transport technology is seen as a crucial factor, necessary but in itself not sufficient for rural development. The advent of urban technologies can exacerbate an already unequal political balance between cities and villages.

Resource mobilization: In many cases urban areas exploit resources at the cost of rural areas (labour, mining, water, taxes). Internal resource mobilization in the urban areas is inadequate and urban development depends on external resource flow (rural-to-urban investments, subsidies etc.).

Migration: Migration is primarily a matter of employment and income. In all the case studies labour interlinkages between rural and urban areas extend beyond national boundaries and make up the prevailing social strategy to increase income. The returning migrants are seldom able to reintegrate in the rural context because it is the sphere of influence of the traditional elite.

Information exchange: Intermediary institutions such as self-help cooperatives, middlemen, schools and media are seen as important carriers of information exchange between cities and villages. They are the levers of economic development and in future development intervention should focus more intensively on these institutions. The comparison of case studies provides evidence that attitudinal changes (towards market-oriented production) require social

and mental mobility and time to develop and to break with cultural traditions which limit the exchange mechanisms to clans and villages.

External effects: Environmental degradation is a long-term liability that the rural areas are exchanging for short-term benefits in meeting the day-to-day requirements which are often controlled by supplies from the urban areas. State institutions have largely failed to absorb risks which would allow small farmers to experiment with new approaches (e.g. fruit orchards).

Conclusions

The conclusions regarding the dynamics of rural-urban interlinkages are based on the evidence and analysis provided by the case studies:

1. The dynamics of urban areas exceed that of rural areas. Economic growth rates are generally higher in urban areas. Innovations, increasing division of labour combined with "economies of scale" provided by urban areas are the engines of urban growth. They lead to increasing economic disparities.
2. The urban boom is subsidized by external environmental and social costs not borne by the polluters and consumers. Low tax levels and government subsidies (for electricity, water and fertilizer) benefit the rural elite and urban upper and middle classes.
3. Children and women, hardly represented in formal institutions and bearing a bigger share of the external costs, are among the losers of this development process.
4. Most policies to reverse or scale down urbanization have failed since urban incomes are, despite widespread urban poverty, still attractive to deprived rural migrants. Integrated rural development programmes have only had a marginal effect on migration flows.
5. Rural-urban interactions occur on a continuum of settlement hierarchies and take place at different economic levels. Indicators may expand beyond national boundaries (e.g. migration to Indian cities).
6. The development of rural-urban interlinkages needs infrastructure such as road networks, communication and schooling facilities, especially if development is to be seen as offering an improved market access. Without complementary improvements in education and social institutions (NGOs etc), however, rural areas will be the ultimate losers.
7. Intermediary institutions such as the marketing and credit systems of rural cooperatives and community groups are an essential element in promoting growth in rural areas. This fact has already been known for several decades in developmental literature and research. However, in framing development intervention in rural areas during this time, this in-

sight has inexplicably been ignored. The results are investments in rural development with impacts which are less than satisfactory.

Policy Recommendations

In fostering sustainable development, rural-urban interlinkages play a crucial role in the development processs, primarily because of the synergistic nature of the interaction between cities and villages. Future interventions in development cooperation should focus more specifically on:

1. Fostering sustainable development is not only a question of balancing investments between rural and urban areas. Sustainable complementary rural growth is necessary to counterbalance the dynamics of urban areas. This implies development efforts in improving farmer managed irrigation where socially and ecologically feasible, credit systems and supporting rural change agents (e.g. intermediary institutions such as NGOs and user groups). Complementary efforts in urban areas which benefit rural areas comprise improvements (legalization) in the activities of the informal sector.
2. By the year 2010 half of the population of developing countries will live in cities. Due to this demographic transformation, development assistance in future will have to consider more specifically the role and management of urban areas. Rural types of government-oriented projects transplanted to urban areas, however, are most likely to produce only marginal benefits or failures. Urban areas in developing countries are the centres of wealth and know-how and should by means of appropriate institutional arrangements, be capable of solving growth problems more effectively by internal resource mobilization. Urban institutional reforms need revision and political commitment, as do the reforms for rural areas.
3. Decentralization of the central power to local governments such as cities and districts is a precondition for sustainable development and more efficient interactions between rural-urban areas. The balanced local control and management of resources (water, forests, land) is a prerequisite enabling rural areas to have a leverage vis-a-vis the urban economy.
4. Know-how development is at least as important, if not more so, than "hardware" (infrastructure) or capital flow. The potential to significantly accelerate this by development cooperation is limited. Mental transformation in socio-cultural relations and values is a necessary precondition for rural-urban processes (technology diffusion and adaptation).
5. Sustainability of development intervention in rural and urban areas is a function of the strength of social institutions. The transfer of money is a temporary incentive, but does not result in the sustainability of motivation and efforts.
6. The role of small towns on the rural-urban continuum needs to be enhanced as they are the catalysts in economic and social terms between villages and big cities. Development interventions in big cities (such as the Kathmandu Valley) should be carefully evaluated to prevent concentration of services and facilities.
7. Foreign aid in the past has often supported capital investments in infrastructure (roads, communication) which cannot sustainably be maintained. Priority should be given to the development and maintenance of low cost infrastructures in rural and urban areas. Important criteria for development cooperation are improvement in cost recovery, training and maintenance support.
8. Aid agencies and cooperating governments and institutions must reassess their capital investment philosophy. Failures of development intervention often have their underlying causes in the internal paradigms upheld by these organizations as well as in the sociology of power within these bodies. Aid agencies must show honest soul-searching in order to gain legitimacy in the developing as well as in the donor countries.

PART 1: INTRODUCTION

1.1 BACKGROUND AND OBJECTIVES

Global Urbanization Trend

Since 1950 the world's urban population has grown from under 300 million to 1.3 billion people. The pace of growth of cities in developing countries is without historic precedent. Within the next 15 years the urban population in the South is expected to grow by another billion people. Then, out of 21 megacities with more than 10 million inhabitants, 17 will be in developing countries. These megacities will each have to provide housing, infrastructure and employment to a population larger than Switzerland. Figure 1 shows the development of the world's biggest cities between 1950 and 2000.

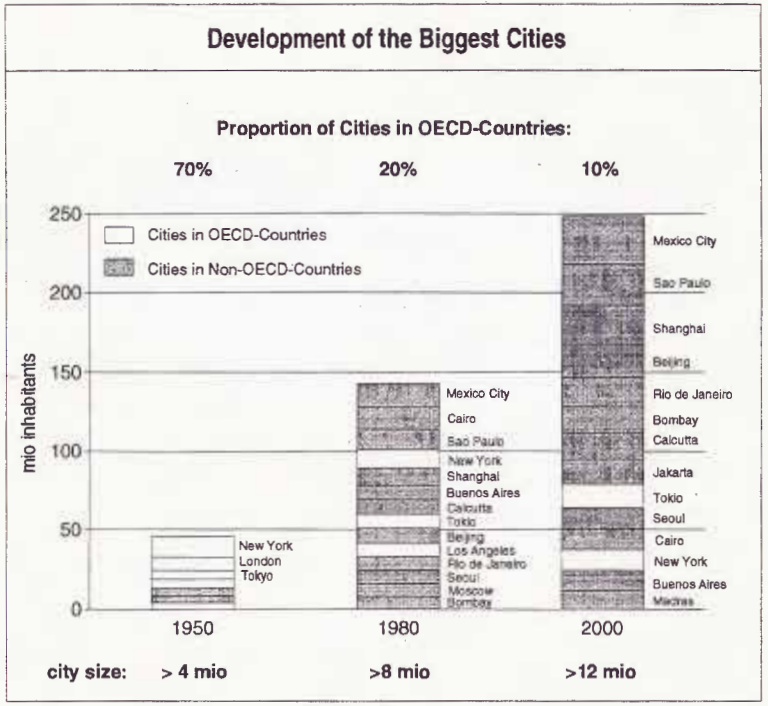


Figure 1: Development of major cities (metropolitan areas) between 1950 and 2000.

During the past decade, the living conditions of many people in the rural hinterlands of cities and of the urban poor have deteriorated in many developing countries in comparison with preceding decades - though aid supported rural development efforts were the major focus during the 1970s and 1980s and increasingly urban projects were taken up later.

Since the advent of foreign aid and development assistance to developing countries of Asia, Africa and Latin America some forty years ago, intervention efforts were implemented with conceptually diverse labels such as basic needs, economic growth, poverty alleviation, growth with equity, market integration etc. During these decades, Swiss Development Cooperation (SDC) has had a particularly strong focus in rural areas though a moderate policy adjustment towards the challenge of global urban dynamics took place from the mid-1980s. A relatively small but growing share of aid funds is being directed to urban areas (see Figure 2).

Swiss Development Objectives

Swiss assistance to rural areas through technical cooperation projects operated under the paradigm that economic development in rural areas would obviate the need for people to migrate to urban areas. The fast urban growth, resulting in slums and unmanageable downstream effects in cities (pollution, waste disposal etc) and overloaded municipal managements was seen as a development nightmare planners should try to avoid. Rural development support in this sense was perceived as a means of preventing foreseeable problems in cities.

This policy is based on the objectives stated by the Swiss law on development cooperation: to focus cooperation on poorer countries, regions and population segments by supporting (SDC 1987 a):

a) development of rural areas
b) improvement of nutritional standard, especially by increasing agricultural production for local markets
c) promotion of local businesses and small-scale industries
d) creation of employment
e) rehabilitation and conservation of the ecological and demographical balance.

Urban - or more general - economic growth per se is not explicitly mentioned in the objectives of the Swiss law. However it is addressed by the objectives stipulated by the law under paragraph c, d, and e.

There is a substantial amount of literature available on rural and on urban development issues to accelerate economic growth or to uplift the living conditions of the poor in both areas. Governments have "urban development policies and "rural development policies" but the critical aspect of interlinkages has not really been addressed explicitly so far.

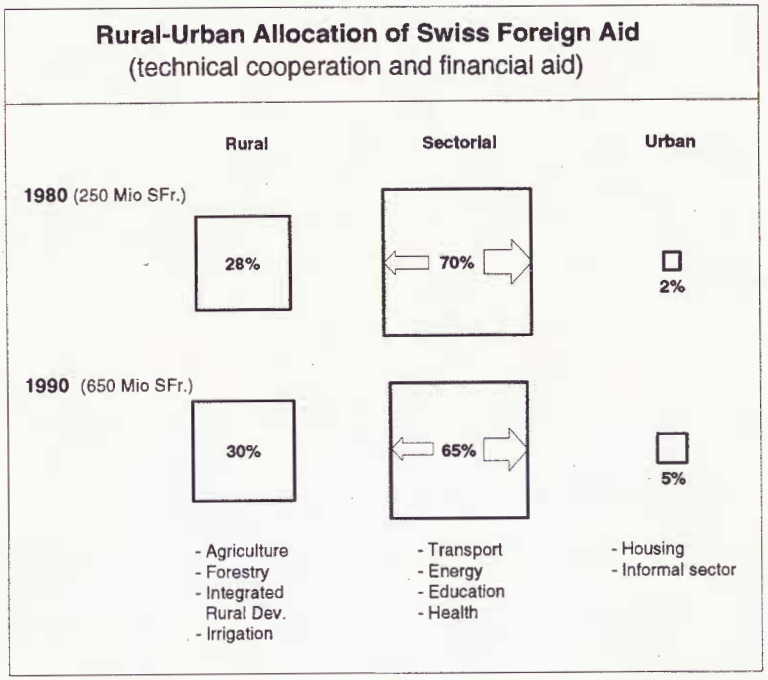


Figure 2: Development of financial allocation of Swiss foreign aid in rural, urban and sectorial programmes in 1980 and 1990. The distribution of sectorial investments according to rural and/or urban beneficiaries is difficult and empirical studies are lacking. The World Bank estimates that approx. 40 % of its sectorial investments directly benefit urban areas (IUED 1991).

In Switzerland - as in most western countries - the debate on tools and policies for balanced rural-urban development have been indirectly addressed through research on spatial implications of economic growth to formulate regional development policies for balanced growth. Similar concepts have then been applied to developing countries.

While the existence of distinct rural and urban aspects cannot be denied in reality - there are villages and there are cities - the difficulty is that a linear extension of the rural-urban dichotomy to the areas of economic and social development leads to conceptual difficulties. Is there a "rural" economy quite different from the "urban" one ? If so, how distinct is it and is it capable of sustaining a sovereign development path? Such questions bring into consideration the interlinkages of villages to towns, and towns to cities and the world beyond.

Rural-urban interactions are significantly influenced by macro-economic measures such as structural adjustment programmes. This study, however, analyses the driving forces in rural-urban interaction at micro-economic or household decision-making levels with the hope that the insights thus provided would prove no less valuable to national and donor decision-makers. INFRAS has selected Nepal as a case study area. The field research has been implemented in cooperation with Interdisciplinary Analysts (IDA), a local consultancy firm in Kathmandu.

1.2 KEY QUESTIONS AND HYPOTHESES

This study investigates the transformation process of rural-urban interaction as the precondition to development. In this context INFRAS has been mandated by the Swiss National Research Programme (NFP) 28 to implement this research project on the role the dynamics of rural-urban interaction play in the development process.

In this research contribution we are going to investigate why the rural investment approach implemented through technical development projects did not produce the expected results. As will be elaborated below, we have concluded that the crisis of "development strategies" needs more thorough analysis than expressed by shifting investments from rural to urban centres or growth poles.

The question is not whether development cooperation efforts are more effective in rural or urban areas. There is evidence that urban development efforts were similarly ineffective as were efforts in rural areas under similar framework conditions. In both areas interventions could - at best - create islands of development (wealth) but in most cases failed to comply with initial expectations. Although no cross-comparative evaluation of the performance of rural and urban projects or programmes is available there is general agreement that both integrated rural development projects and infrastructure and income generation projects in urban areas were not that successful. Whereas in rural areas

many projects failed due to a lack of appropriate technical packages (know-how, inputs, credit etc.) many projects in urban areas failed due to a lack of technical and managerial capabilities and weak institutions.

Rural-urban interlinkages show cross-cultural and cross-sectorial aspects and extend beyond conventional analytical boundaries (migrants from hill villages go as far as Bangalore in India, the Gulf states or even Japan in search of jobs). Rural-urban interactions are complex but relevant factors in the economic transformation process.

The specific research questions addressed by this study are:

- What are the engines of urban growth and what role do rural-urban interactions play?
- How can these processes be measured and integrated into development cooperation?
- What kind of conclusions can be drawn for the strategy of development cooperation in urban and rural areas?

At the start of the field investigation several open questions were kept in mind so as to focus the interviewer's attention in making interviews. The guiding questions to obtain empirical evidence from our case studies in Nepal were:

- What are the elements of urbanization dynamics that influence the behaviour of villagers in the hinterland?
- What are the services or attractions provided by larger settlements that smaller centres cannot provide?
- What factors allow rural development investments to induce urban growth? And are there examples of processes vice versa?
- Why have some rural areas failed to exploit advantages presented by infrastructure developments that have led to negative balance of payment while others have not?
- Are there examples of endogenous rural development successes as opposed to administration and urban driven developments?

Key answers to these questions were developed on the basis of our field observations and insights. Chapter 2 presents the field information, chapter 3 analyses and comparisons of the case study evidence and finally, chapter 4 draws the conclusions.

1.3 FRAMEWORK FOR ANALYSIS AND METHODOLOGY

Framework for Analysis

Dichotomies, whether rural-urban, formal-informal, structured-unstructured, industrialized-nonindustrialized, or developed-underdeveloped, are ideal for neatness of analysis but are rarely successful in conclusively describing reality. The anomalies in any such splitting of the whole into parts prevent neat compartments and subsequently introduce contradictions in policies of development intervention.

If development cannot be a wholly rural affair or a wholly urban one, the next set of questions that have to be introduced are the ones relating to those aspects that bind rural development with activities in the urban areas and induce a synergistic effect enhancing the development of both. In this research, these aspects are what is termed "rural-urban interlinkage". It is not only a focus on the physically visible connections such as road transport, but also on a broader set of social, ecological, economic and physical interactions that determine the behaviour of rural inhabitants in relation to their urban counterparts.

After the democratic changes in Nepal in 1990, the new government changed the definition of a municipal area. While previously only the population criterion was taken, the new definition indicates an attempt to come to terms with the significant functional diversities of rural and urban areas which complicate a neat or consistent delineation of the rural from the urban. This is because both socially and economically, urban and rural areas are open systems. In terms of migration, the system boundary of rural migration out from the Hills extends to burgeoning urban centres in Nepal such as Kathmandu Valley and Terai centres. In the past, this boundary extended to the big cities of India and the places where the British Gurkha troops were taken; in recent years Nepalese workers have gone to the Gulf states and even to Japan. In terms of goods, due to the globalisation of markets, cement for village drinking water projects come from Korea and Thailand, chemical fertilizers from Germany etc.

An analytical framework for unifying and reflecting all aspects of interactions does not exist or cannot adequately be displayed visually in two dimensions. Two approaches taken in defining the analytical framework for the analysis of rural-urban interlinkages are presented below.

Figure 3 displays the system of rural-urban interlinkages as three hierarchically interrelated subsystems: the world market, the urban and the rural areas. Both market forces and policy decisions (institutions) shape interaction at the world market level, the national urban level (consisting of a formal and informal sector) and the national rural level (farm and off-farm sector). This framework views interlinkages as primarily economic interlinkages such as trade, commercial exchange and the flow of resources from one place to another.

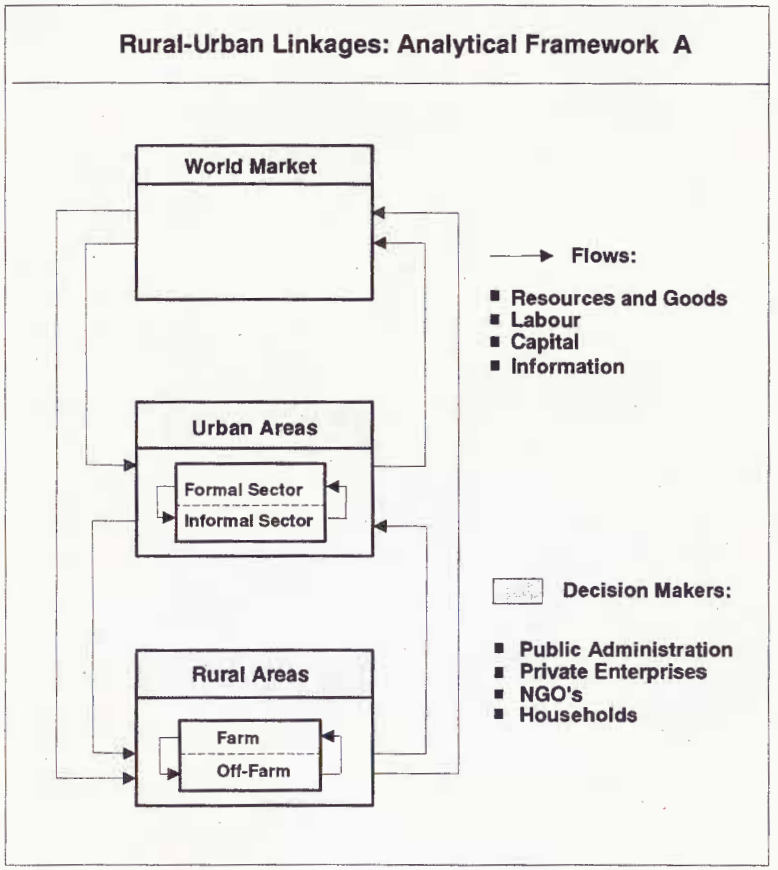


Figure 3: Analytical framework for rural-urban interlinkages at global level (adapted from EVANS 1990).

Figure 4 displays a broader functional model to analyse rural-urban interlinkages at the national level, giving equal importance to the exchange and flow of intangibles such as information and values. The framework identifies six interrelated sub-systems in rural and urban areas: resources, technology, products, social values, institutions and population. These systems are interlinked. Rural and urban areas interrelate with each other through the exchange of goods, technology transfer, resource exploitation, migration, in-

formation exchange leading to social costs and changes in value systems, and external effects (pollution etc.).

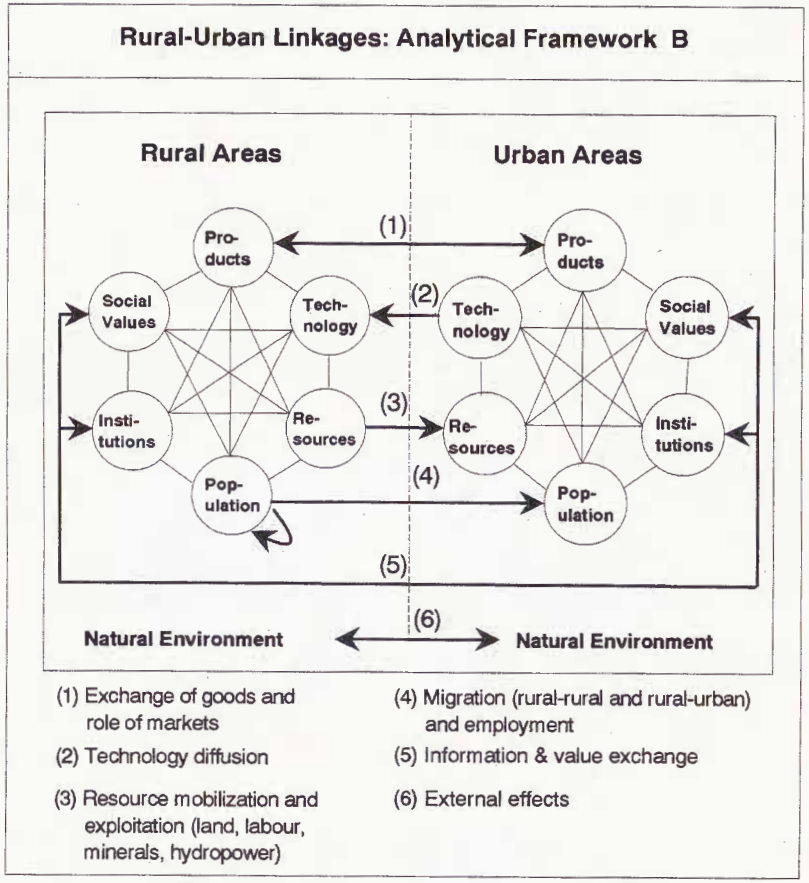


Figure 4: Framework for analysis of rural-urban interlinkages at national level. The structure of interlinkages is shaped by various interlinked social, institutional and economic sub-systems (adapted from STEPPACHER 1982 and NORGAARD 1988).

While the first framework suits an analysis with a macro-economic approach, the second functional framework captures the gamut of interlinkages in a wider net and offers more explanatory insights regarding the development process of

which economic development is but one aspect. While Figure 3 represents the traditional linear view of development focusing on the application of technology to the environment with values and hierarchical social organizations remaining intact, Figure 4 comes closer to a co-evolutionary view that acknowledges the interrelationship between knowledge, values, social organizations, technology and the natural resource base.[1] Each of these realities influence the others and is in turn influenced by them. In this approach, the realities of knowledge, resource base, social organizations etc. are as important as the interactions between them because they change the realities in the process of relating to each other (STEPPACHER 1982, NORGAARD 1988).

Such a framework also departs from most of conventional wisdom. A case in point is the different approaches taken in conceiving social organizations. In the standard linear approach, organizations are often taken as synonymous with institutions. For example, a World Bank publication defines institutional development as "the process of improving the ability of institutions to make effective use of human and financial resources available" (ISRAEL 1987). In the co-evolutionary approach, however, this process would only be the improvement of organizational efficiency. The difference between organizations and institutions from a co-evolutionary perspective is seen as follows:

"Institutions are based on a pattern of values and behaviour of the social system that is sustained over time. The institution has been defined as collective action in restraint, liberation and expansion of individual action, or more concisely as "working rules for going concerns". In this sense, the state is an institution as is the family or markets. All act according to their own working rules and behaviour principles."

"Organizations, on the other hand, are a sub-set of institutions. They are a physical manifestation of the prior rules established by existing institutions, and seek to define the network of roles and procedures articulated into hierarchies, and obeying a system of rules, which elicit individual behaviour and coordinated action. They can be formal if the roles and procedures are rigidly codified (as in the case of a government-run farm) or informal if such statutory codes do not exist but the roles and procedures are well accepted." (CIWEC & EAST 1990).[2]

1) The co-evolutionary view understands development as co-evolution of interrelated social and ecological systems. It further stipulates that sustainable development can only be achieved if the economic system shifts to the consumption of renewable (flow) resources and by phasing out the hydrocarbon (stock resource) consumption for energy purposes in the longer term (NORGAARD 1988).

2) The Master Plan for Irrigation Development in Nepal (CIWEC & EAST 1990) brings forward this definition based on BROMLEY (1985), CERNEA (1987) and UPHOFF (1987).

It is with this kind of conceptual understanding that the idea of intermediary institutions between the rural and urban areas is developed in the case studies and the subsequent analysis. While a state-owned agriculture input corporation is an organization at a lower level than the cabinet or the ministry, it is still a part of the institution called the state. On the other hand, a truly autonomous farmers' cooperative would be an organization that would also be an intermediary institution, i.e. an institution between two extremes of permanent social institutions that are the family and the state. Similarly, the phenomenon of middlemen traders would be an intermediary institution which may not even be an organization but only a loose network.

Methodology

Case Study Areas: This investigation uses various methodological tools. For the purpose of spatial stratification three case study areas were selected to conduct the field research on rural-urban interlinkages. The three case studies represent different socio-economic settings in the Nepalese context (incl. cross-border aspects with adjacent India and Tibet). Figure 5 shows Nepal in its broader geographic context and the location of the three case study areas. The basic features of accessibility and agro-ecological conditions of the case study areas are given in Figure 16, Annex B.

For the field studies the methodology of social anthropology was adapted through the selective use of household case studies to provide a level of insight that is not available generally from the numbers generated in a statistical approach. The underlying belief is that there are ways of obtaining reliable socio-economic information without resorting to simple dependence on dubious quantitative surveys. This case study approach is different from a "rapid rural appraisal" which is based on the assumption that perfect knowledge is not possible in development and that the objective is to make a compromise between reasonable accuracy and reasonable speed. It has been criticized for becoming "development tourism". The case study approach, on the other hand, is not about a compromise between speed and accuracy, but limits the possibility for generalisations.

Case Study Products/Aspects: Rural-urban interactions include a huge variety of socio-economic aspects and subjects. For the specific purpose of this study and to economise on time and resources in the analysis, selective subjects were chosen for detailed investigations, and long conversations with concerned actors in various situations form the basis.

Interlinkages/Aspect	Case Study Area 1 Dolakha-Kathmandu (LJRP/IHDP)	Case Study Area 2 Palpa-Butwal (PDP)	Case Study Area 3 Bajhang
1. Fruit & vegetables	2.1 (15)	2.3 (20)	
2. Metals	2.2 (10)	2.4 (15)	
3. Livestock/Soap & Carpet Production	2.5 (5)		2.5 (5)
4. Migration/ Marginality			2.6 (20)

Table 1: Overview on case study areas and the subject areas to trace the effects of rural-urban interlinkages. Figures refer to the corresponding chapter. The number in brackets indicate the approximate number of interviewed persons.

Preliminary field investigation were conducted to determine which items would provide a rich dividend of insights into rural-urban interlinkages. Among the various interlinkages, metals and vegetables/fruits were selected as indepth case study items for the following reasons. Firstly, vegetables and fruits represent village products that reach the urban centres of consumption and hence are a concrete element having a chain of interlinkages that can be followed from the start in the villages to the finish in the cities. Secondly, while urban and industrial products as well as goods and services dominate a trade regime within a country, vegetables and fruits represent products which highlight the rural area's inherent strength vis-a-vis the urban area. Thirdly, even within the rural context, these items highlight progressive dynamics in the villages: villages in the subsistence mode, that is, the majority of villages in Nepal, produce primarily grain for their internal consumption, whereas those villages producing vegetables or fruits will have done so within a mode of interaction with the urban, formal and market economies.

As in the case of fruits and vegetables, metals too were selected as a useful item of study that would shed light on the nature of rural-urban interlinkages. In contrast to vegetables and fruits, metals and metallic goods generally originate in urban areas and find their way to villages, thus representing the reverse in the chain of interlinkages that vegetables represent. They could thus be considered to represent urban goods that end up in villages. Furthermore, metallic goods or at least certain critical components or associated processes which cannot be produced in the villages, could highlight the inherent dependency of villages on urban areas.

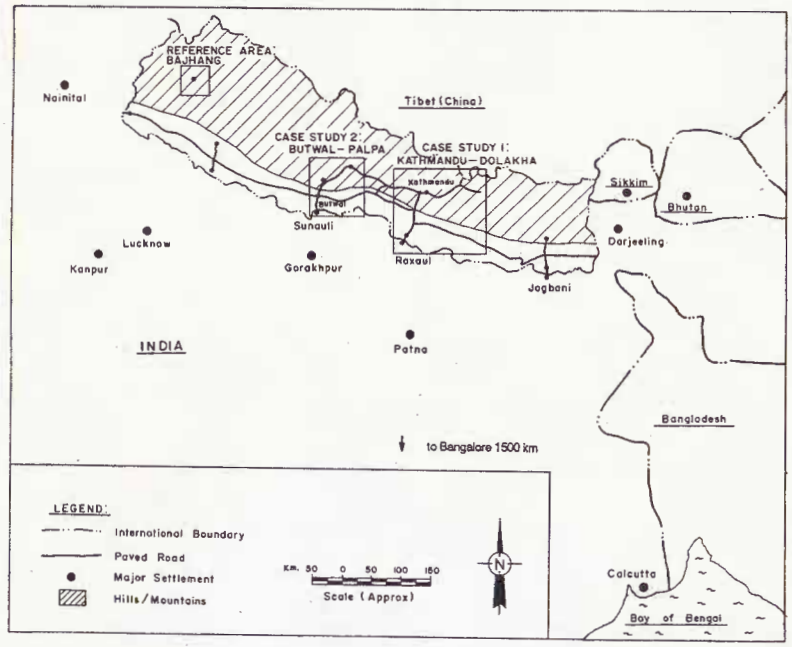


Figure 5: Overview on the present Nepalese road network and the location of the three case study areas: Kathmandu-Dolakha, Palpa-Butwal and Bajhang.

The chapter on further interlinkage aspects describes and analyses some complementary rural-urban interlinkages to gain more insights. The issues relate to livestock, soap and carpet industries. Evidence was gathered during the initial and subsequent field visits.

The case study area of Bajhang represents a remote region in far western Nepal with no roads or modern communication facilities. As with many hill and mountain areas of Nepal, Bajhang's land resources are inadequate to support even the existing population. Therefore seasonal and long-term migration out has been a traditional social solution. The evidence presented here is based on field research in the destination place of many migrants in the city of Bangalore (India) by Dr. Joanna Pfaff conducted in winter 1991 and winter 1992[3].

3) The author wishes to express her thanks to the collaborators Amar Raj Khair and Dhan Prasad Pandit for their support during both field-trips.

The "data", or the observed social truth, presented in the case studies in the following chapters originates from following an approach of interviewing key informants. Many farmers, shopkeepers, government officials, political figures etc. were met and matters discussed with them in all three case study areas. Much of the conversations were tape-recorded; what is produced in the report is based on the analysis of the interlinkages indicated in them. While more time at the field level would have been welcome had the resource been there, the focus on a specific topic such as metals, vegetables or migration did allow sufficient indepth discussions with key informants to establish certain threads that, we feel, provide insights about rural-urban interlinkages as well as their implications for development interventions. A list of key informants approached in this study is attached in Annex C. In order to protect the informants, names were either changed or only the informant's function is described.

Systems Analysis: The analysis of rural-urban interlinkages using the methodology of systems dynamics and regional modelling of economic interactions was conducted for the Kathmandu-Dolakha case study. This has been documented in the interim report (INFRAS 1991 c). An illustration of the major elements shaping rural-urban interlinkages is described in Figure 14.

Rural-urban interlinkages are not only a question of economic factors. Social and cultural aspects play a significant role in the behaviour of villagers and their urban counterparts. This, together with the fact that Nepal finds itself among the poorest and the least urbanized countries of the world would suggest that there is a limited potential for deriving generalizations. However, recent research done on Asian metropolitan regions, primarily the "desakota phenomenon"[4], demonstrates that the rural-urban interlinkage process in Nepal is indicative of the desakota phenomenon in its earlier development stage, which perhaps may allow comparisons with other areas facing similar development pressures (GINSBURG 1991).

4) Desakota: desa = village, kota = town in Bahasa Indonesia.

1.4 ABSTRACT OF MAJOR PARADIGMS

A review of the major theoretical concepts describing and analysing rural-urban interaction is taken as a reference point for the analyses of facts and observations from our case studies in Nepal. There are many studies available which deal either with rural or urban aspects (economics of cities, social and anthropological studies of migrants etc). Here focus is given to concepts related to rural-urban interaction. Not surprisingly most of these concepts were developed (in industrialized countries) to balance regional development. The concepts, however, were also widely applied and further developed in developing countries.

One research focus on urban-rural interaction is a functional point of view: rural-urban interactions in this analysis is basically considered as a synonym for core-periphery or centre-hinterland interlinkages and processes.

The Early Regional Development Models

PERROUX (1955) coined the term "**growth centre**". Later attempts to accelerate the development of peripheral regions relied largely on some kind of growth pole strategy.[5] The key to balanced regional development was seen in urban industrial growth, basically a centre-oriented paradigm.

MYRDAL (1957) found that whatever causes the initial expansion of a growth centre, cumulatively expanding internal and external processes would fortify its growth at the expense of other (rural) areas. This cumulative causation can also be nourished by non-economic factors. It may lead to **backwash effects** such as migration to centres, growing trade deficit, capital outflow, and brain drain of the hinterland. On the other hand **spread effects** are increased outlets for agricultural products and a tendency of increased diffusion of technical innovations (e.g fertilizer application, new seeds etc.). High labour costs could increasingly affect the growth of the centres. Later other factors limiting the growth of centres could also apply: high costs for construction and maintenance of infrastructure, reduced quality of living due to pollution.

HIRSCHMANN (1958) proposed concentrating development strategies on a few key sectors where optimal backward and forward interlinkages can be identified. To balance disparities he argued to initially support "growth poles". Since "nothing succeeds like success", growth poles would generate their own dynamics for some time. However, at a later stage **trickle down effects** in

5) The concept of growth poles in Nepal through the creation of service centres is basically some form of growth pole strategy.

form of demand for purchases and investments in the hinterland tend to reduce the initial disparities.[6]

First rural-urban concepts

FRIEDMANN (1972) for the first time formulated a development model for the core (urban) - periphery (rural) interaction. A central aspect is the diffusion of innovations: "core regions" are the major centres of innovative change while peripheral areas are dependent on the core centres and their institutions. Core regions tend to dominate over peripheral regions. This self-reinforcing process is the cause of six principal feedback effects:

1. **Dominance effect:** The weakening of the periphery by resource transfer to the centre (labour, capital, political power).
2. **Information effect:** Increased interaction, information flow promotes creative innovation in the core (this effect is also stressed by JACOBS 1985).
3. **Psychological effect:** Higher rate of innovation due to greater visibility, higher expectations and lower risks.
4. **Modernization effect:** social and institutional changes in the core favour innovations.
5. **Linkage effects:** innovations tend to induce yet other innovations.
6. **Production effects:** Increasing productivity by economy of scale in core areas with nearby markets.

The major criticism relating to the neo-classical paradigm as presented by HIRSCHMAN is that it is based on assumptions for which there is little evidence in practice, neither in industrialized countries nor in Nepal. There is never absolutely free competition (free market), nor perfect access to information, nor free mobility of economic factors (labour, capital). Therefore the basic measure for neo-classic interventions is the reduction of market deficiencies and optimization of resource allocation on the macro-economic level.

A comprehensive neo-marxist theory of spatial development or rural-urban interlinkages does not exist. Essential elements towards such a theory were contributed by WALLERSTEIN (1974), who views the internal spatial structure of developing countries as part of a world system of production and consumption linkages where the **flow of surplus** is the essential determinant. The expansion of agricultural and mining activities by capitalist enterprises in the periphery of developing countries increasingly integrates manpower into wage-labour relationships, thereby generating surplus value. This extracted surplus

6) On the other hand competition from the growth poles could depress inefficient manufacturing and export from the hinterland. Since public investments in growth poles will be reduced in the long run, these funds become available for other areas. Therefore, in the long run regional differences tend to disappear.

is either transferred abroad or lost for the periphery through unequal trade relations.

This surplus extracting model had to be adjusted to different kinds of capitalist and socialist economies. An essential explanatory element for growing regional disparities in the marxist analysis is the accumulation of capital: the system tends to impoverish poor regions by a high rate of surplus extraction (absolute exploitation) but in more dynamic rural regions may induce higher income levels and increase labour productivity to some extent (relative exploitation).

According to LO/SALIH (1981) a basic model of rural-urban interlinkages in a macro spatial model consists of the following elements and interlinkages between them: the **world market** buys primary products from developing countries and exports manufactured goods, the **urban formal sector** is dominated by foreign-influenced companies (capital), the **urban informal sector** consists of a wide range of traditional activities, the **rural export sector** is dominated by the centre and the rural peasant economy is increasingly integrated into this world system.

LO/SALIH propose describing the rural-urban linkage by a typology of subnational regions (with examples for our case studies):

1. **Metropolitan dominance area:** Comprises major city, in general the capital, and its immediate surroundings (e.g. Kathmandu town and Greater Kathmandu Valley).
2. **Urban shadow area:** The region benefitting from urban growth (agricultural specialization), but suffering from industrial-agricultural land use conflicts (since Nepal and especially the Hills have not faced an industrialization this relates more to the conflict between house construction (service) sector boom and the loss of agriculture land in the Kathmandu Valley). The region benefitting from agricultural specialization are the adjacent districts (Nuwakot, Dhadding).
3. **Mixed rural-urban regions:** Agriculture-based town development regions can hardly be found in the Hills and are restricted to areas where irrigated land is available (e.g Tansen and Madi plain). On a larger scale this type of region is prevalent in the Terai.
4. **Rural dominance area:** Periphery with low production potentials and lacking urban facilities (e.g. Dolakha and most remote districts of Nepal).

Overall, neo-marxist analysis is not able to clearly identify the role of the state (bureaucracy) and the role of markets. This is also partly reflected in empirical evidence from socialist countries: neither the former Soviet Union nor China could effectively reduce growing spatial disparities by collectivisation of the peasantry and industrialisation between their centres and the periphery. Although China has drastically limited the mobility of its labour force by sending millions of people from cities to rural areas between 1961 and 1976, with the reduction of mobility control the process reversed and since the 1980s China

faces an accelerated urbanisation which is concurrent with an economic boom in coastal towns. The most drastic effort was made by the Khmer Rouge in 1975: three out of four million urban people were forcibly sent to the countryside, but later many returned.

The debate on regional and sectorial resource allocation for a balanced regional growth has been ongoing since the 1950s with little conclusive evidence for any of the described paradigms. LIPTON (1977) argued "that the most important conflict in poor countries of the world today is not between capital and labour. Nor is it between foreign and national interests. It is between the rural classes and the urban classes. The rural sector contains most of the poverty (...); but the urban sector contains most of the articulateness, organization and power." The manipulation of interest rates, prices, subsidies and other strategies used by the urban alliance, leads to overinvestment in the city. Since urban elites tend to be the winners in the economic process a shift of resources to the rural sector is often the overriding developmental task (GILBERT/GUGLER 1982). This argument, namely that any further urban investment would worsen the condition of rural people has changed during the 1980s because of two factors (STREN 1992):

1. The explosive urban growth could not be stopped or even controlled through policies favouring the rural areas
2. Prospering city economies play an important role in the development process of a nation through the absorption of migrants, input supply, centre of innovations etc.

The Role of Markets and Creativity

Nepal is still basically a feudal society, but it is also one experiencing the early stages of capitalism both in its national and international relations. For such a society moving in the direction of a capitalist market-based economy, the arguments put forward by JACOBS (1970 and 1985) seem to have relevance in explaining the role of an urban centre in the overall economy.

The role of creativity: Central to JACOB's argument is the concept of a city which is a settlement that consistently generates its economic growth from its own local economy. A **stagnant city** is a settlement that formerly grew as a city, but has stopped doing so. A **metropolitan area** is economically the same as a city but politically it is a city that has physically expanded beyond its formal boundaries, in the process engulfing former towns and, in some instances, coalescing with other, formerly separate cities. A **town** is a settlement that does not generate its growth from its own local economy and has never done so. The occasional export a town may have generated for itself has produced no consistent self-generating growth thereafter. A **village** is merely a smaller town; and the term urban only pertains to cities and stagnant cities but not to towns.

JACOBS considers the concept of a national economy to be irrelevant, which is merely the sum of a nation's city economies and the past and current secondary effects of city economies upon the economies of towns, villages, countrysides and wildernesses.

The core of JACOB's argument is that economic growth is not possible without an intrinsic creativity that is able to take advantage of possibilities. The quality of this human spirit that overcomes physical odds is seen as the basis for the growth of urban centres. An urban area becomes prominent in a region's economic life and maintains itself in that position based upon the level and quality of its creativity. A valuable geographical location may be advantageous, but may not necessarily be sufficient to keep an urban area from stagnating if it fails on the creativity front. And creativity can range from the ability to create new products and jobs to the ability to manipulate national and international institutions to their advantage. What creativity does is constantly generate new work - the basis of a city's existence. If it is not able to constantly generate new work, it stagnates, becoming perhaps a town or eventually a metropolitan area.

More recent empirical evidence suggest that "agglomeration advantages" (external effects of urban areas) are a major driving force for sectorial and regional concentration. Spatial concentration of manufacturing and services is in general not understood as a result of a development process, but rather as a function of it. Most industrial and developing countries have adopted some kind of growth pole strategy with the principle of concentrating on inputs and maximizing benefits or positive spread effects. However, induced impacts could seldom comply with the expectations of researchers and politicians.

On the other hand an increasing dis-economy of scale is observed in big cities (e.g. Kathmandu): mushrooming land prices and people's increasing awareness of environmental aspects (especially water and air quality) force industries and even services to move out of cities. This trend is particularly prevalent in American and European cities at present, but initial steps of this mechanism are observed in cities of developing countries as well.[7]

Recent Models on Rural-Urban Interlinkages

The desakota model: A recent study (GINSBURG et al 1991) on the symbiosis of urban and rural areas which result in multi-purpose land use over larger areas presents aspects which are supported by case study findings from Nepal. MCGEE (1991) defines five types of regions to describe "space-economy transition" or in our words the dynamics of rural-urban linkages:

7) A cement plant in the vicinity of Kathmandu heavily pollutes the town and the political pressure to either relocate the plant or to reduce emissions drastically is increasing.

1. Major cities, often dominated by one extreme large metropolitan area (such as Kathmandu, Bangkok etc)
2. Peri-urban regions, areas within a daily commuting reach (Kathmandu Valley)
3. Desakota[8] regions, prevalence of small farms which need non-agricultural income to survive -> intense mixture of agricultural and non-agricultural activities mainly along transport axes linking big cities
4. Rural regions: densely populated areas (wet rice cultivation, comparable to the Nepali Terai)
5. Frontier regions: sparsely populated frontier regions (like the mountain districts in Nepal)

The regions labeled desakota are located in between large urban areas and are characterized by densely populated, smallholding agriculture, commonly wet-rice economies, with an intensive mixture of agricultural and non-agricultural activities. The desakota regions are highly integrated into the national economy in terms of movement of people and commodities. However, they do not necessarily represent fast growing regions in economic terms. In Japan and Taiwan desakota type of regions show significant economic development whereas desakota regions in India or Nepal show only marginal progress.

In Nepal such desakota regions with intensive rural-urban interlinkages are developing mainly in the Kathmandu Valley and between urban centres in the Terai, where already high population concentrations are found. Due to the low growth of income, surplus of labor and the yet low level of urbanization in Nepal, we find only selected areas in Nepal corresponding to desakota regions. Although the Greater Kathmandu Valley shows characteristics of a desakota region as expressed by a patchwork of intensive smallholder agriculture, brick factories and manufacturing establishments, the limited accessibility and the prevailing subsistence economy in most hill areas limits the flow of goods, people and commodities. Besides services such as public administration and in some areas tourism, there is virtually no manufacturing sector in the Hills outside the Kathmandu Valley.

The above-mentioned study concludes that desakota regions - zones of intensive rural-urban interaction - must be recognized and more emphasis should be given to them as investment areas by governments, donors and private enterprises. The support of desakota regions could become an alternative development path to big city growth, small town development and rural development. This strategy gives emphasis to in-situ development of the labor force and improvement of transportation (roads, railways) in these densely populated areas.

However, development efforts in such desakota-type regions hardly promise the general magic for the Nepalese hills. The adverse conditions in the Hills such as unfavourable agro-ecological factors, scarcity of water resources, lack

8) desakota: desa = village, kota = town in Bahasa Indonesia.

of transport facilities etc., cannot sustainably feed population densities characteristic of "desakota" regions at reasonable costs. However, it seems that Nepal will face a considerably urbanisation boom in the Terai and that the desakota phenomenon will gain considerable importance in Nepal in future.

The virtuous circle model: EVANS (1992) develops a model of mutually reinforcing patterns of linkages between towns and their hinterland. This model, developed on the basis of evidence from Kenya, starts from rising agricultural incomes which spur demand for food and other consumer goods. This leads to the creation of non-farm jobs and the diversification of urban activities, especially in towns close to agricultural production. This absorbs surplus rural labour, raises demand for rural products, and by this process induces demand impulses in agricultural productivity and income.

Small towns therefore play a vital element in three areas: they are collection centres for the marketing of agricultural produce, to a lesser extent they supply necessary inputs, and serve as a regional market for agricultural produce from the hinterland.

According to this model and contrary to expectations, rural small-scale manufacturing develops only marginal linkages to agriculture. Non-farming income from other commercial activities of households are more significant in increasing household income and agricultural productivity. Efforts to promote rural economic development and the growth of rural incomes must, according to EVANS, start with agriculture and not with manufacturing.

Conclusion

A general conclusion which can be made from this literature review is that all theoretical schools or paradigms predict an increasing polarization between urban areas and rural hinterland during initial stages of development of rural-urban linkages. However, whereas the neo-classical approach believes that these distortions will be reduced in the long run (with a market economy) others are more skeptical whether this polarization trend can be reversed without stiff counterbalancing by government policies and measures.

1.5 ECONOMIC AND RURAL-URBAN BACKGROUND OF NEPAL

Economic Context and Urbanisation in Nepal

Nepal is consistently ranked among the low income countries. Over the past three decades the per capita GNP has shown an incremental growth (to 180 US $ in 1990), but remains among the lowest in South East Asia. Although still 80 % of the population find employment in agriculture, the urban service and industrial sector are growing at double the rate of the agricultural sector.

In 1950 Nepal had only ten "urban" centres of which five were located in the Kathmandu Valley. The remaining centres were Terai towns, commercial and agro-industrial centres along the border with India. In the period 1961-71 the number of urban centres declined in the Kathmandu Valley[9] and six new town areas emerged in Nepal (e.g. Pokhara). The urban population increased by 40 % during this period. The following period 1971-81 was characterized by rapid urbanization (the urban population increased by 110 % in this period), especially in the Terai. Yet only 6 % of the population were living in urban areas.

In the period 1981-91 urban growth continued to be high but was only half (55 %) of the previous decade. Deviating from inter-census estimates the urban population has increased more prominently in Kathmandu and Pokhara than in many Terai towns. While the overall economy was growing only very slowly during this period, foreign aid inputs, tourism and carpet manufacturing faced dramatic increases with significant side benefits for Kathmandu and Pokhara. Now 9 % of Nepal's population are living in towns (see Figure 6).

Towns were legally defined in Nepal as settlements with more than ten thousand inhabitants. The need to fit into this criterion resulted in small townships forcibly incorporating large village areas into their fold so that "towns" were formed in which more than half the population (and an even larger proportion of the area) was effectively rural.

With the recent changes in Nepal, the new democratic government has widened the classification of urban areas in a new local self-government act in 1992. It envisages three levels of urban areas: Greater Municipality with a minimum population of three hundred thousand, minimum annual income of NRs 70 million and facilities such as electricity, roads, water supply, communications etc; Sub-Greater Municipality with a minimum population of one hundred thousand, minimum annual income of NRs 20 million and facilities such as electricity, roads, water supply, communications etc; Municipality with a

9) Kirtipur and Thimi were declassified.

minimum population of twenty thousand, minimum annual income of one million rupees and facilities such as electricity, roads, water supply, communications etc.

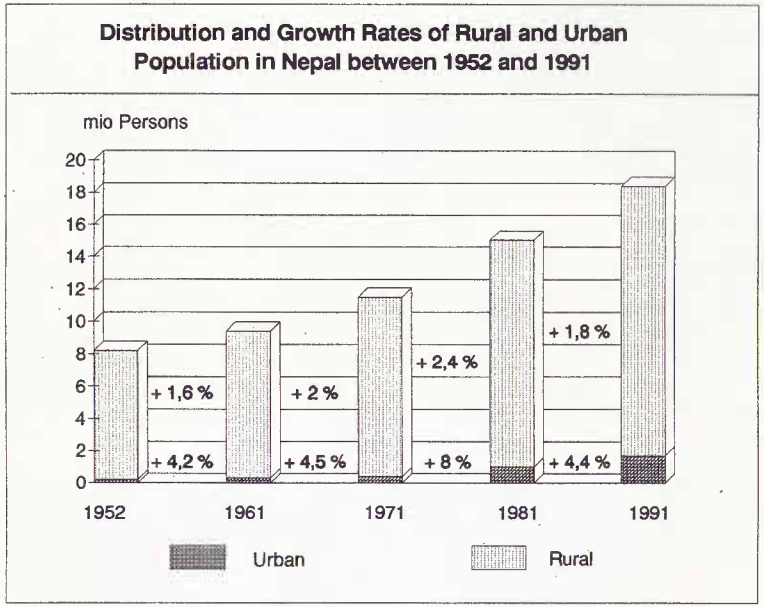


Figure 6: Development of rural and urban population growth in Nepal between 1952 and 1991. Overall urbanization is very low and recent census figures do not (yet) indicate a progressive dynamic of urbanisation.

Migration Trends

So far, migration in Nepal has been dominated by rural to rural migration indicating a high mobility among the most deprived. This may be related to the low cost of moving, since in the past the destination was generally frontier land in the Terai.

The lack of information regarding international migration is considerable since the border to India is virtually open and uncontrolled. Although there is evidence that many Nepalis left their homes to look for jobs in Indian towns, more recently many thousand Nepalis are believed to work in the Gulf states or South Asian countries and increasingly in Japan (illegally). On the other hand

Indian nationals have settled in the Terai and supply a big proportion of semi-skilled industrial labour.

The rapid population growth in the Terai is a result of continued migration into the area during the past 30 years. Data on origin of migrants show that almost 90 % of the Terai migrants came from hill and mountain districts.

The conclusion from numerous substantial research efforts (GILBERT/GUGLER 1982) on rural-urban migration over the past decades provides evidence that the great majority of people move for economic-reasons. This is generally also true for Nepal. Direct economic related dislocations are more substantial for the mountains than for the hills and are attributed to the drop in border trade with Tibet after the imposed border restrictions in 1959.

An important reason for Hills-Terai migration is the population pressure[10] and the related scarcity of cultivated land. In 1981 the mountains had 10.6 people per cultivated hectare, the Hills 7.6 and the Terai 4.7 (HMG 1987). The lower the per capita availability of cultivable land, the higher was the net migration out. It is also assumed that the severe food scarcity towards the end of the 1970s (INFRAS 1991) may have considerably accelerated migration from the Hills which have been traditional food deficit areas for a long time and depend on significant grain imports from the Terai.

Most migrants, rural to rural and rural to urban, appear to have some knowledge of their new destination either from accounts of migrants who returned or from relatives that have already established themselves there. As a consequence, cities show segregation trends according to the origin of migrants and other social aspects. Newly arrived migrants tend to settle where relatives could already establish an existence. This also relates to the poorest, least educated migrants who have very limited prospects of finding earning opportunities.

In recent years squatter settlements have increased in all urban areas in Nepal although not yet to the same extent as found in other Asian cities (e.g. Calcutta, Bombay). In Nepal, squatter problems appear to play a more significant role in the Terai towns than in Hill towns. In Butwal, one of our case study areas, approximately 1/4 of the population is classified as squatters.[11]

10) The Nepalese Hills already suffered from overpopulation a century ago when large scale migration to India occurred (GURUNG 1991). Therefore population pressure relates to the carrying capacity of the area which is determined by various dynamic factors, like availability of land, crop yields, off-farm income opportunities etc.

11) A squatter is generally defined as "somebody who settles land without right or permission".

Rural-Urban Disparities in Nepal

Despite rural development efforts the rural-urban gaps in access to basic services steadily increased. Water and sanitation are more widely available in urban areas than in rural settings. Infant mortality rate in Nepal was 67 deaths (per 1 000 births) in urban areas and 105 in rural areas. Similar drastic disparities are observed for literacy rates. On the other hand fertility rates in urban areas (5.8 births per women in 1981) were slightly lower than in rural areas (6.4 births).

Although in general rural-urban disparities are continuously increasing it must be noted that the standard of living for most rural areas has also improved over the past three decades (life expectancy, literacy, nutrition; UNDP 1990, INFRAS 1991).

Estimates of average income in rural-urban areas show significant differences for Nepal and supports the hypotheses that economic factors shape directionality of migration flows. During the late 1980s, the average income was considerably higher in Kathmandu than anywhere else in Nepal (see Figure 18 in Annex B). This has contributed to the accelerated growth of Kathmandu in recent years. However, the predominant migration is still rural to rural which supports the hypotheses that mainly the lack of cultivable land and off-farm income employment opportunities force people to leave the rural mountain and hill areas.

Rural-Urban Dynamics in Nepal

BLAIKIE et al (1976) concluded from an intensive study effort in Western Nepal (Palpa-Butwal area being one part of the study area) that road construction has not changed the economic crisis in the Hills: growing population, stagnant agricultural production, increasing trade deficit and denudation of forests. There were no complementary investments and mainly trading and commerce were fostered and shifted to the road area. The road, however, has stimulated urban development by allowing government bureaucracy and transport enterprises to grow. In principle these findings correspond to the overall findings in the case of the Lamosangu-Jiri Road in the Kathmandu-Dolakha area by INFRAS (1991 a).

The expansion of the transportation network apparently plays a crucial role in urban development: road construction appears to be necessary for urban development[12] and strengthening of rural-urban interlinkages, but is in itself not sufficient. However, there is little direct empirical evidence to indicate whether these dynamics are driven more by rural or urban forces. A common explanation is that towns develop only if their hinterland prospers and for this

12) Accessibility (transportation availability), followed by labour supply was found to be the most important variable for the decision about the location of industrial enterprises in Nepal (NEW ERA 1990).

a hinterland must be linked with a network of market centres (RONDINELLI 1983).

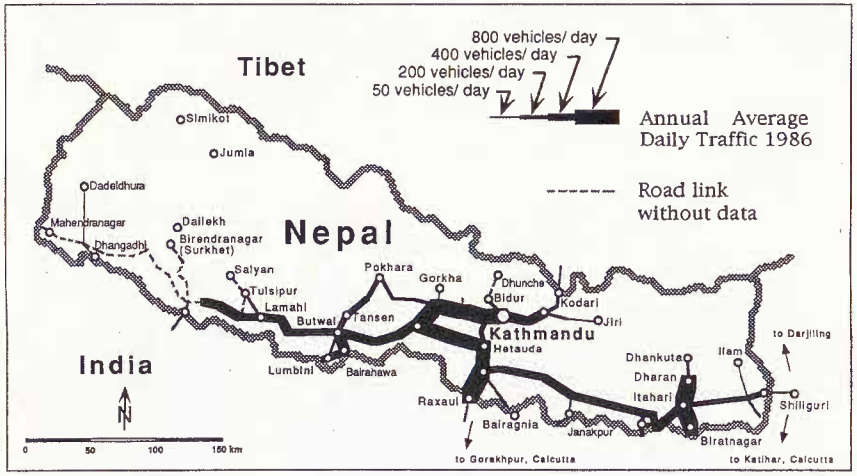


Figure 7: Road network in Nepal showing the number of average daily traffic in 1986. The Terai border towns serve as gateways to Indian cities and show significant traffic volumes on north-south axes. Overall traffic volumes and growth rates on Hill roads are modest. Figure 20 in Annex B shows the distribution by type of traffic.

An important role in rural-urban interlinkages is also played by the labour markets. Figure 8 summarizes the present knowledge on employment status in Nepal. The role of the informal economy, where most of the women are economically active, is dominant. The importance of the rural informal sector in terms of employees, including subsistence agriculture, is still significantly higher than the informal or formal urban sector.

A study conducted by NEW ERA (1990) on Narayanghat[13] revealed that most migrants came from adjacent hill districts and still maintain close social interlinkages with their relatives. An input-output analysis assessing the economic interlinkages of selected industries found that more than half of the raw materials came from within the Terai-District (52 %), and the rest from India (18 %), other non-Hill areas (17 %), from Kathmandu (9 %) and abroad (3 %). Only 1 % of raw materials came from the Hills. The consumption of the out-

13) A municipality located at the junction of the east-west highway and the road from Kathmandu to the Indian border.

puts on the other hand showed a similar pattern, except that the Hills consumed a considerably higher proportion of the output (11 %). Therefore, the Hills do not appear to play an essential determinant in rural-urban interlinkages as a source of raw materials for the manufacturing industry. The major hill resource contributing to manufacturing is that of (cheap) labour.

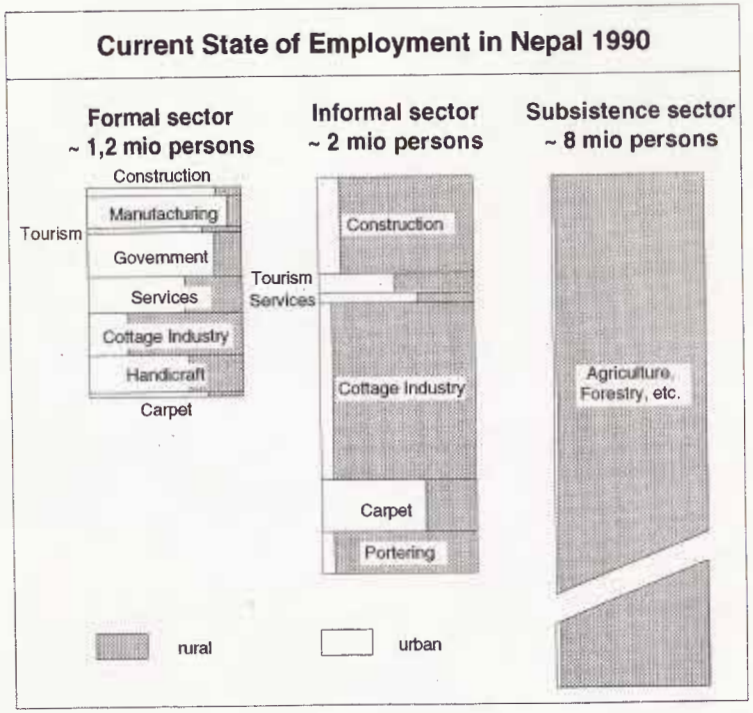


Figure 8: Overview on status of employment in Nepal. Source: KHATRY 1992.

1.6 HISTORIC AND ECONOMIC BACKGROUND OF CASE STUDY AREAS

The three selected case study areas represent different historical and socio-economic settings. The demographic and economic characteristics are illustrated in Table 3 in Annex B.

Dolakha-Kathmandu Area

Dolakha: Despite the fact that Dolakha was an important centre for trade with Tibet and China in previous centuries, it stagnated with the decline of the northern power and a simultaneous rise of mercantile culture to the south in British India. During the first half of the 20th century the Dolakha area served as the exploited backwoods supplying meat and dairy products, wood and porters to powerful households in the Kathmandu Valley. Unlike Palpa, which saw some public investment in infrastructure (including drinking water, trails etc.), the IHDP area saw very little investment from the state, possibly the only "public" investment came from rich families of the area primarily to earn religious merit. The preliminary hunch is that history and its political economic interlinkages have provided more "investive" efforts in the former and more "extractive" ones in the latter.

The area began its modern development with the construction of the Arniko highway (linking Kathmandu with the Chinese border) and the subsequent Swiss development efforts (cheese, road and rural development). It is an open question at this stage whether there is a natural time lag of a decade or more between opening a road and the time a socio-system learns to take advantage of it. Economic activities in this region are still in the traditional subsistence mode of grain production and animal husbandry mostly for self consumption, partly for exchange. New economic activities such as tourism, cash crop economy, production for sale in a market etc. have made some promising starts in the road corridors and there are a few examples of fruits and vegetables (including potatoes). In this sense, new job and trade opportunities are still at a nascent stage battling with difficulties that arise at the early stage of development.

Kathmandu: The Kathmandu Valley is the major urban area in Nepal and includes three major and ten minor towns, with a total population of roughly 1.2 mio in 1991. Kathmandu, the capital, supplies central services for most areas in Nepal. Its hinterland varies according to the zone of influence of the services provided (commuters, bus services, telephone, migrants).

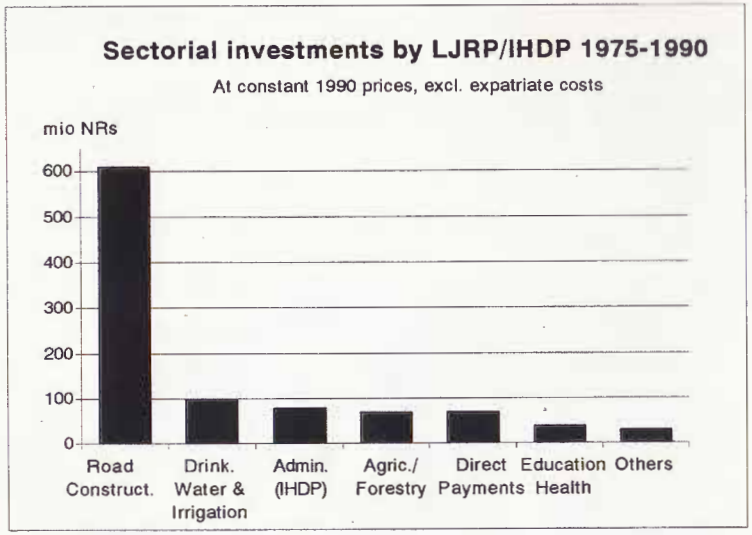


Figure 9: Sectorial distribution of LJRP/IHDP investments. The overall annual input is estimated at US $ 15 - 20 per capita, corresponding to approx. 10 % of the regional GDP.

The valley was historically the most fertile and productive area in Nepal and one of the most productive agricultural areas in South Asia during the 1960s. Later, agricultural productivity declined or stagnated. Today still 60-70 % of the economically active population is engaged in agriculture in the valley often on a part-time basis. This indicates that agriculture still plays an important role in terms of employment. Approx. 50-60 % of the present agricultural demand is produced within the Kathmandu Valley (BANSKOTA in ICIMOD 1986 a).

Kathmandu has faced an unprecedented growth of the service sector (administration, trade etc.) and to a lesser extent manufacturing industries (carpets, textiles) where employment in registered enterprises increased considerably between 1972 and 1986 (HMG 1988). Due to transportation problems and constraints in the supply of raw materials, however, the industrial growth has been less rapid in the Kathmandu Valley than in some Terai towns (PADCO 1990).

The fast growing sectors in terms of employment are administration (foreign aid-related), tourism and carpet industry. The Kathmandu Valley's share in the national consumption is significant and it is the key export area for manufactured goods (carpets and garments) and hard currency revenues (tourism).

This development has led to a boom in house construction[14] in recent years to satisfy the demand for residential, office and industrial buildings. There is no data available for land demand per sector nor for average land price increases over time. However, observations show a dramatic increase in real estate prices. Booming land prices are also induced by the inflow of foreign aid to satisfy the demand for additional office and living space (for the approx. 300 expatriates in Kathmandu). This cumulative cycle is further nourished by the land and real estate demand induced by either speculation or private investment. Land appears to be the most profitable and secure investment possibility in Kathmandu.

However, the integration process into the wider national market has been slow. The direct road interlinkage Kathmandu-Dolakha has reduced transportation costs by a factor of ten (compared to porterage). But the opposite of what was expected happened: a tremendous increase in imports, no increase of exports (on a per capita basis). Since Dolakha has been a food deficit area it cannot be expected that the conventional economic model works immediately.

The stagnation in export-oriented agricultural production in Dolakha is also seen in the manufacturing sector: the number of persons working in manufacturing establishments has decreased in Dolakha over the past 15 years whereas it increased in most other Hill districts, Kathmandu and the Terai.

In the past most migrants left Dolakha for India or the Terai. It is yet uncertain whether the new road has significantly influenced long-term migration.[15] The road interlinkage, however, has clearly accelerated seasonal migration to nearby areas (e.g Kathmandu Valley). An accelerated development of the Kathmandu Valley (and its employment opportunities) will therefore certainly increase the tendency of seasonal and possibly permanent migration in future.

14) Daily cement consumption in the Kathmandu Valley was approx. 800 t in spring 1991. This exceeds the production capacity of the Himal cement factory located near Kathmandu (120 t/day). Source: Rising Nepal, 21.3.91.

15) INFRAS 1991 estimated that annually 1 000 persons migrated to the road corridor. This possibly reduced migration temporary.

Mr. Shresta bought a piece of land (500 m²) 20 years ago in Patan (Kathmandu) for NRs 8 000. Today the same land accrues a value of NRs 1.5 million which means a factor of increase of 2 000 within 20 years. Investments in the real estate sector in Kathmandu are much more profitable than "productive investments" or depositing money in a bank account. How long can such a trend continue?

Palpa-Butwal Area

Palpa: The initial impression of this area regarding urban-rural interaction can be characterized by the word "dynamic". Not only is the fast growing urban centre, Butwal, creating new jobs and opportunities for its hinterland populace without having the advantage of a privileged administrative or political position, but its rural area seems actively engaged in - and benefiting from - the opportunities presented by the urban area. This contrasts with Kathmandu's privileged administrative and political position as well as the more passive roles played by rural areas like Dolakha.

Historically this area also presents a sharp contrast to the Dolakha area. The Principality of Palpa was ruled by Magar kings till the rise of the Sen dynasty coeval with the Muslim invasion of north India in the 13th and 14th centuries. Although the Gurkhas had captured Kathmandu Valley in 1769, Palpa became a part of united Nepal only in 1806 and that, too, through a bloody conspiracy. During the years of Rana rule, Palpa maintained a somewhat independent status by virtue of the fact that it was governed by "rebel" Ranas who were

"exiled" to its governorship. The result was that, unlike Dolakha from where the Ranas extracted as much surplus as possible without much re-investment, Palpa undertook many independent development initiatives, the legacy of which survive to this day.

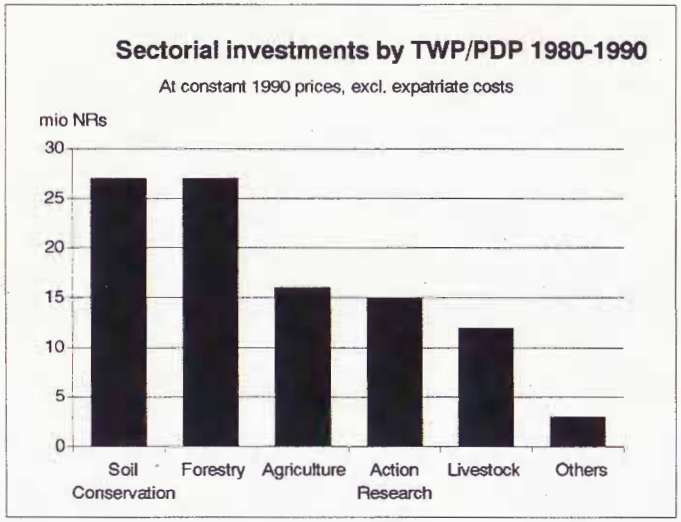


Figure 10: Sectorial distribution of TWP/PDP investments in Palpa. The overall annual input is estimated at US $ 2-3 per capita (at 1990 prices), corresponding to approx. 1 % of the estimated regional GDP.

The area's economy has been based on remittances. Almost every household has seasonal or long-term migrants. Compared to the size of the population (even before "population explosion" became fashionable) the hills have not been able to sustain grain production to the degree required to be self-sufficient. The wealth of families is generally measured by the number of months they can feed themselves from their land without seeking wage labour outside their villages.

Modern roads have at first only made the flow of goods easier, not reversed the cycle. For example, the "two-day trek to Butwal and three-days back" with salt, oil, grain and other necessities *(noon-tel-unna)* has been rendered unnecessary at Hartok because these goods are now available there. Only a few places such as Hartok, Madhan Pokhara and (in some cases) Tansen have managed to reverse the tide with some goods.

Butwal: Palpa was connected with the Terai by highway already in the late 1960s, although the road bypassed Tansen and has negatively affected the growth dynamics. The rural hinterland of Tansen is also characterized by stagnating agricultural productivity, high population growth rates and subsequently a significant migration out. Butwal was a tiny catering village in the early 1960s. It has faced a dramatic growth caused by the following factors:

1. With the construction of the road to Pokhara and the extension of the east-west highway to the west, Butwal became a centrally-located town. Butwal was a traditional Terai-Hill interface . Road construction provided new opportunities for the wholesale trade of manufactured Indian goods, ghee, ginger, herbs and other hill products.
2. Early build up of metal workshops (by UMN) has initiated the growth of a metal manufacturing sector. With the demand for maintenance of vehicles and catering to the passengers, Butwal's growth is also based on industrial development with some very large industrial parks established recently.
3. Most of the migrants from the hinterland (e.g. Palpa) were businessmen on the one hand; and poor, landless families on the other. A considerable part of the businesses in Butwal are managed by dynamic innovative persons originally coming from Tansen or the Palpa area.
4. The proximity to India has stimulated Butwal's development as well. Nearby Bhairahawa is an important customs' point.

Migration from rural areas in Palpa was significantly higher than in the case of Dolakha. The migrants mainly moved to the nearby Terai to cultivate frontier land (after the land had been cleared from the forest) or to settle down in the growing urban areas, such as Butwal and Bhairahawa. Many of the traditional Tansen Newari traders have moved down to Butwal and maintain close kinship relations with their relatives in the Hills.

The market comprising of the municipal areas of Butwal and Bhairahawa as well as villages evolving into small townships such as Manigram on the one hand, and the villages as well as evolving townships of Palpa and other districts on the other, constitute a dynamically interacting network of interlinkages. This dynamism is highlighted by the fact that this system has exhibited a tendency to actively take advantage of possibilities offered by new infrastructure developments such as roads, telecommunications and education.

The description of such dynamism is encapsulated below area-wise in an attempt to highlight how farmers have taken or not taken advantage of the possibilities of development. It may be observed that many of these areas are on or next to planned roads or roads under construction; and it may be commented that this narrowing of the scope of observation excludes from the analysis the very large areas of Butwal market's "watershed". Indeed, much of Palpali rural hinterland is under the informal subsistence mode of production, having no relation to the larger world of the market because even remote hamlets do have

market connections, but substantially informal with the bulk of the rural economic activities centred in the immediate vicinity.

For this study, it was felt that such subsistence villages did not present enough data for the study of urban-rural interlinkages. Rather, the different settlements and their denizens described below are in various stages of increasing the level of their interaction with the market centred in urban areas. Such interactions capture the dynamics of urban-rural interlinkages, the pitfalls and the possibilities better than villagers and villages more overwhelmingly in the subsistence mode.

Bajhang

Bajhang's economy is defined by its remoteness: Chainpur, Bajhang's principal centre, is located three walking days from the next road. The basic resources, such as forests, cultivable land and pastures are scarce and overexploited, but since trade with hashish has been banned there are virtually no exports from the area.

The severe food shortage, combined with high transportation costs, has forced people to migrate seasonally or permanently. Members of elite families tend to migrate to Kathmandu in search for employment or education, the medium farmers have a strong kinship network with migrants in the urban setting of Bangalore (India) and a significant proportion of small farmer households migrate for 2-3 months to nearby Kumaon (India) to earn money by daily wage on road construction etc. Overall up to 60 % of the male population are absent at least part of the year from Bajhang.

The state institutions are the major local source for cash supply; remittances being the other major source and growth in public service sector played an overriding role in the generation of off-farm income and stimulated the demand for agricultural products on the market.

PART 2: FINDINGS OF CASE STUDIES

2.1 VEGETABLES AND FRUIT INTERLINKAGES IN THE DOLAKHA - KATHMANDU AREA

General Background

The Dolakha area has seen development intervention in the form of Swiss development efforts from the mid 1950s onwards (cheese factories, livestock development etc) mainly in the Jiri area. Accessibility was improved in the form of a major arterial highway linking it to Kathmandu in 1968. Between 1975 and 1990 a rural development package consisting of the Lamosangu-Jiri Road (LJRP) and an integrated hill development programme (IHDP) were implemented that have induced changes in several sectors and directions. However, the integration with the larger market has been relatively slow, and the rural countryside could not take full advantage of this to accelerate its development.

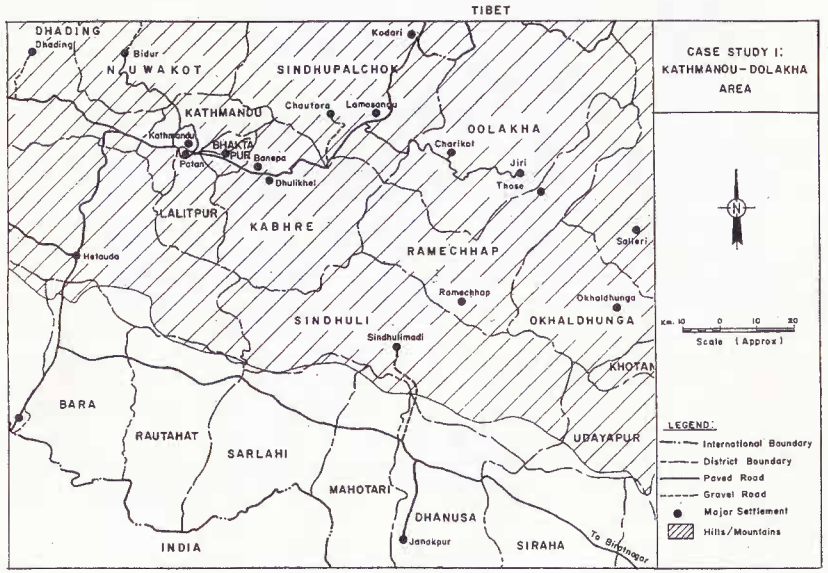


Figure 11: Map of the wider Dolakha-Kathmandu area. Dolakha is a mountainous district approx. 100 km to the east of Kathmandu Valley.

The Lamosangu-Jiri road has had the single major impact in changing a pre-existing pattern of economy, a change to which the system is still adapting.

The area was neatly divided into two zones: the area east of Tama Kosi[1] in former times exhibited a movement north-south while the western part was oriented toward west, the Kathmandu Valley. The road now makes the entire area a hinterland of Kathmandu.

Much of the Dolakha area is high altitude, cool temperate (above 1500 - 2000 m.a.s.l.) with severe frost conditions in the winter, with a smaller amount of area in the sub-tropical river valleys. This ecological factor has meant that the area had in the past specialized in livestock, with farming being of the self-consumption type. Even now, much of the population migrates temporarily or permanently out of the area in search of employment. It is said that from every village about 100 to 150 people go out to search for work in August and come back in May in time for the monsoon farming, bringing back with them five to ten thousand rupees. Also from every village, in the villagers' estimate, five to ten families have migrated permanently to the Terai.

This area is now in the process of making a slow transition to integrate itself with the larger urban market in Kathmandu and beyond.

Charikot

Charikot Bazaar, the headquarters of the Dolakha District, provides a market for vegetable and fruit products that has induced new dynamics in the region. The introduction of a significant population of civil servants, development workers, migrants from the surrounding regions and a large population transiting through Charikot, which is used as a transport centre, creates a demand for vegetables and fruits that did not exist in the past. Prior to this, much of the vegetables grown in the area was for self consumption by the families that grew them. Vegetables were not seen as items that could generate cash, nor is there even now much evidence of the skills and knowledge necessary for the enterprise. The irony that strikes an observer is the fact that almost every vehicle from Kathmandu unloads a consignment of vegetables in Charikot; but, even with this expression of need, the vicinity of Charikot has not stepped in to fulfil the demand.

When small farmers-cum-part-time-labourers are asked why they do not grow vegetables to sell, the stock answer given is that Charikot is too cold for vegetables and fruits because it is a high altitude *lekh* area. Only the lower caste farmers in the lower altitudes of Tama Kosi lowlands grow vegetables. The other explanations proffered are that vegetables need chemical fertilizers for which the primarily subsistence villagers have no money, that there is too much rainfall, and that the soil here is not suitable for it. Indeed, there is a tradition in the upper reaches of Sindupalchowk and Dolakha to taste the soil before buying land *(mato chakhne)*. If the soil tastes sweet, the land is sold for a good price. If it tastes sour and the texture is not clayish but powdery, then the land is not regarded as good.

1) The road crosses the Tama Kosi between Charikot and Kavre.

Charikot is the District Headquarter of Dolakha. Road construction and the growth of the administration has increased demand for fruits and vegetables significantly. The proportion of imported fruits/vegetables from Kathmandu or even India is significant in the fast growing centres.

Interestingly, the same explanation of cold is given for why there is not much poultry farming either. The vegetables need good fertilizer which, if not procurable from the market in the form of chemical fertilizers, must come from livestock. There is also not a very strong livestock sector, and the explanation as to why this was so was explained by saying that the climate is not suitable for livestock either. It is said that cows and buffaloes suffer from liver fluke (locally called *namle kira*) which results in their wasting away and dying in a year or so.

The following case study findings illustrate that this reasoning is not supported by all farmers:

Vegetable merchant in Charikot: Above explanations do not find much sympathy with him, the leading vegetable dealer in Charikot. He believes Charikot and Dolakha are excellent for vegetable production, but for this business to really take off what needs to be done is better transport to provide easy access to markets, better availability of input such as seed, fertilizer, plastic

sheets (to protect against frost) etc., and better irrigation facilities. He counters popular perceptions mentioned above with his own. The cold climate in Charikot is actually beneficial because it allows the growing of vegetables that are "tastier" although they take a longer time to grow. His view is that the poorer Tamangs, Thamis and Jirels who could grow and sell vegetables profitably do not do so because they have grown to feel more comfortable with a guaranteed wage at the end of the day assured by portering or labour rather than better profits at the end of a growing season.

The most important thing, according to this successful vegetable grower and seller, is that the times to plant, hoe and harvest are different in the high altitude *(lekh)* areas than they are at the lower areas. Many newly-starting farmers in Charikot and Dolakha, which are at higher altitudes, do not know this. In effect, vegetables are a "new technology" to subsistence farmers who have not known anything besides maize, rice or potatoes and other such traditional crops. They therefore plant at the wrong time, and try to harvest when the farmers at the lower altitudes begin to sell their earlier-grown vegetables in the market. For example, onions grow very well in Charikot and Dolakha as they do in the lower plains of the valleys. In the latter, onions planted in November grow during January to March and are harvested in April. In high altitude areas, planting must be done in March, allowed to grow all of April and May, and harvested only in June. He contends that these lekh onions are far tastier and bring more tears than those grown in the lower areas. He has succeeded because he has managed to utilize this information to his advantage.

In 1985, he was able to sell a significant quantity of garlic grown in Dolakha in the Kathmandu market. The price was NRs 40 per 2.4 kg in Charikot and, because of an unusual demand in India, the regular price of NRs 50 in Kathmandu shot up to NRs 120. This bonanza has not repeated itself, but even at the lower price difference of NRs 10 per 2.4 kg *(1 dharni)*, it would still be possible to sell in Kathmandu for a good profit provided the transport system is reliable and there is an assured market guarantee.

Among the inputs required, he has managed to develop his own irrigation system. He had used the stream near his farm in Dolakha to generate electricity enough for 50 bulbs and run a small agro-processing mill, but now he has given up the venture and converted the water into irrigation for his vegetable patch. The pull factor was the more profitable use of water for growing vegetables: the push factor in abandoning the mill was the lack of water in April and May leading to a lot of dissatisfied customers, as well as the fact that oil expelling was a loss because not enough mustard grew in the area. Indeed, at the time of the interview, he was busy bargaining with scrap metal dealers *(madhisey kabadiwallas)* for the proper price for his mill's axle, fly-wheel etc. High value crops such as vegetables are particularly sensitive to maintaining a

proper moisture content which can be achieved only with irrigation. He believes that he could grow more vegetable if he had enough water.

In a similar fashion, such crops demand higher fertilizer rates which have to be assured either through compost or from imported chemical fertilizer. He is in a lucky position in this regard: not only has he managed to effectively use his animal manure, but he is the first in line when the Agriculture Inputs Corporation distributes chemical fertilizer and other chemicals in Charikot. He is helped not only by his proximity to the centre of supply, but also by his very good relations with the officers of the organization (as with other government officials in Charikot) who patronize his shop for most of their vegetable and fruit needs. Skills at developing patronage especially with key officials such as the horticulture farm manager of a nearby farm or those who command vehicle movements between Charikot and Kathmandu likewise have allowed him to overcome limitations imposed by geography and to have access to seed and market information that many other farmers do not enjoy. For example, observing his dealing with the many civil servants patronizing his shop, it was not uncommon to see him quote NRs 12 for some item, have the official tender three five rupee bills, and for him to return five rupees.

Not surprisingly, he is the only person to have reliable access to seed from horticulture farms for vegetables such as cucumbers, pumpkins, mustard and other greens. His father, who is sick now, was one of the very first *Tuki*[2] self-help farmers and has established a seed market spread over four neighbouring districts. He sells approximately 70 % of the total produce (fruit and vegetables) in the market and in his shop.

Such interlinkages are an addition to the more formidable command over another form of network that this very energetic and polished entrepreneur enjoys. He has a house in Kathmandu as well as one in Dolakha and in Charikot. Besides, he has many relatives in Kathmandu upon whom he relies for temporary stay, information, credit as well as backup support in supplying him vegetables and assuring a buyer for his own produce. He mentions that he has had many competitors vying for the Charikot market, but that they have not survived. His reason that he has provided far more reliable quality service that his clients have come to value is true but only part of the story: that reliability and quality are assured by an interlinking chain of credit, information and backup that stretches all the way from the vegetable market in Kathmandu (Kalimati market) to Charikot. His competitors, whether high caste Brahmin and Chhetris or lower caste Tamangs and Jirels, some of them even richer than he, did not have such a resource at their command.

He is exploring if he can supply eggplants, turnip, radishes, beans and pulses from here to Kalimati in Kathmandu. He thinks if he can work out a reliable

2) Since the mid 1970s IHDP has conducted integrated progressive farmer trainings for extension, the name Tuki for this extension agents symbolizes an oil lamp.

agreement with some seller in Kalimati and if he can similarly work out a deal with a bus or truck owner, he can make it a success. He will only then invest in the actual production of such vegetables after assuring such interlinkages. Otherwise he does not feel it is wise to convert more of his rice and maize growing fields to growing vegetables as the Charikot market alone is not big enough.

His formidable interlinkages also explain why the poorer Tamangs, Thamis and Jirels do not opt for vegetable production. Firstly, the smaller landholdings do not allow for experimentation with new and uncertain items such as fruit and vegetables. Secondly, the lack of pre-existing interlinkages with the market such as relatives and friends in such areas precludes them from having information about such possibilities. And thirdly, dire poverty forces them to earn today to eat today, rather than plant today, labour for a season hoeing, irrigating or guarding the growth (he mentions a high level of vegetable theft in Charikot which he feels would not occur if more people grew them), and then only harvesting and getting a return.

A more sensitive state structure or a state-encouraged NGO volunteer system capable of bearing such risks temporarily while the poor farmers shifted to a new cropping pattern might have helped shift them towards a new pattern of interlinkage with the market; but the lack of such foresight or inclination has seen the result that we all see. Despite more families starting to grow vegetables and fruits in the Dolakha area after the road reached there, market integration of horticulture does not automatically benefit those groups already disadvantaged in the past.

Kavre

Vegetable farmers: Janice Sacherer, an anthropologist who lived for a year in Kavre village between Charikot and Jiri in 1979 before the road reached there, and visited the area in 1989, documents her observations regarding the changes induced by the road and other influences on vegetable production (SACHERER 1990). Several factors have contributed to many farmers shifting their cropping patterns from grains to vegetables. Unquestionably, the most important is the proximity to the road which allows for access to saplings, vegetable seed, fertilizer and to knowledge that comes from mobility. Second was the availability of a farmer-managed irrigation system. Mobility and the interaction with the Kathmandu Valley have induced significant mental changes especially among the Brahmin farmers of Kavre. Also the availability of irrigation (for the nearby farm) and the universal shift towards stall feeding has increased off-season vegetable farming significantly. Interesting is the interlinkage between the striking value change, taking up poultry farming among Brahmin households (formerly taboo) and vegetable farming. This interlinkage was also found at Madhan Pokhara, Palpa case study.

On the other hand the impact in fruit growing was not found obvious. SACHERER concluded that fruit trees were ranked far down on the list of local priorities, even far below vegetable. The poor condition of trees was attributed to a lack of extension work (disease control etc) which resulted in production problems and a lack of interest on the part of the villagers.

SACHERER describes an uneducated Brahmin known now as "vegetable Brahmin" *(tarkari baje)*, who turned his rice fields into vegetable gardens, earning in the process five times more income than previously. The fact that the presence of a road opened up a previously non-existent market for vegetables - corresponding to the influx of civil servants, development workers etc. - accounts for the shift. Those first to take advantage of it are those best informed and most flexible regarding social customs. The "revolution" in Kavre's Brahmin agriculture described by SACHERER are interlinked to education and changes in social values. Under the influence of their educated sons Brahmin mothers started chicken farming, a profitable practice traditionally banned by caste rules. Chicken farming produces manure needed for vegetables. These observations in Kavre are probably early indicators of a transformation process that was observed in Madhan Pokhara (Palpa) on a broad scale (see the following chapter).

An impact assessment exercise carried out in 1990 (see INFRAS 1990 d) indicates that while proximity to market is a necessary condition for the introduction of fruit growing, it alone is not sufficient to assure sustained vegetable growing. The importance of the proper supply of fertilizers, pesticides, extension, follow-up training etc. are seen as important in ensuring that fruit becomes a marketable product having a significant impact upon the interregional export. They may be and are, however, significant in intra-regional consumption and the improvement of the nutrition standards of the villagers.

Another important observation was that people with access to market information (who knew that Jiri had provided better prices than Kavre had) and possibly had access to transport facilities were beginning to act as middlemen buying entire loads *(dokos)* from farmers and taking them to Jiri to fetch a better price.

A conclusion from the INFRAS 1990 study was confirmed in this study: the road has induced a mental transformation process especially among the better-educated people. This process is the starting point of market integration. However, fruit and vegetables in the fast growing road centres are often imported from Kathmandu. With increasing distance from the road the amount of imported fruit/vegetables compared to local production reduces significantly.

Jiri

Jiri, a rural township at the roadhead, is a centre of several administrative and other services and a focal point for international trekkers on their way to the Khumbu (Everest) region. Hence Jiri possesses qualifications to develop as a major centre for a broader hinterland. It has not only not done so, but also shows indications of losing that position to the more aggressive older settlement of Those if the road is taken there.

Discussions with hotel owners and others showed a clear despondency stemming not only from the fact that a road was being constructed up to Those but also that several measures from the central government in the past few years had badly discouraged the township's growth. The foremost among these was the fact that Gaurishanker trekking was closed. This resulted in a drop in Charikot-Jiri centred tourism. The Mt. Everest trek was dictated and dominated by Kathmandu with even cabbages transported from Kathmandu and next to nothing bought here. Trekkers were mostly transients who had already paid their agencies in Kathmandu and spent very little in Jiri.

Lodge owner in Jiri: Vegetables were brought from Kathmandu even by the local hotel owners. Some potatoes, mustard and garlic were grown here but it was rare for hotels to buy from them as a regular process. Rather, the buying was sporadic when it seemed like a good deal. Some of the richer or more knowledgeable people such as the lodge-owner had grown cabbages, radish, as well as greens. Beans were very good, pumpkins have been satisfactory. Only two months of frost (January and February) were without vegetables but the rest of the months supported continuous growth of vegetables in the various seasons. In the Jiri valley itself water was not a problem since there are very stable flowing perennial streams draining it.

An important factor was that the owners of most of the land around Jiri, the Jirels, did not grow vegetables for sale. It was explained that there was a kind of cultural constraint, that selling food in the market was considered a loss of dignity. Given the right profitable conditions, these constraints could change, especially since it could be argued that Jirels, who had no tradition of mechanical involvement with motor cars in the past, now had a Jirel who was the owner of a few trucks.

Perhaps the better explanation is the lack of clan or kinship connections with the demand centres such as restaurants and lodges in Jiri or the larger market in Kathmandu. Unlike the vegetable merchant in Charikot, very few Jirels (who own the agricultural land) have houses or hotels in Jiri. Most of these entrepreneurs were from Ramechhap or Those. In fact, with the creation of Jiri as the roadhead, many shopkeepers shifted operations to Jiri. It was not a migration: the old interlinkages with the home base in the form of land, shops or children going to school continued. The ephemeral nature of the township's economy has not encouraged a permanent social settlement to an appreciable critical mass for these newcomers. The civil servant or student communities also are too small to induce a demand considerable enough to encourage a strong change in cropping pattern from grain to vegetables.

Role of middlemen: The vegetable centre in the region is the small Saturday *haat bazaar* in Mane Danda just above Jiri. This market was established with Swiss support in the late 1960s to reduce the influence of the powerful Those middlemen in the area. However, they were clever enough to shift to Jiri or to take advantage of their informal kinship relations.

The market collects villagers from about four hours' walking distance away, including villages in Ramechhap which supply beans and citrus fruit. The main clients are the civil servants of Jiri, the military and police as well as the lodge owners. Fruits, such as apricots, have been coming to the *haat bazaar* for the last six years. The saplings had been distributed by IHDP in Dandapakhar. There was a general feeling that fruit growing was more profitable than growing wheat for sale; but the difficulty was that the ensuing glut drove prices down to 20 per rupee. The glut in recent years was so bad that much of the fruit had to be fed to cattle. Experimentation with fruits is continuing so that the villagers are not in a position to say what is good or bad with certainty. There is general agreement that apples do not grow well here, although they should climate-wise, because, it is said, of high winds during the flowering season.

A considerable number of fruitsellers interviewed at the haat voiced grievances that there were no middlemen they could rely on who would guarantee them a fixed base price and would thus reduce their risk. The system of bidding for fruit trees had not developed here. The lower level of development of such social structures that provide a link between the farmer and the market translated into an inability by the farmers to take the risky step of changing to a more profitable cropping pattern.

Potatoes, on the other hand, have always been a traditional crop in the surrounding regions and export to India has been a long-standing feature. The traders who bought potatoes used to porter them via Sindhuli to Terai roadheads. The demand for Nepali potatoes is said to be mostly for seed in India as Indian-grown potatoes cannot yield good seed for the next year. With the completion of the Lamosangu-Jiri road, they bring in trucks via Kathmandu and truck the potatoes away to India via Kathmandu instead of Sindhuli. Some felt that this was profitable for the traders because trekking business had increased labour costs. Potatoes are planted in October and harvested in March when all the available premises in the Mane Danda market are rented to temporarily store potatoes.

The developed system of middle men in the case of potatoes, unlike in the case of fruit and perishable vegetables, is significant. It has allowed farmers to confidently pursue growing potatoes without the risk looming so large as to paralyse their day-to-day initiatives. Also significant is the fact that this highlights a fundamental truth: in development, as with its outward expression in technology, the role of the social carrier of development or technology is important. Rarely is the subsistence farmer himself the social carrier of the process of development, which is akin to his "bootstrapping" himself out of development. In most cases, it is a symbiotic and mutually beneficial relationship that leads to a new level of interaction. Potato growers and potato traders form that mutually beneficial symbiosis.

The settlement of Those is the commercially more creative centre of this area as well as the centre of the network ranging from Khumbu in the east to Kathmandu in the west. It has an established high school as well as an old trading community. Before the road was constructed, it took nine days to go to Kathmandu for the traders to bring in the necessities such as oil, cloth and salt. Food had to be carried in a relay system up to intermediate points even for the return journey.

Those and nearby Rasnalu are representative of the problems faced by fruit and vegetable growers. Following a royal directive, the ADB/N initiated a massive programme of horticulture development and encouraged farmers to grow citrus such as tangerine *(junar)*. Because of the favourable climate, the cultivation was successful. However, there was no interlinkage with the market: the villages could never absorb this amount of fruit, and Kathmandu was too far away without a direct road connection. Transportation to the roadhead added too much of a cost on the product to make it attractive to truck it to Kathmandu. There was also no complementarity investment in fruit processing plants making fruit juice, jams or concentrates that could overcome the hurdle of human transport by increasing the weight value of the product.

The result was inevitable: a glut whereby prices fell from NRs 2 to NRs 0.5 and less. Farmers who had taken loans from the bank now found the mathematics of interest rates working against them in a debt trap: they can never pay back the interest with the output of the venture from which they had taken the loans. Widely mentioned is the case of a Ramechhap farmer who had grown 62 thousand tangerine trees. His plight has prompted other potential growers of fruit and vegetables to stick to growing grain which can at least be stored and eaten.

The promoting agencies have not taken the responsibility for the glut of tangerines and the corresponding hardships on the enterprising farmer. This risk has been borne entirely by the farmer: the bank continues to demand its interest. It is said that if this situation continues, all the land registration certificates placed with the bank as collateral will remain with the bank since land in the

villages generally does not have a market (not enough rich buyers), and the bank will become the biggest landlord in Nepal.

2.2 METAL INTERLINKAGES IN DOLAKHA - KATHMANDU AREA

The metal scene in the Dolakha area is a study in both critical interlinkages with the larger urban and industrial market in Kathmandu as well as in the role of history in determining the course of evolution. Charikot Bazaar and Jiri show how interlinkages operate to tie these areas with Kathmandu while Those Bazaar is a study of how a settlement's potential for further development can be depressed by technological and political factors.

Charikot

This bazaar is the roadside incarnation of the older and traditional Dolakha bazaar which lost its position to Charikot when Charikot became the district headquarters. With the opening of the Lamosangu-Jiri road this process was accelerated. The completion of a jeepable track from Charikot to Dolakha under the "Food for Work" programme two years ago, however, has allowed Dolakha to stir once again and regain some importance as a roadhead trading centre besides its cultural importance as a religious centre housing the famed deity Dolakha Bhimsen. The proximity of the two settlements and the interlinking road may assure the growth of these twin settlements as one urban centre in years to come with Charikot retaining its administrative character and Dolakha picking up commercially as the gateway to a larger hinterland.

The importance of Charikot lies in the fact that it is the administrative centre for Dolakha district. The presence of the district court as well as of many government offices and their projects ensures a cash flow as well as a population flow at this point that other settlements cannot easily match. This fact has ensured a rushing growth of tea shops and lodges; but has not had a significant impact on what was done prior to the boom as regards metal industries.

The demand for metal products centres around construction and agriculture. The advent of cement technology has encouraged cement-based construction with the corresponding requirement for reinforcing steel bars. The attractiveness of this new form of construction over the traditional is not only in the ease of construction (it allows greater room spans) but also in lower costs since wood is not easily available. This demand is at present confined to externally

funded project constructions and to constructions of the rich elite; and hence the quantity is not significant. However, the mimesis effect is significant, and even the poor consider themselves fortunate if they can live in a cement *(pakka)* house as opposed to traditional adobe dwellings. This kind of construction technology has also spawned a whole set of secondary demand for hardware such as fixtures, plumbing, screens etc.

Blacksmiths in Charikot *(kamis)*: The quantity of this demand is difficult to estimate at this point. It was high when the development projects (IHDP and LJRP) were in progress but is said to be significantly lower after 1990 with the closure or completion of these efforts. Since all such materials have to come from Kathmandu, their decline is perhaps correlated to the decline in traffic on the Lamosangu-Jiri route: shopkeepers at Charikot mention that, while some 50 vehicles would arrive per day when the projects were in progress, now the figure is only 11 buses and four trucks to Charikot with 3 buses going on to Jiri. The number of trucks to Jiri depends upon the season, perhaps one or two in the pre-monsoon and pre-festival seasons and only occasionally at other times. At the time of the field investigations, only three trucks operated between Charikot and Jiri.

Metal use in agriculture, the traditional sector as opposed to the modern sector described above, is confined to the raw material requirements of village blacksmiths. Subsistence agriculture needs iron for plough metal tips, hoes, sickles and axes. The village blacksmiths have provided these services in the past and continue to do so at present. A hoe *(kodaloe)* requires 1.2 to 1.5 kg of iron costing NRs 22 to NRs 30 per kg. A blacksmith traditionally took about one *pathi* (= 3.4 kg) of grain or millet as labour charges for beating the iron into a hoe. In the old days, charcoal could be assumed to be free, entailing only the cost of getting it. So if someone supplied iron to a blacksmith in a village (NRs 33), he could expect the equipment upon payment of one *pathi* of grain. Now charcoal has to be bought or brought at risk, adding to the cost. Village blacksmiths, therefore, are not willing to work for only a pathi of grain unless old generational debt obliges them to do so. The current price of a *pathi* of grain is NRs 18; and a hoe is sold in Charikot *haat bazaar* on Saturdays for NRs 65, meaning that blacksmiths are adding the price of an extra *pathi* of grain (= 3.4 kg) as the risk factor for acquiring (illegal or semi-legal) charcoal.

Metal trade: There are four shopkeepers *(sahujis)* that deal in iron in Charikot and each sells about one and a half to two tons of iron mostly in the months of April and May just before the wet season. Good quality iron is sold at NRs 30 per kg and scrap at NRs 18 to 22. Scrap metal is obtained from large-scale hardware dealers in Kathmandu at rates ranging from NRs 6 to 10 per kg and the transport cost is NRs 0.50 per kg from Banepa and NRs 0.60 per kg from Kathmandu. The large profit margin that accrues to the commercial agent is an

indication of a political economy that favours not so much the producer as the one with the right interlinkages with urban supply centres.

Jiri

Jiri represents the end of the road, the roadhead that commands a hinterland all the way to Solu Khumbu. Its economy is based on two factors: first, on economic activities having a roadhead character such as cloth, oil and grain shops as well as a tourist point; and second, on external investments in infrastructure such as a hospital, technical schools and training centres which induce the geographical location to act as a population centre of gravity.

As with Charikot, the trade in metals is either for modern construction with items such as corrugated sheets or in the traditional sector of manufacture of agricultural equipment. Iron is brought directly from Kathmandu and sold for NRs 20 to NRs 30 per kg for scrap and NRs 35 to 40 per kg for softer iron plates, the latter being more expensive because blacksmiths in the villages find it easier to work with. Conversely, villagers prefer equipment of harder iron because it lasts twice as long. Transportation charges are NRs 0.75 to 0.80 per kg from Kathmandu. There is only one hardware shop in Jiri owned by Newar businessmen from Dhulikhel who are able to use clan connections in Kathmandu to extend credit across time and space in order to meet business obligations.

Coppersmith in Jiri: Many smiths immigrated to Jiri from adjacent districts to the east after the road was completed and business opportunities grew in the booming centres, but objective conditions are not regarded as stable enough to justify permanent settlement. Hence many of them have either gone back to their villages or were opening tea shops. The case of this coppersmith, who migrated to Jiri from his village in Ramechhap, is interesting in this regard. Originally working with iron, he has found the raw materials, whether iron or charcoal, too expensive to justify further investment of time and effort in blacksmithing. A hoe from Kathmandu weighing about 1.25 kg is sold in Jiri at about NRs 90 per piece. An imported manufactured heavy hoe *(pharuwa)* from India is available at NRs 110 per piece while a smaller hoe similar to a traditional one is available for NRs 65. Because of the lack of charcoal, the high price of raw material and the physical labour needed, blacksmiths are able to sell hoes at the haat bazaar in Jiri at NRs 90 to 110, not less. Hence blacksmithing is a subsistence profession only, although without it, subsistence agriculture in Nepal is hardly possible.

Because of these reasons, he has begun to work with copper. He had some skills in making local trumpets *(karnol)*, the traditional curved trumpet whose parts telescope into each other for easy transport and which are used in villages during festivals. He found a ready market for copperware among the lamas

and made the switch. Incidentally, the increased demand by lamas, he feels, is traceable to the increase in tourism and the added revenue it has brought to the Tamangs and the Sherpas. He brings his copper from Patan (Kathmandu Valley) at NRs 145 to 155 per kg, the higher price for the thicker gauge sheets. Buses charge NRs 1.5 per kg, although bulk amounts can be transported at cheaper rates. His son also works with him; but he cannot use hired labour simply because the necessary skills are not there to be hired. Unlike in Palpa and western Nepal among Gurungs and Magars, the Tamangs are not said to favour copper pots *(gagros)* or other such wares, preferring aluminium and stainless steel goods. Since copperwork demands far less charcoal than ironwork, he has been able to meet his charcoal needs by collecting spent ash from teashop and restaurant stoves which contains enough charcoal for his needs. Besides the cost of raw materials, his problem is the lack of precision tools that he needs for copperwork for which he has to make frequent trips to Kathmandu.

Village blacksmiths are among the poorest and most exploited people. The trend towards increased imports of ready-made tools and instruments in Dolakha increases the economic pressure on blacksmiths.

Those

Local mining industry: Those bazaar south-east of Jiri and within a comfortable three hour walking distance is a strategically-located settlement connecting four hill districts. This position has allowed it to survive despite the fact that Jiri overtook it in importance after the opening of the road which initially

was planned to reach even further than Those. Mainly due to reasons of costs road construction was then stopped in Jiri. Now, after the democratic changes in 1990, the more resourceful traders of Those have managed to get the state to initiate construction of a 15 km road linking Jiri with Those. There are already indications of people trying to shift back to Those and land speculation there has begun. Indeed, some of the hotelowners in Jiri were cynical enough to say that Jiri has no future if the road goes on to Those.

The second importance of Those stems from its historical antecedents. It has an iron mine operating since antiquity but brought into prominence during the reign of the Rana dynasty after 1900 as a weapons' producing centre. It was then known as *mekchen*, a corruption of the English weaponry word "magazine". The settlement was to work the iron mines and manufacture about 3.6 tons of equipment for road construction works *(tempwal, jhempwal etc.)* per year which was to be taken to Kathmandu and delivered to the Rana government. Besides the regular contingent of blacksmiths, there were civil and military positions financed by the central government till as late as 1955 for the purpose of metalworking.[3)]

The main scaling down of weapons building occurred in 1955 about four years after the 1951 anti-Rana revolution when civilian work was stopped with charcoal shortages becoming endemic and money being scarce in government coffers to pay the salary of employees. Forests were nationalized around 1959, exacerbating the problems of availability of charcoal. However, some of the diggers remained in Those working till 1967.

The durability of the metallic goods made by the then craftsmen such as a 12-bore rifle as well as knives and kitchen implements such as big knives *(choonesis)* are still very much around in Those and parts of Dolakha and Ramechhap. Schoolmasters in Those still use such equipment and claim that they are more durable. Indian imported Tata hoes may cost only NRs 65 while those made by Those blacksmiths may cost NRs 100; but the latter lasts twice the number of years and can be repaired locally whereas the Tata one cannot be so repaired. However, these skills are being lost.

An indicator of the loss is the near extinction of a Tamang sub-group called *Khanel* (meaning diggers). This specialized sub-caste or occupational ethnic group used to mine iron ore in the 18 mines around Those. They had developed skills in mining such as the ability to use baskets and lights to reach very deep underground and extract the ore. Now these skills of mining are lost, the lack of charcoal through forest closure being cited as the main reason why the younger diggers migrated to other areas converting themselves to a class of landless labourers. It can be wondered how much the state would have to

3) This labour force included 4 *sipahi*, one *havildar* and one *kote* or *kotwal*, assisted by *bhai* naike and *tahabildar*. This old Nepali army nomenclature disappeared together with the disappearance of the metal technology in Those.

spend to train people to mine the ore and to replace the lost skills of these traditional miners. This is interesting because the enterprising Those residents are now wondering if the excellent small hydropower possibilities of the river, which runs past Those into the Khimti, cannot be harnessed and iron extraction from the mines restarted. They could at least supply all the pig iron needed for the village blacksmiths from Ramechhap to Charikot.

The role of rural infrastructure in inducing new types of growth as well as new social patterns of perception and behaviour is highlighted by the Lamosangu-Jiri road. From straightforward economic analysis it may be difficult to justify the expense of NRs 600 million on the road (see Figur 9), since only a few vehicles use it (INFRAS 1991 a). However, because of the impending power shortage in the Nepal power grid which state-led institutions cannot fulfil, the government of Nepal has recently put forward a new hydropower development policy and new water and electricity acts which allow and encourage private hydropower generation. It is because of the presence of the Lamosangu-Jiri road that the Norwegian sponsored Butwal Power Company is actively pursuing the development of the 48 MW Khimti hydroelectric project below Those from the private sector. This will lead to its own growth dynamics in Jiri-Those, but would have been unconceivable without the road. This also applies to electrification of villages along the road corridor between Lamosangu and Jiri.

2.3 VEGETABLES AND FRUIT INTERLINKAGES IN PALPA - BUTWAL AREA

General Background

The market comprising the Terai municipal areas of Butwal and nearby Bhairahawa as well as villages evolving into small townships on the one hand, and the hill villages as well as evolving townships along the Butwal-Pokhara highway on the other hand constitutes a dynamically interacting network of interlinkages. This dynamism is highlighted by the fact that this system has exhibited a tendency to actively take advantage of possibilities offered by new infrastructure developments such as roads, telecommunications and education.

The description of such dynamism is encapsulated below area-wise in an attempt to highlight how farmers have taken or not taken advantage of the possibilities of development. It may be observed that many of these areas are on or next to roads under construction or planned roads; and it may be commented that this narrowing of the scope of observation excludes from analysis the very large areas of Butwal market's "watershed". Indeed, much of Palpali rural hinterland is under the informal subsistence mode of production, having no direct relation to the larger world of the market. Remote hamlets do have some market connections, but substantially informal with the bulk of the rural economic activities centred in the immediate vicinity.

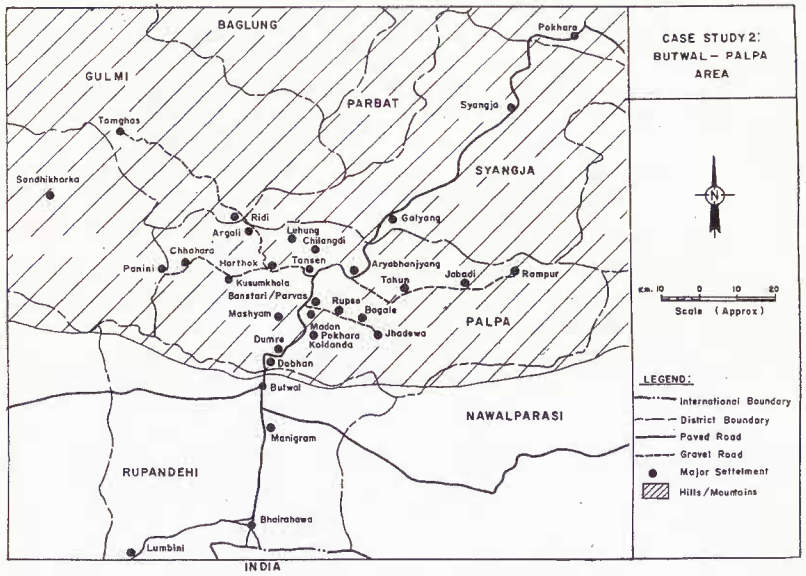


Figure 12: Map of the wider Palpa - Butwal area, indicating all places mentioned in this chapter.

For this study, it was felt that such subsistence villages did not present enough data for the study of urban-rural interlinkages. Rather, the different settlements and their denizens described below are in various stages of increasing the level of their interaction with the market centred in urban areas. Such interactions capture the dynamics of rural-urban interlinkages, the pitfalls and the possibilities better than villagers and villages more predominantly in the subsistence mode.

Jhadewa-Rupse

Blacksmiths of Bagale and Jhadewa: The valley of Jhadewa is in eastern Palpa and its economy is characterised by subsistence production with strong feudal exploitation. The poor and the landless, or those with minimal landholdings operating under a feudal order where much of their labour, the only

resource they possess, has to be parted with to the landlords under very unfavourable terms of exchange. The blacksmiths of Bagale and Jhadewa highlight this unfavourable situation. Although the role in poverty alleviation and rural-urban interlinkage of Bagale metalwork is described in detail in another chapter, what is touched upon here is how this situation sheds light on farmers making a transition from subsistence grain to cash crop vegetable production.

Bagale blacksmiths *(kamis)*, with the success of a poverty alleviation programme, were able to increase their options and degree of freedom to a certain extent. From their savings, which resulted from their small-scale production of copper goods that catered to a small urban and mostly rural market from the programme's seed money as well as savings from voluntary reduction of conspicuous consumption (ban on drinking and gambling), many metalworkers were able to invest in the acquisition of land. Having already understood the potential of the market in absorbing their metalwares, they were anxious to extend into vegetable production for sale in Tansen or Butwal.

While some sporadic benefits have accrued to individual farmers at particular times, this enterprise has not been very successful so far on a sustained and firm basis. The primary reasons are lack of proper knowledge of new farming techniques and lack of a developed system of intermediaries between the farmer and the consumer.

The complaints of the blacksmiths regarding why they have not increased production of marketable vegetables is that they do not have the knowledge of the finer points of vegetable farming. Their own family-based knowledge is in the areas of metalwork, and what little traditional experience they have in agriculture is in the production of cereal crops such as maize and rice. They have experimented with ginger, beans and tomatoes, and complain that the lack of knowledge as to how and when to plant, how to protect from frost, when to harvest has resulted in loss of income. Similarly, the entire sequence of processes starting from the time that a vegetable is picked to the time it is sold to a customer requires some specialist skills and services that Bagale blacksmiths do not possess.

Ginger wholesale: Ginger is a good example of the critical role of intermediaries. Much of the wholesale trade in this crop for east Palpa is concentrated in Aryabhanjyang and is controlled by one family of traders. One brother controls Aryabhanjyang and another stations himself at Khahare below Rupse. The villagers are disadvantaged because of the fact that all the farmers come at one point in time to sell, depressing the price to their disadvantage and to the advantage of wholesale trader. The Bagale coppersmiths also recall the price wars that took place a year ago when newcomers from Butwal tried to buy the product. The Aryabhanjyang trader *(sahu)* escalated the price to NRs 30 per kg until the new buyer fled and then he depressed it back to NRs 7 per kg, allowing farmers no choice but to sell or to carry the ginger back to their villages.

Proper marketing of their products is among the fundamental difficulties facing the growers. Farmers do not know during what season it is advantageous to sell a non-perishable product such as ginger, and when it is not. This market information is not available to them as they are newcomers to the field. Dried ginger would be more advantageous since it would fetch a higher price per kg of portered weight, but they are frightened of the police. Inter-city commerce in Nepal is governed by unclear regulations, and police at checkpoints in Dumre or Butwal can and do stop innocent villagers and confiscate their products. This procedure is more commonly applied to the poorer and the more ignorant such as the Bagale blacksmiths. Among other difficulties, they also complain that the weights and scales used by the shopkeepers are not standard and there is a feeling that they are being cheated in Butwal.

First commercial fruit farmer in Palpa: Compared to the poverty stricken blacksmiths of Bagale, the first fruit farmer of the area is a rich farmer. He has worked with district farmers' organizations from the very start and has influence extending well beyond Palpa district and reaching Kathmandu. He has imported fruit saplings from India as early as 1965 using the good offices of the state agricultural institutions and other bodies. In 1970 flash floods damaged his irrigated *khet* fields which used to yield approx. 5 t *(72 muris)* of rice in one crop and giving three crops a year. He tried to obtain funds for rehabilitation through flood relief programmes of HMG but complains that the government was not responsive enough. However, this rich entrepreneur farmer has been able to successfully use the state mechanism to pay for his trips to Kathmandu, meet ministers, convince them of the need to fund a pilot demonstration farm, have state directives passed to the ADB/N for preferential treatment, get into training programmes in Pokhara and to obtain help to set up a water supply system to create a fruit nursery. This gentleman is obviously an expert in manipulating the government machinery to his advantage.

His fruit farm was established in the flood damaged *khet* lands. They have provided good yields but he himself has not concentrated on marketing. Instead, he relies on middlemen to purchase all his fruit by bidding for his trees. These middlemen are smaller farmers from Madhan Pokhara as well as individual dealers from other villages who do the actual selling in Butwal. This developed system of middlemen has reduced his own level of risk and allowed him the freedom to concentrate on other entrepreneurial activities such as sericulture, silk weaving etc.

While he obviously does not suffer from a loss from his fruit farming, his initial growth pattern in the fruit and vegetable area has not sustained itself. In providing him the starting impetus for growth, transportation development has played an important role: from Rupse it used to be a two days' walk to Butwal,

but now it is only three hours by tractor and bus. This factor allowed middlemen to have access to his products, much of which are of high value but perishable. The availability of middlemen also compensated for the loss of family members to education and government jobs, thus removing them from the business of fruit harvesting and marketing.

The lack of further sustained growth is explained by physical and institutional factors. The water supply which he managed to get for his fruit farm by pushing the state machinery for providing village water supply, is now depleted because of upstream capture. Success breeds imitation and many upstream farmers have begun to divert water from his source for the very same purpose of vegetable and fruit farming. Lack of codified water right guarantees has allowed this to occur; and it seems that the use of state funds by him has reduced the strength of his position to assert his prior rights because the use of state funds is perceived as legitimizing public claim over the resource. His strength in manipulating the state mechanism to his benefit has seemingly worked to his disadvantage.

Among the institutional factors are the prospects and processes that go beyond the aspect of middlemen. To move into more profitable directions, labour differentiated institutions must be in place that can allow a fruit farmer to save his time and energy for more productive activities. The lesson from the above is that even successful fruit and vegetable production is sustained by critical interlinkages with irrigation, water rights and the institution of middlemen. Silk farming, into which he had diverted, needs knowledge input through extension or cooperatives, services such as dyeing (for which he had to make trips to Benares, India) and weaving concerns that deal with silk weaving. The lack of these things has meant that he has attempted to create them himself through vertical integration, in the process "reinvent the wheel". He has set up a silk weaving unit and hired handloom weavers. To create a market for his products, he has tried to market hand stitched silk Nepali caps *(topis)*. Nevertheless, these efforts divert from improving fruit farming and one man can, after all, do only so much in the intricate gamut of interlinkages between production and marketing processes.

Madhan Pokhara

Madhan Pokhara's development as a major centre for the production of vegetables started with the completion of the Butwal-Pokhara highway in 1969. Some indications of the shift in agricultural economy from subsistence grain to cash crop vegetables began to be evident from 1967 onwards when the road was not yet fully complete, when some innovative farmers began to make more frequent trips to Butwal. Several initiatives were introduced after this which has led to the dramatic developments that one sees today.

Vegetable production grew from the time of completion of road, which made Butwal a next door place two hours away instead of the two day walk. Increased access to the market and its potential was also given a boost by the introduction of plastic (PVC) pipes in 1975. This technology allowed the cost-effective tapping of stream and spring sources for increased vegetable production. At present the Gangdi stream in Madhan Pokhara is now practically dry as almost all the water has been appropriated for horticulture. Similarly, five spring sources have all been tapped for vegetable farming, and the very modern sprinkler system has been adopted by many farmers to boost their vegetable production. It is interesting to note that in 1979 there was severe deforestation in and around Madhan Pokhara, the very areas which formed the catchment of the flash flood river. The villagers, seeing the explicit result of environmental degradation, responded with social fencing, the forest has regenerated and the water volume has increased again.

The role of education and information: The transition to vegetables in Madhan Pokhara was not instantaneous. First only the winter crop was replaced by vegetables while the summer crops remained the traditional maize and rice. Eventually, with a time lag of two to three years, more and more farmers became convinced that vegetables and fruits were much more profitable than traditional crops.

Contour strips are a traditional soil conservation practice in Palpa. The contour plantation with fodder and fruit trees offers direct economic incentives. Only where irrigation water is available off-season vegetable cultivation is found.

In 1981, the Small Farmers Development Programme of the ADB/N was initiated with a total investment of NRs 7.6 million so far. This state intervention effort, which built on an already existing successful entrepreneurial base, also contributed to a tremendous growth in vegetable production. There is a clear realization among farmers of the village of the comparative advantage with the plains in areas of fruit and vegetables. While it is difficult to compete in textiles and other industrial products, the middle hills offer climatic advantages that the Terai plains cannot match. In vegetables, it seems that, while they grow better in the Terai and the Indian plains, the hill-produced vegetables are "better" in taste and they provide better seeds.

This success has bred confidence and provided for some capital accumulation that has allowed farmers to begin experimenting with other innovations such as coffee and fruit-bearing trees that have a longer gestation period. Such experimentation is not easy in situations as occur in the subsistence hinterland since the marginal economic situation discourages risk-taking.

Landholdings in Maden Pokhara average 5 *ropanis* per family (1 *ropani* = 500 m^2). People owning more than 15 *ropanis* are classified as moderately rich. Palpa district is a water poor area and irrigated *khet* land is proportionately smaller in a family's land portfolio. Madhan Pokhara people have some *khet* in the nearby Madi lowlands and seem to be better off than many farmers in other parts of Nepal. The very smallness of the landholdings in Nepal has created problems of shifting over to a new cash crop: unless one is a fairly big farmer, one is not able to take the risks of new crops and experiment and experience the market.

As with the rest of Palpa district, there is significant migration out for seasonal or permanent work from Madhan Pokhara too. The attractiveness of migration to India for work is described in a simple villager's economics as follows: he earns IRs 16 per day in labour, spends IRs 6 on subsistence and sends IRs 10 home. He compares the costs in India and in Nepal and quickly realizes that of the IRs 10 he sends home, almost IRs 5 is spent in Nepal government taxes because products are so much more expensive than in India. This fact was used as a propaganda point during the Nepal India Trade and Transit Impasse of March 1989. About one in every five homes have one long-term migrant in India or Arab countries, a fact that is related to the lack of economic possibilities at home. The new "Eldorado" destination is Japan. The implication of this is that there is some capital available for investment in the rural hinterland of Palpa district, and sporadic entrepreneurs do emerge on the horizon. They are, however, too few and far between to translate into a statistical effect. Lack of productive investment possibilities means that this capital often finds its way into wayside tea shops, ready-made product stores or houses in Butwal.

There are about 1 200 houses in Madhan Pokhara, slightly less than half of them belonging to Brahmins, Chhetris and Thakuris. In some wards there are

predominantly Magars. In terms of ethnic distribution, this village development committee is fairly typical for the lower middle hills of mid-western Nepal.

Madhan Pokhara's Sharda High School exports teachers to almost every school in Palpa. In 1951, the first primary school was established, and in 1959 Sharda High School was opened. Because of its peripheral position, the school was not able to exploit the scholarships made available to school graduates in the capital. Nor was it able to use state and political patronage to join the civil service. As a result, many graduates opted for teaching in schools in the hinterland. Since 1968, 368 students have passed SLC (school leaving certificate) from this school, many of whom have opted to become school teachers in other schools of Palpa. The tradition of education runs deep among Brahmins and Chhetris and teachers who have been teaching for 35 years have seen their sons follow in their footsteps. On the other hand, among the Magars, the lure of good employment is so strong that if a chance arises to join the Gurkha troops, the students often do not even bother to finish their schooling.

Although Madhan Pokhara has an old tradition of education, and even today may be the only village with two high schools, the complaint of the key village informants is that the quality has not improved. The main blame is placed on the government for poor management of fund flows which makes it difficult to pay the salaries of teachers in time etc. Whatever the national or international level of the quality of education the Madhan Pokhara schools provide, it is significant in the relative context of Palpa-Butwal. The result of all the schooling is that the level of political consciousness is indicated by the fact that of the 36 people arrested in Palpa on 18 February 1990 at the start of the movement for the restoration of democracy, 21 were from Madhan Pokhara. There is a distinct, though difficult to quantify, interlinkage of schools and education with the ability to constantly innovate. Madhan Pokhara is a good example of what JACOBS (1970) describes as the creativity that distinguishes an urban economy from a rural one and keeps it ahead in the economic race. And Madhan Pokhara shows all the nascent tendencies to draw economic resources towards it and dominate its hinterland.

Weaving industry owner in Tansen: One interesting thing about education is the ability it gives to people to take advantage of information and the ability to see niches. An entrepreneur made the weaving industry a cottage industry by shifting the burden of premise rental to the weavers in return for the security and comfort of working at home. As a result, many rural housewives who would not go to work at a job now willingly join the labour market when the job comes home to them. This method is being extended to carpet weaving. This is quite different from another weaver entrepreneur from Tansen, who was the first to start the Palpali fabric *(dhaka)* business and has a large factory establishment in Tansen.

Electricity and communication infrastructure: Some people in Madhan Pokhara have television. The new demand now is for telephones. The primary drive for this form of apparent luxury comes from the need to bargain with transport owners in Butwal and in Tansen for the transport of goods to the market in Butwal. A telephone would allow the information flow that is so very important for an economy dependent on trade in perishables. During the recent multi-party elections, this hamlet managed to wrangle 1.5 km of road from the highway as a gift from the state. It is also asking for a bank so that the villagers do not have to go to Tansen to make financial transactions.

Electricity made its advent in 1978, the result of strong lobbying by leaders of Madhan Pokhara in Kathmandu using a "son of Palpa" who had been chief engineer of HMG's Electricity Department. Those houses with electricity found themselves very fortunate compared with those who had to rely on kerosene during the Nepal-India trade and transit impasse. A new technology such as electricity and its adoption can also be seen as a function of education and the ability to manipulate information. Those who were the best educated and already into strong market interaction through the selling of vegetables were able to see the benefits of electrification. However, opposition to electricity was felt in a *ward* by less knowledgeable Magars because "electricity destroys maize", presumably during the stringing of transmission lines. Now, with the demonstration effect of Madhan Pokhara core, they too have invested their own money to pay for the poles to get electricity after a lapse of five or six years. This is a measure of the social time lag that introduction of technology demands.

Electricity is used for rice and oil mills, as well as furniture works. Cold storage for vegetables is seen as the next quantum leap in technology so that the uncertainty of selling perishables is minimized. The quality of electricity in terms of both voltage and frequency (too many bulbs have exploded as a result of high transformer tapping) as well as outage rates are seen as the drawbacks in this enterprise.

Fruit nursery owners: A good example of farmer innovativeness in Palpa is provided by the nursery owned by two brothers in Madhan Pokhara. It is a fruit farm that was started after a natural calamity. In 1981, a flash flood destroyed the fields. The brothers own about 26 *ropanis* of *bari* and *khet* lands (= ca. 1 hectare). Those areas that have some spring sources have rice in summer and wheat in winter. After the flooding, it was not possible for standard agriculture and also could not be sold for such purposes.

The agriculture extension office was distributing coffee saplings and the brothers decided to take them along with other fodder saplings they had come to collect. A hundred and fifty saplings were planted in the land degraded by the flood and subsequently they brought some seeds from Palpa too. Real plantation was started only in 1985. Last year's harvest was about 72 kg which

was sold to the processing mill. Now the brothers have 1 700 coffee plants in 17-18 *ropanis*. In the rest of the land they have switched to vegetables and other fruit rather than to stay with cereal crops.

The advantages of coffee and fruit trees is that they do not need the same amount of farming effort as standard crops, which allows household members to do other activities such as school teaching. The older brother teaches in Sharda High School in Madhan Pokhara. Not much labour is needed except for picking coffee and fruit. Also the tree is supposed to last 50 or 60 years. While the initial impetus for the change in cropping pattern was because of a natural calamity, now it is also because grain price has fallen as has the price of mustard, making them no longer viable cash crops. It is realized that it is much more profitable to go for fruit and vegetables.

Coffee and bananas are generally interspersed. Coffee has a maturity period of 3 to 4 years, bananas much shorter and thus can give returns in the meanwhile. In the initial stages of growth, coffee plants need shade which bananas provide. Bananas and other fruit have a fairly big internal market besides Butwal, within Madhan Pokhara, on the highway as well as in Tansen. The yield is about 10 kg from each plant. With a price of NRs 20 per kg, even if 5 kg per plant per year were available, it would be possible to get NRs 170 000 per year. At present, the coffee processing factory at Manigram buys at the rate of NRs 22-23 per kg but it is an effective monopoly and the farmers fear economic loss that could result from the loss of bargaining power. They rejected a move to put them within *sajha*. Madhan Pokhara took the initiative to set up their own association. A coffee growers' association was first set up in Madhan Pokhara and is now expanding to cover all of Palpa district as well as the first coffee growers in Gulmi. There are now 15 farmers in this association. This was a reaction to the lowering of price by the monopoly processor at Manigram from NRs 21.75 actually given last year to NRs 16 this year.

The coffee processing mill: The Nepal Coffee Company Pvt. Ltd. was established at Manigram near Butwal in 1985 by two brothers from Gulmi with the help of the Agricultural Development Bank. They collect coffee from the hinterland by moving up towards Gulmi in May and returning to Butwal in June with the collection. They accept 10 quintal loads since it is uneconomical to go about collecting smaller amounts. Their complaint is that there is not enough raw material: the mill is operating at only 8 % capacity and as a result is having problems with the bank. This state of affairs hardly justifies the stated belief of the coffee growers that someone is opening another processing plant in Kathmandu.

The difficulties highlighted by the coffee farmers, as with the vegetable farmers, relate to uncertainties about plant diseases. Some worm that looks like a Nepali worm *gabaro* breaks the tips of growing shoots. They also mention the need for training and information access. For example, is it better to pick

everything at once or to pick only the red ones and then pick the others later? (Manigram processors say that a plant needs to picked four times in a season so that most of the fruit is harvested). Have they planted the saplings too close together? Do the plants need shade? How much irrigation is needed?

The difficulties also relate to extension services. The farmers have loans from the ADB/N but the technical help provided is felt to be inadequate. There is a 15 % interest on bank loans for fruit and coffee which is felt to be too high. They are told that half of it will be converted to a grant but that is very uncertain. Loans are also not provided in the actual agricultural season when the farmers need them but much later. Unlike tea the growing of which has regular grants, coffee growers are told the grant is only for the one year that ADB/N announces and not for the other years. It is difficult to make long-term investments in orchards with this level of uncertainty.

All over Palpa, it is estimated that there are about 80 thousand coffee plants. These farmers are looking for a pulper, a device that apparently can grade beans and separate them as well as take off the outer cover. The point here, both as regards the setting up of the coffee growers' association and the search for intermediate processing devices is that perhaps it is education and social "consciousness" that gives these entrepreneur farmers the ability to slowly consolidate their comparative advantages and terms of trade.

Coffee is a new technology. Its planting was started in 1945 in Gulmi by a mercenary soldier after returning from Burma. The Ghimire brothers saw coffee planted first in Gulmi. The entrepreneur of Manigram, also from Gulmi, received the impetus from the King's visit to the region and the royal directive (passed on to the ADB) about the need to do something about the coffee grown from there. Because of the newness of the technology, people still think that Nepali coffee is bad "because it does not dissolve like Nestle instant coffee" that one can buy from the market. Many have started home processing of coffee for self consumption, and the final result of that may only be seen many years from now when coffee replaces tea.

Why have they not created a fruit growers' association in the area in line with what was done for coffee? It is probably because no similar threat was felt from the likes of the bank and Manigram monopoly. They have not done so because of the proximity of Butwal and its favourable transport conditions. The highway is hardly half an hour away and from there buses and trucks that take one to Butwal are available with less than half an hour of waiting. With dozens of vehicles plying the route every day, and more so with many returning to Butwal from Pokhara almost empty after delivering their cargo, taking Palpa fruit and vegetables to Butwal by the sack is a mutually profitable business. The Madhan Pokhara farmers face practically no danger of not being able to take perishables to the market on the same day.

Initially there used to be a bidding process wherein someone who actually went to the market in Butwal would approach a farmer and bid for the fruits maturing on his trees or for his crop of vegetables. The going rate even now is, for example, about one thousand to fifteen hundred rupees per pear *(naspati)* tree. Partly because access to the market is so easy and partly because these farmers are quite educated, they are able to dominate the middlemen whom they are beginning to use to save their own time and exploit alternative profit-making channels. Independence in bargaining stance is seen to be a factor in their calculations: these very progressive farmers have begun reducing the use of chemical fertilizer too because of the observed addictiveness of the soil and the dependency on middlemen who could siphon off more profit than they deem to be just. There is also a reluctance to use pesticides, at least for consumed vegetables, because of perceived harmful effects.

There is a demonstration effect of Madhan Pokhara in the surrounding regions; but the fact that other villages are far away from the road means that similar miracles may not be easily duplicated elsewhere. One *doko* of vegetables transported from Rupse to the road is NRs 8 and then on to Butwal is another NRs 9. It becomes uneconomical (or not so attractive) then to sell anything in Butwal because all the profit will have been taken by the middlemen transporters.

Rich vegetable farmer in Madhan Pokhara: Transformation from the traditional sector to the modern is exemplified by this person. This Brahmin farmer has 17 *ropanis* of land which he manages by crop rotation with tomatoes, eggplants as well as beans and other crops. Plots are separated and rotation is carried out so as not to reduce output through loss of fertility, a practice he claims has come from the roughly fifteen years of experience he has had with the new crops. Of the vegetables he grows, cauliflowers go to Tansen while most of the other vegetables go to Butwal. Sometimes, when the demand is right, vegetables also go up to Pokhara. The main critical link is the timely availability of buses and trucks to move things.

His vegetable farming would not have been possible without irrigation, which was desirable in the previous subsistence mode but now is a necessity. He was one of the first to use the modern sprinkler system for vegetable production, experimenting with various spring settings to increase nozzle velocity. He is convinced of the positive correlation between afforestation and streamflow increase, and is an ardent supporter of the social fencing in places which levy fines of NRs 50 for first offenders and NRs 250 for second offenders cutting trees in the vicinity.

His family consists of eight people, including aged parents and three children. So he faces constraints in labour and farmhands. He has to hire people who have no land, and he estimates that 30 % of the people in the village have spare time to sell as labour and that there are about 30 houses of mostly blacksmiths

who are landless. Those who have enough land to manage to feed themselves for a whole year without having to do vegetable farming or looking for alternative employment make up only about 10 % of the village's population. He also has to spend about ten to twelve thousand rupees per year in buying oil, salt etc. as well as clothes that fit the town mode rather than the village mode. This is a disadvantage of living near a town or among the educated population.

He has traditional access to up to 40 *ropanis* (= 2 hectares) of pasture land with other families; but because of conflict with the Deptartment of Forests and nationalization rules, he has not been able to make effective use of it. Unofficially they have their own rules regarding the pasture land where grass cutting in winter is allowed but *sal* tree cutting is forbidden.

While he praises the contributions made by the Small Farmers' Development Programme of the Agriculture Development Bank of Nepal as a very successful intervention effort contributing to helping the farmers of Madhan Pokhara to shift to vegetable farming, the pressure to repay loans before the farmer's product matures and the lack of flexibility in considering the impact of the unforeseen are explained as the problems towards further development of vegetable farming. As a result, he is now considering diverting towards coffee and fruit. Another constraint was the perceived weakness in being able to bargain with urban shopkeepers. A remark by his old father was significant: "A shopkeeper can buy at any rate he wants but a farmer can only sell at the rate mentioned." The terms of trade are stacked in favour of the town trader. Farmers are the first to bear the burden of devaluation as well as octroi tax legislation regarding which they are the last to find out.

The need to go to Butwal is not only to sell but also to buy grain. There is not enough grain production in the area to feed all the population in their village. There is also the nature of the transport: he can bring a sack of grain or salt with himself after doing other work, resulting in a complementary advantage of a trip. Also, because many farmers in Madhan Pokhara are well-educated, the police does not stop them to extort rent as is the case with poor blacksmiths from Bagale.

In philosophizing, he feels that vegetable production would be encouraged if profit in agriculture is there through better government policies. If not, people will go for government jobs because of the advantages therein such as security, as well as increase in alternative opportunities, wider access to information and privileges etc. If there is no profit in an activity in Nepal, people will migrate to India for jobs. Development has come to Madhan Pokhara despite the reluctance of the Panchayat system in the past. This area was considered anti-monarchial and so even water supply or electricity was brought to the village only after a bitter fight.

Commercialization of agriculture and role of women: The above mentioned examples of successful commercialization in agriculture in Madhan Pokhara by replacing formerly-grown food staples such as maize, millet or oil seed by vegetables and fruit refer to resource rich farmers who have traditionally had access to irrigation water. Vegetable and fruit growing has changed cropping patterns on many farms in Madhan Pokhara.

Interviewing women involved in vegetable farming in above-mentioned farms revealed that in well-educated upper caste households women play their role in the marketing of produce to local markets. They get their share of cash in return. The short marketing distances (one day's trip) and the high level of education prevailing at Madhan Pokhara have been identified as key factors for enabling women to step into vegetable marketing.

Two examples gained from a complementary research effort conducted by Sushma Bajracharya in Palpa and Dhading district (both supplying vegetables to the Kathmandu market) give evidence that the agricultural commercialisation supported by development cooperation projects in rural areas do not necessarily improve the status of women. In many ways, it even worsens the situation of women. Roads, irrigation facilities, market development on the contrary can contribute to widen gender disparities and to marginalize women.

Vegetable farming woman: She is the wife of a Chhetri vegetable farmer in Dhading district. Her husband, 12 years ago, while going to Kathmandu got inspired by the vegetable grown in the valley. He also started vegetable farming since a road link makes marketing easy. Since then he had continuously expanded cultivation. He went on growing more and more vegetables and buying more and more land. Mrs. Ghimire says that she has to work more and more everyday. Her husband takes care of the marketing. She does not have any control over the money. If she would ask for some money, her husband would say: "It is not your dowry *(pewa)*[4])." And sometimes she feels very weak. She feels that she cannot work that much. Then her husband would say: "Go to your parents. I will get married to another woman." She knows many examples of men getting married to two or more women. So she remains silent.

Low caste woman: She lives west of Hartok in Palpa and started to cultivate maize on her strip of *bari* land (upland for rainfed cultivation only) in spite of having a very nice fruit orchard of their own to live on. Confronted with why she was doing that, since it seemed not even worth working on that marginal land, she told: "Before we had shifted our land to fruit orchard, we had enough grain to eat and we could even sell something. But since my husband has converted a bari field into a fruit orchard and takes the fruit to the markets, I do not get any money in return. I have to feed my children. So I am cultivating

4) Traditionally women retain a claim on the dowry they brought into the marriage.

maize on this land and hope we will get enough for eating." She has a double workload. She has to look after the fruit orchard as well as the bari land. Most of the wives of vegetable and fruit farmers agree that they do all the job and their husbands look after the marketing part since marketing distances require more than a day of travel; hence travelling would require an overnight stay. However, overnight stays of individually travelling women are culturally ostracized. Therefore, generally wives stay at home and seldom have access to the money (depending on decision-making structure and the wife's status in the family) and they cannot decide upon how the money should be spent. If the husbands are kind enough, women and their children get enough food to eat and clothes to wear. But there are many counterevidences that this is often not assured.

Livestock-vegetable interlinkages: The complementary nature of livestock and agriculture development is seen in the case of poultry farming. The successful vegetable farmers of Madhan Pokhara want to keep chicken also because of the high nutrition value of fertilizer from chicken droppings. A Brahmin poultry farmer, who traditionally considered chicken taboo, used to be the leading farmer with over 40 000 chicken and his poultry farm used to sell chicken droppings for a profit because there was a good demand for it and there was even advance bookings for chicken droppings!

Despite the ambition of the farmers to have 100 000 chickens in Madhan Pokhara, the number has dwindled to three or four thousand. This irony is explained by the nature of urban to rural interlinkage that has terms of trade stacked against the rural areas. Poultry farming was introduced by a Chhetri farmer of Madhan Pokhara who worked in a chicken feed industry in Pokhara. He was also the supplier of newly-hatched chicks. As with irrigation and fruit, the start of innovation was the more educated and progressive Madhan Pokhara from where it went to the rest of Palpa, proving the value of education and comparative advantage in access to information in economic development.

The feeling is that the hill farmers need a protected market from the Indian production in the initial stages. Nepali eggs can sell for NRs 2 whereas Indian eggs at only NRs 1.50. Free entry from India has caused problems of competition with Nepali eggs because the ancillary inputs are so much cheaper in India. The biggest problem is that of chicken feed. Hybrid chicken cannot survive without a balanced meal of grain, fishmeal, calcium, vitamins as well as vaccines and electric lighting. However, there is both uncertainty and high price of feed which cannot be kept in storage in large quantities because they tend to go bad very fast. Feed is produced in Pokhara and is transported to Butwal before it is brought back to Madhan Pokhara. The return trip from Butwal adds Rs 17 per bag from Butwal as transport charges. This is still bearable but the uncertainty is not. During the Nepal-India trade and transit impasse, shortage of feed led to the slaughtering of much of the stock because even by

foraging for grain in the surrounding villages it was not possible to keep them alive.

For development extension agencies and banks that promote poultry farming, the important lesson in synergy is that sufficient investments must be made in ancillary measures such as the creation of an assured source of supply, of being able to guarantee a reliable market and in transferring the risk burden from the entrepreneur farmer to themselves in the initial stages.

Harthok

Harthok is a newly-growing township where the road from Tansen branches off to Arghakhanchi on one side and Gulmi on the other. It is witnessing rapid growth since the opening up of vehicular traffic.

Ginger marketing: Ginger production is a good case in point. Before 1977, there was only one merchant in Tansen who bought all the Harthok and western Palpa ginger as a wholesaler. The price then used to be NRs 0.75 but now is about NRs 15 to 20 because the products are taken directly to Butwal on a tractor or truck from here. Since the construction of roads, the production of ginger has gone up by about 25 %. About 500 kg per family is grown in the villages surrounding Harthok, all of which are within 3 hours' walking distance. It is estimated that 25 % of the families grow ginger. In Khasauli village, an estimated 75 tons of ginger is harvested. Interestingly, the villagers bring back to Harthok, besides the regular kerosene and clothes, vegetables from Butwal. This is probably an indication of the mimesis effect: they are now beginning to acquire a taste for vegetables which never formed part of their diet before. With a time lag of some years, one can expect this part of the Palpa to begin experimenting with growing them and then perhaps exporting them. However, for this to occur, a host of secondary inputs must be assured: irrigation (which is difficult in this part of Palpa because the area is water scarce), reliable and frequent transport fast enough for perishables unlike ginger, and credit arrangements that stretch from Harthok to Butwal that would absorb the risk.

An important point that needs to be made is that the argument against roads as a means of exploitation by the urban centres against the villages does not seem to hold for Harthok. The villagers are now able to get a better price and assure for themselves some of the windfall profits that used to accrue to the Tansen *sahujis* (shopkeepers). It is interesting to compare this situation with the problems that people of Rupse and eastern Palpa face because they have a monopoly buyer and a lack of frequent transportation.

The difficulties of farmers relate to adjusting to new measuring scales *(jhape tulo)*. They do not know how to use thes. So their idea is that if they have to

be cheated they would rather be cheated once in Butwal than twice in Tansen and Butwal. This points to the necessity of confidence building by middlemen before farmers will trust them with their crops. This is also a factor contributing to the natural time lag in making a transition from an informal subsistence economy to a market economy.

With the advent of road, labour wages have gone up. Now it is NRs 30 to 35 when 16 years ago the wage was NRs 1.50. Perhaps this can be linked to the increase in the degree of freedom: a poor farmer is not tied to his landlord who pays him less. Inflation only explains a part of it.

The role of credit: Apples and citrus are exported to Butwal. Average land holding in this area is said to be 14 to 15 *ropanis* (1 ropani = 500 m^2) with a range of 2 to 30 *ropanis*. Some landless are cheated by shopkeepers with usurious lending rates, when the land is forfeited to the shopkeepers if the farmer cannot pay the high interest rates. Unlike in Madhan Pokhara where the farmers are more astute, the feeling is that the ADB/N has become the new landlord: very few farmers have benefited by taking loans from the bank and now the bank has most of the land registration certificates as collateral against loans that are difficult to repay because of the high rates of 18 % and lack of flexibility.

This calls into question the role of the state in banking. People understand very well that the money is given to the banks by aid agencies at 3 % but the ADB/N middleman increases it to 18 % which is felt to be too high. There is a demand that the interest rates be lowered to 5 % by reducing bank overheads. The feeling is that farmers take all the risk (hailstorm, monkeys, delayed rainfall, pests etc.) but the bank takes very little risk. A rural bank should be a rural bank, not a periurban bank, and rural loans should not be given on a par with commercial loans because the risk pattern is different. The farmer has to buy necessary goods from the town and the market is biased in favour of the urban dweller and not the rural masses. The price of rural products goes down but the price of urban products never go down vis-a-vis the rural goods. The whole concept of octroi tax (road tax), which is charged in Butwal and Tansen on commercial vehicle movement, is urban development at the expense of rural, a subsidy provided to townspeople by villagers through indirect taxation.

Mashyam - Koldanda

Koldanda and Mashyam are two settlements of Magars very close to Butwal on the highway. They are a major supplier of bananas and some vegetables such as tomatoes as well as some fruits (peaches etc). These villages form a "watershed" of the road of 2 to 3 hours of walking distance. Travel of greater distance with a load of perishables is problematic because of the stream that

can block movement and also the risk of having to stay the night which can entail increased costs.

Chhetri vegetable farmer: He began to sell his goods in Butwal fifteen years ago. Before the road opened, there was no bazaar he recalls. He first sold cauliflower, which he remembers sometimes having to take back a whole load because they could not be sold. Over the years, he has developed a clientele that assures him a ready market: if he is not able to retail at a higher price, then at the end of the day, wholesalers pick up whatever remains so that he is not at a total loss. Sometimes, if the price is good enough, he delivers to the wholesalers immediately and goes on with his other business in Butwal of buying necessities. These Butwal wholesalers take the products to as far away Terai districts, assuring Tinau catchment farmers a wider demand market.

An interesting point is his recounting the fact that within the last fifteen years, there was a flood of vegetables from India but hill farmers like him have managed to counter that. The important factor was that, even though Indian vegetables were cheaper by a rupee or a rupee and a half, it is universally acknowledged that hill vegetables taste better. Nepali farmers have managed to adapt to this comparative advantage and have increased their reputation for quality by selling products that are cleaner and with less inedible parts like stems and leaves.

Butwal

Haat bazaar: Haat bazaar in Butwal held on Wednesdays and Saturdays is the biggest vegetable market in Nepal. The next day, Thursdays and Sundays, the haat bazaar moves on to Bhairahawa; on Fridays in Manigram, on Mondays and Tuesdays in nearby Simra. It is acknowledged that the Butwal *haat bazaar* is not only the cheapest but also the most diverse and colourful because it is the meeting point of the hills and the plains. The diversity is indicated, for example, by the availability for sale of a rare type of live yellow snail for NRs 0.25 each. This rare commodity, regarded as a medicine for rheumatism and other ills, is collected in the highland jungles by those tribals living closer to the forests.

From the perspective of the farmers, bringing goods to the Butwal *haat bazaar* assures him a double security: it not only provides him the best chance of selling his goods at competitive prices but also the fact that a moving haat increases his security so that things can be sold the next day in Bhairahawa. Also vegetables can be taken over to India and same comparative advantage in taste can assure good returns. This security is very important for perishable products such as vegetables and to a certain extent even for fruit.

This market was created by the city fathers of Butwal in an attempt to outclass Bhairahawa, an older and larger settlement with the advantage of proximity to India. Butwal's haat bazaar became bigger and more diverse than Bhairahawa with a simple decision taken by the Butwal authorities some five years ago. In order to assure cheaper vegetables to the town dwellers, they took the decision to ban wholesalers from bringing vegetables into the haat. This prerogative was given only to individual farmers who could bring in whatever they could carry. Small farmers with simple loads are charged NRs 2 for entry and those wishing to erect stalls are charged NRs 5, which results in a net income for the municipality of NRs 3 000 per haat day. This indicates about a thousand sellers who have to be small farmers of the type found in Madhan Pokhara and Mashyam. What would have gone to middlemen as profits now accrues to the farmers.

Palpali vegetable seller: He is from Madhan Pokhara and has been selling vegetables ever since the road opened up. He remembers selling all the eggplants his sister-in-law grew in only 1.5 *ropanis* of land for NRs 18 000. He suffered during the Nepal-India trade and transit impasse because few vehicles were plying the highway and he could not bring his goods to Butwal.

His basic problems centre around quality seed. He buys it from the government extension agent and does not trust the private dealers because of his experience of mixed seeds that ruined his crop. He senses that many other farmers would like to buy good seed but are not sure of the quality. In order to go for seed farming, he cites the lack of land. Land for seed has to take double season with the same standing crop whereas vegetables can be harvested earlier and something else planted immediately.

The seasons in which the vegetables are sold are: May and June for tomatoes, March and April for cabbages, June to August for beans, eggplants, till November for greens and turnips and cauliflower all winter.

The important point about Butwal is its assured market, its place where the return goods can be brought, and newer possibilities explored. A case in point is ginger. It is a cash crop with a tremendous demand but the market interlinkages are not developed adequately. Palpali farmers grow them and could carry more to the market if the ginger were semi-processed by drying to become lower weight, higher value dried ginger. However, Nepali traders have not dealt with this in the past and the only ones to deal with this are the Indians with links across the border. Butwal traders mention that there is a heavy "informal" trade by boat across the border on the Gandak river, but Nepali traders do not have the necessary contacts. They are thinking of how to take advantage of this situation but at present have not received encouragement from the government.

2.4 METAL INTERLINKAGES IN THE PALPA - BUTWAL AREA

The study of metals in urban and rural economies provides insights into the nature of rural-urban interlinkages, which in the Palpa - Butwal region, appear to be especially fruitful. The Palpa-Butwal area has a long history of association with metal craft and metal trade both traditional and modern. Butwal and Tansen represent the modern metal scene while Bagale and other villages represent the older tradition.

Tansen

The tradition of modern metalwork, especially brassware and goldsmith, was brought to Palpa from Kathmandu by the Newari Banda (Shakya) community who arrived with exiled Ranas. The social carriers of ironwork were goldsmiths of Kathmandu as well as other blacksmiths.

Blacksmith and modern metal entrepreneur: He is the proud owner of the only electrified workshop north of Butwal within Palpa. His family originally hails from Kathmandu and migrated to Palpa with the exiled Rana governer Pratap Sumshere. Several blacksmiths of Kathmandu came to Palpa in the wake of a scandal. A case where a young member of the royal family was banished for manufacturing machine guns.

Although there were and are blacksmiths in Palpa, the modern metalworker is a man who took traditional metalworking into a new modern dimension. He has been operating his workshop for the last ten years. Previously, he worked as a motor mechanic with the Department of Roads. His main activities centre around vehicle repairs and making grills for construction. His workshop in Tansen conducts a roaring business in tyre and other vehicle repairs; and he is now considering expanding into a new workshop in Ridi at the far end of the roadhead.

The difficulties faced by this entrepreneur highlight the difficulties of the trade. He needs raw material such as sheet iron, flat iron, angle iron etc. for making grills which have to come from outside. Charcoal is also needed because controlling temperature with industrial coal is not possible. This technology does not seem to be there with small Nepali metalworkers and traditional skills have developed with charcoal which allows metalworkers to tell critical points in the process by the colour of the flame. As a result, local metallurgy is not feasible without charcoal which has to be brought from Butwal. Even then there is the risk of arbitrary confiscation if the Forest Department officials or the police feel like it, as there is no hard and fast rule about legal charcoal production in Nepal. This anomaly, blacksmithy in Nepal is not possible without

charcoal which cannot be produced legally, has encouraged a type of rent seeking behaviour of the officialdom.

As a consequence, the price of this essential item of productivity is much higher than (it is felt) it should be, incorporating as it does the risk factor as well. The price of a bag of charcoal is NRs 110 per bag plus NRs 30 for transport. In a day about 2 bags of charcoal are required by him.

Other essential items, like welding rods, are also something he has to depend upon for supplies from Butwal. Because of another factor of dependency beyond his control, electricity of low quality in voltage and frequency supplied by the Nepal Electricity Authority, he is forced to use expensive welding rods of 12 mm size for his work even though the job can, in principle, be done by 2.5 to 6 mm rods if the voltage was not so low. Low voltage is also the reason why he has to do most of his work after 10 PM.

The biggest problem he faces is that of credit. He is confident that if that can be arranged, all the other problems become secondary. The interest rate is *sayakada ek dekhin teen* i.e. 12 to 36 % per annum in the real money market operated by shopkeepers or traditional moneylenders. As to why he was not taking loans from the formal sector banks, his argument was that it was more expensive. This proposition was difficult to entertain initially as commercial bank interest rates in Nepal range from 12 to 19 % per annum. However, the following explanation sheds light on the nature of capital in Nepal and the difficulty of entrepreneurs.

Even if the trader's interest rate is 3 % per month (equivalent to 36 % per annum) as a borrower with credit in society, the trader has known his family and he has known the shopkeeper's family for generations, he can make repayments in kind rather than cash. This is a very important factor in a cash starved society like rural Nepal where, on the other hand, there is free labour time available. For instance, he can present an excellent Nepali knife *(khukuri)* he has made and has not been able to sell to others in lieu of cash payment. There is less rigidity in delayed payments and more understanding. He can explain why he was not able to pay a certain installment (because of a child's sickness, daughter's confinement, relative's marriage etc) and the installment is sometimes waived entirely and at other times can be met with a present of some fruit, vegetables or some free work. This can effectively bring down the actual interest rate from 36 % to 20 % or thereabouts, it is explained.

On the other hand, there are tremendous difficulties to obtain loans from the Agricultural Development Bank, Nepal Bank or the Rashtriya Banijya Bank for investments in rural areas. These banks have divided sectors geographically so that one is tied to a bank whether one likes it or not. The result is that there is no competition but a carving out of the area of influence for rent seeking reasons ("rent seeking" is a term increasingly used by the new political economy school, GALEGHER 1991).

The entrepreneur had difficulties processing the loans. The bank people had said that if the member of the Parliament *(Rashtriya Panchayat)*, provided a letter of recommendation to him, then they would be able to easily process the loan. The politician, however, assured that if he came to see him in Kathmandu, he would provide the necessary recommendation. The metal entrepreneur was frustrated: if the politician would not do him the favour in Tansen, he felt it would not be done in Kathmandu too where important people would be even less accessible. Without this recommendation, the bank people hinted at 25 % as "speedup" money, this on top of the 18 % that was the official loan. The result would be an effective interest rate of 43 %!

The entrepreneur did manage to get NRs 20 000 from a good manager of Rashtriya Banijya Bank on non-rent seeking terms as a rolling fund to start his venture. The manager, however, got transferred and his rolling fund project for small entrepreneurs fell through. The entrepreneur suspects this was because this help to small cottage industry people went against the interest of powerful beneficiaries of the system, and resulted in the manager being transferred.

This small workshop operator shows that most simple but hardworking people in the villages are unable to manipulate the state machinery such as banks and government departments to their benefit. On the contrary, these urban-based institutions manage to manipulate the villagers and skim much of the profit away from rural entrepreneurship to urban investments. One can speculate that for every entrepreneur that refused to take usurious loans from the formal sector banks there must be villagers that do succumb to the short-term temptation and suffer irreversible penury consequences. This form of rent ultimately ends up in urban investments such as building houses or sending the children of urban elites to better schools abroad, again enhancing urban "terms of trade" vis-a-vis the rural areas.

The entrepreneur's success is all the more remarkable in that he has managed to use the traditional informal institutions to his benefit. Since many of those who lent him money are also either owners of transport vehicles or those who depend on vehicles for the conduct of their business, it is not only altruism that has prompted them to support a small entrepreneur who is the only one to repair a flat tyre within the district. Another instance cited by him is the present he received from a Westerner five years ago who worked in the Palpa Mission Hospital in part payment (reward or as a present). It was a drill machine costing about NRs 6 000 to 8 000, and it has done wonders for his productivity.

He needs to bring practically all his raw materials from Butwal including tools such as welding transformers etc. Because the traditional credit system has

shifted to Butwal or Kathmandu inducing in its wake the flight of capital, the credit lines are down there and Tansen has thus lost to Butwal.

Old store owner in Tansen: This hardware store also stopped keeping iron sheets, which currently cost Rs 1 900 per quintal, in stock. This has aggravated credit constraints. For a job of NRs 2 000 or 3 000 he receives an advance of only NRs 200 or 300. He cannot be expected to buy all the raw materials required to finish the job, especially when raw material costs are the overwhelming component of the finished product.

Besides the bulk of his work in vehicle repairs, he enjoys a good market for excellent knifes *(khukuris)* made out of suspension spring steel. He mentioned that there are foreigners who come all the way from Kathmandu to buy his *khukuris*. For a no-frills design of excellent quality, he charges NRs 800 to 1 000. For high quality design in brass scabbard and horn handle etc. the price goes up to NRs 5 000.

The market for security grillwork on windows, he feel, is already saturated in Tansen: there is no more growth in this town. Also, if a grill is bought in Butwal, one enjoys cheaper prices because of more competition there as well as cheaper raw material prices. Also transportation costs do not play a significant part because one can buy many things from Bhairahawa or Butwal and load the grill together with rice etc. in the same tractor. This is the complementary advantage offered by a larger market in an urban area.

Traditional brasswork: Brasswork is supposed to be a specialty of Tansen, thanks to the presence of a relatively large Banda (Shakya) community. They have made Tansen famous for bronzework which consist of articles made of an alloy of tin and copper unlike brass which is an alloy of zinc and copper, and which is also used to manufacture various brassware.

The family of Tansen Shakyas is famous for brass figures of deities used in worship as well as brassware such as vessels used for traditional serving of alcohol *(rakshi)*. This is a dying craft: it is said that there are only two families in Tansen that still do this work. Besides the above reasons for the decline, the difficulty of obtaining beeswax for casting the mould was also cited as a cause. Similar to the case of charcoal, villagers are discouraged from coming to Tansen from the hinterland and selling beeswax collected from the forests by the possibility of arbitrary confiscation by the police or forest officials.

That traditional technology has ingrained itself as a part of life unlike modern technology is highlighted by a Newar coppersmith in Tansen. When he observed a worker carelessly throwing his pliers next to a pile of dishes to be washed, he severely berated his worker because of disrespect shown to his tools. This traditional attitude is a good indicator of the assimilation of technology by the traditional social system as well as of the respect for repair and

maintenance. The question now is how will the modern sector take up a technological dharma with a similar level of spiritual integration which the traditional sector has but is being lost.

Newar metal dealer and coppersmith in Tansen: His family has been in this business for as long as anybody can remember, even from the Rana days when Tansen was the administrative centre of nine districts. Its importance is highlighted by the fact that it was able to boast of a college campus in 1959 when the now better off Pokhara did not even have a high school. The fact that nine districts converged on Tansen allowed the coppersmiths easy access to a large market. The decline in the trade is due to a number of factors. The first and foremost is the decline of Tansen vis-a-vis Butwal and Pokhara, the second is competition offered by aluminium and plastic wares, and the third is raw material problems.

For an urban centre like Tansen, its locational value assured it of profitable business. As an administrative centre of what are now nine districts, it controlled a far greater hinterland through "common economic and cultural activities". Now these economic activities have dispersed to Butwal, Pokhara and other smaller urban centres along the highway; and Tansen no longer enjoys the monopoly position it once did that ensured an economic centre of gravity. Initially the beginning of the construction activities along the Butwal-Pokhara highway around 1967 encouraged a spurt in commerce which quickly declined as other settlements, made possible by the opening of the road, led to a stagnation. The opening of Tansen-Gulmi road drastically reduced business with roadhead characteristics such as cloth, oil etc. which shifted further. The possibilities of more diverse economic activities in Butwal or Kathmandu have also prompted a migration of shopkeepers or the educated elite to these centres taking with them the capital and creativity needed to maintain the cutting edge of economic prominence. Many "sons of Palpa" are engineers with HMG in the Department of Roads, Nepal Electricity Authority or the Civil Aviation Department who have very little to do with Palpa professionally.

As far as the metal trade is concerned, another demographic change has also affected its destiny: Tansen still enjoys prominence as an educational centre with both secondary and higher educational establishments. This has meant the influx of a transient population of 3 000 students who are profitable for the landlord class of shopkeepers living in Butwal or Kathmandu, renting as they do a room for about NRs 300 per month; but this is not so for the coppersmiths because students as a class do not buy copperware or support the trade in any way.

The transient population, in fact, is partly responsible for encouraging consumption of aluminium and plastic goods, leading to a decline in demand for brass and copperware. The cheaper price, lighter weight and thus the ease of portering has led the former to displace copper and brass. The demand for

copper pots is only in the hills, not in the Terai, and even there the demand is declining as aluminium pots replace them. The only item of sustained demand is the *taulo*, a conical shaped vessel with a convex bottom used to prepare both animal feed as well as for brewing country liquor. Even though there is flourishing competition from Butwal where imported large aluminium *dekchis* are beaten into taulo shape, many villagers still prefer copper *taulos* for durability.

A bigger problem for the metaldealer than loss of locational value or changing consumer preferences is his lack of confidence about raw material supply. The problem of charcoal has been described above. That of raw material supply (copper, zinc and tin in this case) is also very severe. Metal import is controlled through a system of licenses in Kathmandu; and the opinion of district craftsmen is that only the powerful in Kathmandu manage to have access to it. An oligopoly between the state-owned National Trading Corporation and Kathmandu Metal Trading Company allows large manufacturers easy access to imported metals. The smaller craftsmen have to get their supply only by paying a certain premium or through the informal sector.

Informal metal traders: The informal sector consists of scrap metal collectors *(kabadiwallas)*, the door-to-door itinerants who collect scrap metal in the villages and sell them to a central dealer such as the metaldealer in Tansen or a bigger dealer in Butwal. Many of the collectors are traders from the Terai who, as recent as five to ten years ago, used to migrate to India's Punjab in search of seasonal harvesting jobs. The disturbances in the Punjab has encouraged a shift to this new vocation. It is a profession of very marginal gain: for a net cash saving of NRs 600 to 1 000 for a season of work before they head home to plant or harvest their own smallholdings, scrap metal collectors work very long hours in sometimes hostile environment in the deep hinterlands. They collect broken pots and pans, leaking copper pots beyond repair and any item of metal that can be sold in Tansen or Butwal. The metaldealer in Tansen has a storehouse of scrap copper and brass that he either uses himself or sell as raw material to the blacksmiths who come from the villages such as Bagale or Luhung described below. Interestingly, the nature of the state and its inefficient enterprises are seen even in the scrap metal yards: many copper transformer coils, telephone and electricity drop wires, earthing wire and the like are seen a lot, leading one to suspect a positive correlation between low salaries in Nepal Electricity Authority or Nepal Telecommunications Corporation and the richness of the scrapyards!

Luhung

Blacksmith village: Luhung is a small village of blacksmiths about two hours trek west of Tansen. In the past, the village has been under usurious debt of 24 to 36 % per month leaving indebtedness for generations. This social stigma has in the past prevented this community from taking initiatives at improving

their situation, since any improvement would only be siphoned off towards redeeming unpayable debts. The result of this was twofold. First, anyone who strove for a better lifestyle could only do so away from this milieu. Migration to other large urban centres such as Pokhara, Butwal or Kathmandu could afford not only economic opportunities but also the protection of anonymity. Second, it inculcated a short-term vision in this society that having good food today was a more secure venture than saving for tomorrow.

Migration, the ultimate indicator of a breakdown in social order that is unable to adapt and cope with stress, was an obvious way out. Many of the blacksmiths migrate to work on a wage basis to the metaldealer in Tansen and other metal workshop owners in the area. The wage is NRs 70 per day for straightforward labour, with an addition of a supervisor allowance if he is able to bring in youths to work. While many more knowledgeable blacksmiths argue that if they form a cooperative for both manufacturing as well as selling the goods they make, they could make a better profit, the view of those doing labour seemed to be that a rupee in hand was worth two in an uncertain business.

In recent years, a new social order has been able to assert itself slowly. Partly as a result of an income generating programme and partly as a result of better awareness, two groups of blacksmiths have formed a type of cooperative which not only manufactures products but also hawks them from village to village, especially on the trail to Gulmi. The profit margin is claimed to be only slightly better than those who work on a wage basis; but the proponents argue that such a cooperative greatly reduces the risk of unsold items as well as enhancing their bargaining position thus increasing their intangible sense of well-being. The one outstanding success seems to be a blacksmith from Dharampani who has been able to develop a profitable access to Kathmandu market through his previous contact with income generating trainers.

All subsistence agriculture depends on the iron tools produced by village blacksmiths *(kamis)*. They cannot produce these tools legally because the charcoal they need cannot be acquired legally. The problems faced by the metalworking blacksmith community also owes its origins to the social mores regarding metalworking in particular and technology in general. In India, ironsmiths are not an untouchable caste as the blacksmiths are here. This social status has led to exploitation in terms of resource access as well as social behaviour. The bonded labour *(balighari)* system still siphons off the time and labour of the blacksmiths into traditional channels of surplus extraction. This social atmosphere is added upon by a pervasive attitude towards labour that relegates it to the bottom of the social ladder.

The culture of technology is not in its primacy. Unlike in western Europe, the social elites have not promoted or dignified labour. When the Rana exponent, a mechanical genius, was exiled following his dabbling with the manufacture of machine guns, the period also saw the exodus of many blacksmiths to Palpa,

a punishment for mechanical inventiveness. Now, they are not interested in having their skills transferred to their children: they would rather that the children migrate to cities and "get a job". Skills as a social asset are thus generally being lost. Loss of pride in work has also translated into a lack of interest in craftsmanship, leading to fake goods, shoddy quality and a corruption in technical culture.

There are two tales that highlight the social difficulties faced by this metal-working community in its process of modernization or absorption into the larger urban culture. The first is that of a young son who fled to Delhi after his father was arrested for making guns. By sheer luck, he was adopted by a family of prosperous mechanics in Delhi and eventually went on to become an aircraft mechanic. He returned to Palpa and married a blacksmith girl. The girl could not adjust to Delhi life and eventually came back to her native village. The couple's son became a mechanical engineer. He came through Palpa to visit his mother and uncles who were now living in the squalor that generally is the hallmark of a village of untouchables. The mother was quite satisfied with her lot since she enjoyed the relative success of having lived in Delhi and enjoying some affluence. She was lionized by her community and that was the acme of her social ambition. But the son was not able to stay on. Not only was he not accepted by other villagers because of his over-qualification as a mechanical engineer, but he was not accepted by other engineers and educated elites in the district because he was a blacksmith. Migration to the comfortable anonymity of metropolitan Delhi was the only remaining option.

A mechanical genius in Luhung: He repaired the welding transformer of the Tansen metaldealer. The transformer has been operating without hitch since then for the last six years. He has also made model aeroplanes that have flown in Tansen. The existing social system, however, has not learned to reward such talent. He was not able to find a job in the mechanical departments of HMG such as roads, electricity or irrigation. At present, he works in a lowly job in Tansen's cinema hall. However, fortune seems to be turning in his direction recently: the current trend is the demand for television dish antennas to capture Indian broadcasts and Thaman Singh is now in his element of tinkering and dabbling with a new electronic and metallic technology.

Bagale

Traditional blacksmith: This case provides a study of the conflict, contrast, pain and rewards of transforming from the traditional social system to a modern one. The blacksmith community of Bagale, as in many areas elsewhere, was a victim not only of an external set of circumstances that prevented it from having any access to opportunities but also of its own consequent loss of self-esteem that prevented it from taking initiatives to redeem itself.

Usury in the hamlets in and around Bagale was *sayakada teen ya char* i.e. interest rates of 3 to 4 % per month, working out at 36 to 48 % per annum. This system effectively kept all the poor in bonded labour since it was physically impossible to repay the loan faster than the interest mounted. This meant that the poor had to work for the landlord practically for free and had little time to improve their situation. The blacksmiths were under obligation to the landlord under the traditional salary. For a payment of 3 *mana* (1 *mana* = 0.3 kg) of grain, 3 *mana* of millet and 4 *mana* of paddy a month, the blacksmith was to repair and maintain all the agricultural equipment. In some cases, the return was 2 or 3 *pathi* (= 3.4 kg) of grain for full repair and maintenance. These rates were set decades ago and are still in place. Thirty years ago, the price was two rupees per pathi for grain, but now it is NRs 16 per *pathi*. These traditional rates do not take into account the modern phenomenon of inflation since they do not relate to cash. For the balance, the blacksmiths have to rely on the market and hence the exploitation becomes striking when one compares this with the current rates of agricultural wage labour *(khetala)* in villages which may be NRs 15 per day at the minimum.

This system leaves blacksmiths totally dependent on the landlord. Traditionally landless, the blacksmith had to rely on the landlord for vegetables with which to eat his millet puree, items that he had to supplicate for. An addition of beer was his lot if he kept the landlord pleased. Some food was separated as the blacksmith's portion *(kaami ko bhaag)* during festivals in a landlord's house and the blacksmiths were given a lot of food then. But even if there is a lot of food at the time of festivals, there is no method of storing it. So overconsumption during festivals and hunger otherwise was the general rule. In such circumstances, cholera and fatal dysentery were endemic as well as a host of other diseases. Now the progressive blacksmith village of Bagale has collectively given up drinking, gambling and unnecessary conspicuous consumption during marriage etc.

In addition to these imposed misfortunes, the blacksmith community had degraded to such an extent that there was no sense of cooperation among themselves nor was there any attempt at self-improvement. The wage rates as well as the terms of trade were against the blacksmith. There were no savings and whatever was gained from selling a product all went to unproductive and immediately gratifying consumption such as *rakshi*, meat or gambling. It was pointless to try to save or improve one's lot as that would catch the attention of the usurious landlord who would then make life miserable for this upstart "rich man". Partly because of *rakshi* and partly because of the landlord induced sense of competition among themselves there was much infighting among the blacksmiths. It was a classic case of a shrinking horizon and of the victims blaming themselves.

Total dependency for basic necessities and survival as well as control by a policy of "divide and rule" were the means by which the landlord and bonded labourer system was maintained. The relation of this traditional system to the current changes in the social order stems from the flow of information (in the form of news as well as education) and the emergence of a larger market (in that new opportunities arise that increase the available degree of freedom of the bonded labourer). With a little bit of external help (from NGO self-help programmes) the blacksmiths are availing themselves of the opportunity to free themselves. On the other hand, the traditional feudal forces have been fighting a reactionary battle. They have tried to use the state, or to monopolize access to it, so that the poor are not able to increase their leverage. Failing that, they have tried to enhance their rent seeking possibilities by opting for shopkeeping or monopolizing tantalizing entertainment such as video parlours along the track to the market. In these dynamics of a changing dependency, the poor have had to counter by preventing the landlord from having monopoly control over access to the market; and this they have managed to do through the formation of effective cooperatives that exploit not only the marketing of their products but also new possibilities such as vegetable farming, or creating new jobs in new areas such as knitting or weaving.

Since 1984, the traditional blacksmith from Bagale has been a beneficiary of a poverty alleviation programme implemented by a local non-governmental organization. This programme's primary focus has been to organize the poor to organize and help themselves. The thrust is to form a viable and working cooperative, even though informal, and to provide seed money as loan to accrue to a rolling fund that would essentially allow the bonded labourer blacksmiths to free themselves. As far as the blacksmiths are concerned, the formation of a cooperative has allowed them to take advantage of "economy of scale". For example, only one person can now go to the market either to buy raw material or to sell some of the products. It has also allowed them to withstand attempts by the usurious landlords to sow divisions and maintain control. They are now free to work for themselves and earn some money rather than work for free. The result is that he has paid off much of his debt bonds, has recently bought some *khet* lands for NRs 25 000 and built a house. He has also won prizes in agriculture fairs. Furthermore, to Palpa blacksmiths, it was a dream to go to Kathmandu and the saying was that if one died before going to Kathmandu, one would become an unfulfilled spirit. Now he has gone to Kathmandu several times.

Most of the income now available from their new efforts at agricultural improvements has gone to improving the local diet. Some surplus is sold within the locality. They have not graduated to selling vegetables in Tansen yet but consider that a possibility to increase their income, especially with regard to vegetables and ginger. They do complain that vegetable farming has not been so successful; and the main reason given is that their traditional skills were in a

different area (metallurgy) and not farming. They do not have the backing of their traditional farming knowledge regarding when to plant, what to plant, how to plant, how to harvest and where or when to sell.

The urban centre of Tansen is primarily needed for purchase of metal sheets, not so much for marketing of metalware which is done in the surrounding villages. Copper is bought at the rate of NRs 120-130 per kg for wire, and NRs 145-150 per kg of sheet. This is felt to be very expensive: if raw material could be had cheaper the blacksmiths feel they could do much better.

As regards raw materials, there is the universal problem of legal, or for that matter not so legal, charcoal. Many of the blacksmiths wondered if it could be replaced by biogas, in which case they could opt for a community biogas plant for the purpose.

The costing of metal products highlights the fact that a blacksmith's value added to the finished product is very little compared to the merchant's gains. A pot has 4 kg of copper and a *taulo* 10 kg. They were sold in Kathmandu at the rate of NRs 210 per kg, the ten rupees per kg was added as transport surcharge for bringing them to Kathmandu.

In Tansen the shopkeepers *(sahujis)* use the wage system. A metalworker gets NRs 14 or 15 per kg and NRs 10 to 12 per kg if he gives all the chemicals and coal. In Bagale, the cost of chemicals and coal (if one calculated the time cost of making charcoal assuming that stumps are free) is said to be almost 10 to 20 rupees per kg. The rule of thumb is that a metalworker works on about half a kg of copper a day. The result is that the total earnings of a blacksmith is between 20 to 30 rupees per day if he took all the risks and worked in the village on his own (together with others) rather than work for wages with a shopkeeper. But the risks and uncertainties are so high as regards ancillary input such as chemicals and coal that many opt for the easier option of working for wages.

The Bagale copper pots and cooking pots are almost twice the weight of those manufactured in Tansen because in the former they are beaten out of one mould while in Tansen they are of sheets. This has given Bagale goods a better reputation in the villages because of the weight and durability, but it also costs more not only because it has more material but also because it uses more charcoal to first melt the copper and then more manpower to beat it to shape. It takes about one bag of charcoal and three people working for two to three days to make a Bagale copper pot. It can also take 3 to 9 days of moving around the villages to sell a pot. If people want to keep a copper pot *(gagro)* for themselves, they opt for Bagale durables: if they need one as a present in weddings, they opt for the Tansen one which is cheaper by half.

Because of the self-help programme, he and other blacksmiths have become coppersmiths, but many others still continue to work with iron manufacturing. Iron is brought from the metaldealer in Tansen. It costs NRs 25 to 30 per kg. Selling is not by weight but by bargaining in a process which is called *goru molai*, a lengthy process of bargaining where the one with the least patience is the loser. Iron has not been a big business because the work is not refined in that it has more of a value-added skill. If one can put in more labour, then iron can give more profit but it cannot be done by a household economy but only one where a larger scale of enterprise is involved. And in order to do that, one needs a guaranteed and assured market.

The reason to go to cities is to buy copper and iron. The price is similar in Tansen and Butwal, the difference is may be only NRs 5 which hardly justifies the bus fare. The merchants are able to do this because they bring the material in bulk and also because of cartelization that has resulted from telephones. The shopkeepers are of the same family in Tansen or Butwal. So any untoward shift in clientele is immediately reported by means of telephone. If the blacksmiths try to take advantage of a better price in Butwal, their movement is known to Butwal shopkeepers even before the blacksmiths arrive there.

One important factor discouraging them from trying to market their products in Butwal or Kathmandu and to rely on selling in the villages is that the police arrested or harassed them when they tried to take the goods and sell them in Kathmandu. This signifies the lack of network and interlinkages: without a man in Kathmandu with good links, these simple villagers cannot get their goods released from the police. There is a general impression that the blacksmiths are easily scared, something that has an element of truth in it because of the long history of exploitation; so the police attempt some rent seeking behaviour. When this matter was discussed in Bagale, many blacksmiths were of the opinion that those families who exploited the poor in the past continue to do so even with the newly-educated generation because it is they who can take up government service such as joining the police force now. According to them, the feudal exploitation mentality has expressed itself in a *jaagir khane prabitti*, i.e. a tendency to gravitate towards lowly paid but powerful civil service jobs with high rent seeking value.

Butwal

Big Newar metal trader: He is the son of the metal dealer in Tansen (see page 79) and conducts his business in Butwal from a "pots and pan" shop. He is able to supply the family's Tansen end of the business all the required raw material as well as to provide a Butwal retail outlet for anything produced in Tansen. He stocks all types of cooking utensils from factory manufactured aluminum, stainless steel or plastic dishes to village manufactured bronze, brass or ironware. He also buys and sells metal in the raw, either as imported sheets, angles or scrap metal.

It is his considered view that all metal trade is declining and does not have much of a future in light of the pressure from modern metal goods industries, especially the imported goods. In the face of competition from manufactured stainless steel, aluminium and plasticware, local manufacture of utensils is not competitive and people buy local brass and copperware only out of a force of habit, not because of need or comfort of use. The future therefore is in commerce (i.e. importing and selling by taking advantage of imperfection in consumer knowledge) and not in industry (i.e. using local labour and skills in value adding to raw materials).

An important reason he cites for the decline in brass and bronze manufacture is the price of raw materials which is dependent on state policy, one element of which is double and indirect taxation. In 1984, on top of the regular import tax imposed on all metal imports, an additional 6 % excise duty was added on the imported raw metal even before production with the assumption that it was going to be used in production anyway. In 1986, an additional 16 % of sales tax was introduced to the imported raw material, again with the justification that what was produced was going to be sold anyway. Thus raw material price jumped up by 22 % over the previous years. The impact of the policy of levying production and sales tax on goods even before production and sales was felt most in the informal sector of blacksmith household production as well as small entrepreneurs in the semi-formal sector: the raw material was already more expensive and their value-added labour and skills could compete but little with industrial enterprises from abroad. When this factor is added to the existing monopoly in imports given to a cartel in Kathmandu, the price of raw materials becomes unbearably high for small Nepali workshop owner.

The price of metals shows the importance of an initial control over the supply of material through a command over licenses or access to those with licenses. Nepal Metal Trading Company's price of copper is NRs 117 per kg. Quality Palpali alloy (made of copper and tin) requires copper at the above price and tin at NRs 360 per kg. The price of this bronze was NRs 115 per kg in the past before the excise and sales tax were added. This however is no longer possible. It is interesting to compare this price with the NRs 150 per kg of copper that the blacksmiths from the villages pay. As regards chemicals, sulphuric acid is brought to Butwal at NRs 19 per kg and is retailed at NRs 45 per kg. The rapid inflationary trend that the Nepali rupee has shown vis-a-vis the dollar also contributes to uncertainties in price.

Metal industrialists in Butwal: They use semi-permanent labour of blacksmiths from Luhung near Tansen to beat copper sheets into *gagros* to sell in the hills of Palpa up to Gulmi. Many of their goods are sold in the *haat* bazaar of Butwal or Bhairahawa obviating the need for expensive marketing, such as

with the village blacksmiths who spend days roaming the villages to find a buyer. Interestingly, they pay their labourers NRs 10 per kg of work, little less than the metal dealer in Tansen who was offering up to NRs 12 per kg. The intriguing question of why the blacksmiths of the same village of Luhung would choose to work in Butwal when nearby Tansen was offering better rates was explained by the fact that subsistence was much cheaper in Butwal with room rents as well as food much less expensive and the climate warmer entailing less expenditure in clothes. The cash income could also be better utilized in Butwal to buy many necessities cheaper and of greater variety than in Tansen.

Metal selling shop in Butwal: manufactured light weight aluminium pots are competing with the traditional pots made by local blacksmiths. The lack of cheap raw material is a major constraint for local blacksmiths.

Scrap metal trader: The metal scene in Butwal is more interesting for its thriving scrap metal trade. The scrap metal trader Ibrahim has been plying his trade in Butwal for the last seven years, taking off from the point where the previous scrap metal tycoon left off. His main clientele are the government departments such as roads or electricity who auction off old vehicles, cranes, bulldozers etc. after completion of a project. Small time collectors who scour the hills form only a small fraction of his turnover. The standard buying rate for scrap is NRs 5 per kg and the selling rate is NRs 6.

In principle, he should be mainly supplying the scrap to rolling mills in Bhairahawa or Birganj; but his complaint is that they do not buy Nepali scrap but prefer to import it. The main reason, he mentions, is the NRs 2 per kg that industrialized countries pay to have their scrap removed, often paying for transportation themselves. Such scrap still has valuable copper or other such useful material of great resale value, unlike Nepali scrap which will have been stripped to its bare essentials before being auctioned.

The availability of machine parts allows him to bring his creativity to play: he is able to cannibalize various discarded pieces of equipment to cobble together a functioning unit. In this manner he has managed to reconstruct a functioning mechanical crane as well as trucks and jeeps, the latter for as low as NRs 400 000 when the market price of a new one is over NRs 2 million. His main complaint is that the police will not give him a new "blue book" of vehicle registration since, in the process of auctioning, he is not provided the original "blue books" bearing the chassis and engine numbers. He asks ruefully if old Japanese Toyotas can be reconditioned in Thailand and brought to Kathmandu as new and operated as taxis, what is wrong when a Nepali does this reconditioning with material available in Nepal? This ambiguity in state regulations has encouraged the proliferation of the informal economy. Not only are his cranes operating in the grey economy (a fact he will not openly admit but grin when mentioned), but the demand for spare parts, especially in India, is being fulfilled.

Another scrap metal trader in Butwal as well as one of Bhairahawa are scrap metal "retailers". Most of their scrap metal comes from discarded vehicles or those irreversibly damaged in traffic accidents. Many salvageable parts fetch a very high value as spare parts in India or, to a smaller extent, even in Nepal. However, Indian rules are very difficult to manage, as import regulations are very strict. The result is that a thriving bicycle trade is in operation between Bhairahawa in Nepal and Sunauli in India. The Butwal scrap metal retailer alone has some twenty cyclists crossing over to India with spare metal parts every day. Similar figures could be expected for others. The crude estimate is that some 50 kg of such parts per cyclist per month for nine non-monsoon months is the scale of the trade. These traders wish that a proper district level government policy in this matter would help regularize the trade, give the government some revenue that is now foregone, and free the traders from fear of risk.

Engineering works: Butwal has grown as a strong centre of engineering and mechanical works. Even before it became the crossroads of Pokhara and east-west highway, the nucleus for this development was there in the form of the United Mission to Nepal's Butwal Technical Institute and the Butwal Power Company. In 1965, the first lathe machine was operated here with a diesel engine by an entrepreneur originating from Palpa. Prior to this, one had to go to

Gorakhpur in India even for thread cutting. When the Butwal - Pokhara highway was opened in 1969, a sustained market for mechanical works was made available; and, when work on the east-west highway had begun here in 1970, there followed a period of rapid growth which shows no sign of abating. One further consequence of the development of Butwal as a transport focal point was the increase in tendency of other industries to take advantage of the transportation facility: some ten to fifteen years ago, there was a proliferation of rice and oil mill processing the agricultural produce from the fertile plains in Butwal. With the increase in road network, rice and oil mills have shifted away from the town closer to the source of supply; but Butwal has built on this mechanical base and diversified into new directions such as textile mills. Several textile firms are now in operation, expanding from handloom to spinning mills.

As per the encouragement given to commerce by government policy, Butwal has developed into a hardware supply centre. Besides direct import by Palpa itself, Butwal transports north every month about four to five tons of corrugated roofing sheets (one truck load), 36 tons of steel reinforcement bars (approx. one truck per shop from the twelve major hardware stores in town) and additional amounts of nails, fittings, fixtures etc.

It is said that fifteen years ago there were practically no big hardware stores in Butwal: they were only in Bhairahawa or further in Sunauli in India. Butwal was able to outclass Bhairahawa because of three reasons. First, its commanding position at the neck of the outlet of the Palpa hinterland assured a natural advantage. Second, the presence of Newar traders *(sahus)* with family and business interlinkages all over Palpa and even further allowed the stretching of commercial credit across time and space held together by family and clan interlinkages. Third, the policy of Nepal to encourage trade diversification and consequent import of third country goods also worked to the advantage of Newar shopkeepers with good interlinkages with Kathmandu as opposed to Bhairahawa traders with good interlinkages in India. Corrugated sheets, reinforcement bars and even cement are items that are often imported from third countries as part of commodity grants, donor agency soft loans, or even bidding for licenses in Kathmandu.

2.5 FURTHER RURAL-URBAN INTERLINKAGE ASPECTS: LIVESTOCK, SOAP AND CARPETS

Livestock

Livestock rearing in Madhan Pokhara also highlights the difficulties in rural-urban interlinkages. Cows and buffaloes are reared for milk, some used for self consumption but the rest sold to the dairy in Pokhara. Forest protection has allowed more systematic harvesting of the little forest land that is available than short term exploitation of forests. Stall feeding, that the forest protection has encouraged, has also meant that the dung is now available for use as fertilizer in the village's lucrative vegetable production instead of being lost in the forest.

The successful rearing of Jersey cows, buffaloes and other animals has come about more from a dynamic informal sector than the formal sector. Improved breeds of cows and buffaloes are bought from private breeders in Manigram south of Butwal. Unfortunately, loans from state-owned banks are not easily available for the purpose. The banks insist that the animals be purchased from their authorized dealers, and these dealers, rather than promote national livestock breeding efforts, insist on importing animals from Gorakhpur in India. The complaint about this procedure is that not only is it more expensive but that there does not exist sufficient leverage to elicit accountability from the Indian supplier if the animals are of less than pure breed etc.

Similarly, a state-enforced policy through the National Dairy is that they procure only milk with 5 or more percent fat. This is possible for those who keep buffaloes but, under Nepali fodder conditions, cow's milk can rarely exceed 4 % in fat. This has also discouraged taking loans from the formal sector banks and selling milk to the formal sector's dairy.

While vegetables and fruit predominate in Madhan Pokhara for export to Butwal in the south, the newer settlement of Harthok is a beneficiary of milk export to Pokhara in the north. There are a significant number of buffaloes, although it is said to be less than in other areas because Harthok and its surroundings are drier. The production is about 5 liters of milk by one buffalo per day. Self-consumption is half and half is for sale. The range of production of the settlement is 30 to 150 liters (during the right season) per day. About 5 canisters of 40 liters are taken to Tansen per day from where the milk is taken to a chilling centre and then on to Pokhara. The Butwal-Pokhara road has led to selling of milk along the road corridor and some increase in production. There was milk production before road connection but none for sale as such. After a certain time lag, with the absorption of information about new possibilities, sales and production picked up.

The problem of procuring animals is also faced by yak herders of Dolakha. The price of one animal increased in 1991 alone by NRs 2 500 to reach NRs

10 000. At the prevailing 18 % interest per annum, the interest payments alone amount to Rs 1 800 when the returns to be expected from the sale of the milk at prevailing price set by the government-owned dairy and cheese factory is between NRs 1 500 and NRs 2 200. Even in the best cases, it hardly covers the cost of feeding and maintaining the animals. Old yaks cannot be culled in Nepal because of the anti-cow slaughter laws and have to be smuggled into China, adding to the economic risks and costs. In addition, the Kharka (pasture) Nationalization Act 1974, although ineffectively applied in practice, has contributed to the dismantling of the traditional management system without replacing it with a new one, thus leading to an increase in rent-seeking propensities wherein officials vested with control over "government" land are able to extort one to three thousand rupees per animal.

The net result of such state policies are that it is cheaper to supply tourists and trekkers with imported packaged cheese than with domestic products.

Soap Production

This cottage industry production of soap uses *chyuri*[5], a fodder tree whose seeds are rich in oil and which grows well in the lower middle hills of Nepal, as input material. The fruit itself is edible and the seed is pressed in a traditional oil press (*kol*) to extract the oil which is liquid at higher temperatures but solidifies like traditional animal ghee at normal temperatures. Since *chyuri ghee* is slightly bitter, it is not eaten in large quantities such as animal ghee but is used mostly for stir fry preparations. *Chyuri* trees grow extensively in the case study area of Palpa as well as the deeper hinterland of Arghakhanchi and Gulmi. Its economic use was limited as the demand for *chyuri ghee* was confined to household consumption in subsistence villages.

In 1975, a Palpali soap entrepreneur started Satyawati Soap Industry based in Tansen. The product was a hard soap preferred by villagers made from *chyuri ghee* which contributed about 25 % to the total cost of the soap. The reason this soap was cost-competitive was because, when the entrepreneur began his factory, chyuri ghee could be obtained for as low as NRs 10 per kg while its immediate substitute, palm oil, would cost NRs 21 per kg. Cow and buffalo ghee cost NRs 27 per kg. Even now, when the price of animal ghee has gone up to Rs 100 per kg, chyuri ghee can be had for as low as Rs 15 per kg.

Since *chyuri* trees are partly domestic but often grow in the wild, the villagers collected seeds during the pre-harvest season and either produced the oil themselves or sold the seeds to the soap factory. The soap entrepreneur estimates that he used to buy about NRs 400 000 worth of *chyuri ghee* from Palpa and other districts and that an average chyuri collecting rural household would earn

5) = Bassia butyraceae

NRs 2 000 cash income per season. In a subsistence economy, this was a fairly significant cash flow.

His problems began about nine years later in 1984 when the government in Kathmandu added 6 % excise duty on his products. Previously, the government had enunciated an industrial policy that considered as "industry" only those that operated on electricity and thus liable to excise duty, while the rest were considered as "cottage industry" and thus exempt from this type of taxation. Two years later, in 1986, a 16 % sales tax was added to cottage industry goods as well. This was still bearable since most of the cost could be passed on to the consumers once a market niche had been captured. The final blow came two years later in March 1989 when the Nepal-India trade and transit impasse occurred. Suddenly critical items such as caustic soda, fuel and other chemicals essential for the production process were not available and production stopped.

In the hope that the deadlock would be quickly resolved, he continued to pay his employees' salaries for five months even though soap production was effectively closed. When the impasse lingered further, he had to close down his enterprise, salvage what he had, and divert his resources to another venture: Satyawati Transport, based in Butwal. He is reluctant to venture reopening his soap factory for reasons of inertia: to give up a running transport business and attempt to regain his lost market for soap is seen as entailing too high a "transaction cost". Given adequate encouragement from the state, he is willing to help some other entrepreneur to take up the cause but does not feel up to the challenge himself.

The hardest hit have been the villagers who had benefited from the establishment of the soap industry. There is no alternative commercial buyer for *chyuri ghee* or seeds. As a result of events at the macro policy level, a certain type of economic activity and a certain cash benefit for a significant population of subsistence villagers came to a halt.

Kathmandu Valley Carpet Industry

In recent years, the carpet industry in the Kathmandu Valley has gained significant importance in terms of off-farm employment[6] and has become the biggest earner of foreign exchange income for Nepal. Side effects of this boom are traceable even in the surrounding hill districts. There are reportedly villages in Dolakha (Busaphedda) where only old people and small children are seen. All the rest, including boys and girls, are in Kathmandu working in carpet factories. Many young people working in the carpet industry have permanently migrated to Kathmandu and return home only for festivals. Some social links are maintained and occasionally they send some money to support their family members in the village. This flow of funds, however, not always compensates for the losses for the agricultural productivity caused in terms of skills and availability of labour by the out-migration of the young generation. Occasional observations in a village in Dolakha district reveal a lack of agricultural labour especially during peak harvest periods and irrigation systems can no longer be properly managed due to the absence of skilled and capable family members (INFRAS 1991 a).

Woolspinning and carpet weaving is undertaken in many villages in Dolakha located in the vicinity of the Chinese border where the raw material, Tibetan sheep wool, was available. This work absorbs considerable manpower during slack agricultural season and supports in earning cash income. The carpet manufacturing process is mostly manual and therefore has an extremely high value added. However, this job is mainly performed by women and children whereas men migrate seasonally to find employment in portering or construction work.

The working conditions in carpet factories reported by the local press and several persons interviewed are assessed as an insult to human dignity. Exploitatively low wages forcing the migrants into dependency and debt traps, unhealthy working conditions, lack of sanitation facilities in the labour quarters and even sexual harassment of female labour are reported.

Miss Ghimire, a female labourer in a Kathmandu Valley carpet factory reports the humiliations enforced on her and her colleagues as follows: "We get paid on the basis of square foot of carpet produced. For work we need to get wool, for getting paid we need to pass our carpet through quality check. Wool supply and quality check are functions in the hand of men. Since we live unmarried here, these men request sex in exchange for wool or quality approval. What shall we do? We need the money. My parents have taken a loan from the factory owner. I have to pay back this loan by working here. So I have to give what our bosses ask for. The most attractive girls from our factory are requested by the manager to do it with the carpet traders from Germany or other countries, if they come for a stopover to Kathmandu."

6) The carpet sector alone employs between 200 000 and 300 000 employees, of which approx. 40 % is child labour.

When a physician supporting one of the NGOs struggling for an improvement in working conditions in carpet factories had visited a number of factories he found about a third of the female carpet labourers pregnant - many of them without knowing that. Many of these children will be born into a street life in Kathmandu.

Further elements of the prevailing exploitation of the carpet industry labour reported by the local press and confirmed by all persons interviewed are the prevalence of child labour deprived of schooling and the lack of adequate housing and sanitary facilities for the carpet industry labour force.

The social drama caused by the exploitive working conditions in the carpet industry was realized at a late stage of our research only. The few interviews conducted illustrate how the exchange of goods with the world market induces tremendous social cost which are externalized mainly on women, children and - from a broader social perspective - the next generation. Besides these social costs the carpet industry also induces considerable ecological damage.

Several factors have induced a concentration process in the Kathmandu Valley and illustrate "economies of scale" effects in urban centres: the accessibility by road has become an important factor for cheap transport of carpets to the sales or export shops, which are mainly located in Kathmandu. In recent years carpets are being washed in Nepal rather than exported unwashed, for which considerable amounts of fresh water and chemicals are required. Although water is scarce in Kathmandu, the demand of the carpet industry is increasingly covered by pumping ground water. The waste water flows uncleaned into the river system draining the Kathmandu Vally. Since this water is not taxed, resource depletion and resulting pollution of rivers by chemicals are fully externalized at present. The public discussion enforced by the Rio Conference process has urged the Prime Minister to take up the matter. Urban planners now call for a regional planning framework and some of them suggest that polluting industries must be located outside the Valley. This "out of sight, out of mind" strategy would just geographically relocate the environmental damage induced and is therefore contested by other interview partners. The site Kathmandu Valley provides strong comparative advantages to the carpet industry. The final product, carpets, is mainly exported by air freight via the Kathmandu airport. The close availability of services like efficient modern banking sector (offering money at favourable terms) and government offices (for export procedures), and availability of buildings and sheds to house large numbers of workers, have strengthened the importance of Kathmandu vis a vis other locations.

Approx. 70-80 % of the labourers in the carpet industry are children and women. All these casual labourers come from outside the Kathmandu Valley and are mainly involved in spinning, weaving and cutting.

These factors have induced a self-feeding concentration process of carpet manufacturing in the Kathmandu Valley. The dimension of the external social and environmental effects caused by this concentration process is summarized above. Further negative downstream effects are induced in terms of rapidly growing infrastructure needs and an unpreceded settlement boom.

The concentration of large-scale carpet industries in the Kathmandu Valley has besides tourism and aid inflow contributed to a large scale migration boost and to a mostly uncontrolled growth of settlements in the Kathmandu Valley. The related demand for labour (construction sector and carpet industry) has resulted in relatively high wage levels in Kathmandu (compared to other urban areas in Nepal) attracting yet new migrants. An important factor for potential migrants from rural areas is also the perception or worldview that the risk of not finding a job in Kathmandu is very low. He or she believes that **something will be found** in rich Kathmandu and hence the self-perpetuating propensity to migrate there.

2.6 MIGRATION UNDER MARGINALITY CONDITIONS: THE CASE OF BAJHANG

In the case of Bajhang, a remote mountain district in far western Nepal, from where approx. 20 % of the male population migrates temporarily to Bangalore and several other cities in Southern India, human mobility is - among other things - a striking phenomenon of interpenetration between the "rural" and the "urban".

The marginality of remote mountain areas is strikingly expressed by the fact that an increasing share of their (male) population has to be mobile. Mobility, especially temporary migration to urban centres, becomes increasingly a salient feature of the rural process in remote mountain areas. Migrants are farmers and, of course, members of rural households and of rural communities, but as "migrants" they are absent from a given local rural context. They have become part of the urban labour force. Hence, from the perspective of outside observers, it is difficult to think of them as constituent agents of "rural development". Still, the temporary absence of the migrants from local economies and from the local sociopolitical contexts, and their continuous movement between home and "outside", is a crucial factor affecting contemporary life within marginal rural systems. Temporary migration from rural areas is a rural fact, an indicator of ongoing changes within rural societies and a striking example of rural-urban interlinkages which find expression in human movements.

Background

Bajhang is classified by the Nepali administration as a "remote" district of Nepal. It is indeed far away from the national political and economic centre in Kathmandu as well as from the Nepali and foreign centres of economic growth. In a "Twin Otter" 18-seater aeroplane passengers and goods can fly into Bajhang from the western part of the Nepali plains within 30 to 40 minutes. People and mule caravans, starting from Chainpur, Bajhang's principal town, can reach a motorable road within three days and return in four days loaded with goods. Sheep and goat caravans need about ten days for the the same distance (coming and going). Apart from some scarce and valuable forest resources hashish was, until one decade ago, Bajhang's only important export article. Since its production has been forbidden, the Bajhangis have had to rely on agriculture, pastoralism and crafts such as textiles and bamboo products. In the last few decades, Bajhang has been subjected to devastating earthquakes. Valuable fields were and still are swept away by floods and landslides regularly. Forests, pastures and agricultural land is scarce. Even if land is taken from the few large landowning families, the amount of confiscated land would not be sufficient to support the rest of the population growing at a high rate.

For the majority of Bajhang's population Kathmandu was beyond their reach. Though many of them were often on the move, their routes were basically leading to adjacent parts of Tibet (trading in salt, wool, grain) and to India (trading in fabrics, spices, labour migration). Compared with the route to India the way to Tibet was shorter but more difficult and dangerous in parts.

Many informants have estimated that about 60 % of the male population migrate from Bajhang temporarily. A substantial number of them leave their homes for 2-3 months during the slack agricultural winter season and travel to Kumaon where they mainly work on construction sites and as porters (rural to rural migration). Earning money is not the principal motive for this forceful migration. Demand for skilled and unskilled labour on project sites in Bajhang itself is on the increase in recent years, and local contractors and traders often face difficulties in recruiting labour in Bajhang. However, money cannot buy food in Bajhang. Men must leave their families and their food supplies behind, work and "eat outside". A substantial number of men also leave Bajhang in order to earn money as watchmen in southern India, especially in and around Bangalore.

Social Structure and Spatial Mobility

The often repeated sentence: "spatial mobility is social mobility" holds in some cases of temporary migration reported from Nepal, but in the case of Bajhang is only rarely true. In connection with migration, social mobility depends - among other things - upon such factors as the overall socioeconomic structure in a particular region, the socioeconomic background of the migrants as well as their social networks "outside". In some areas of Nepal, cases are known of improving social status of returnees from (especially British) Gurkha-regiments. Several upper class families of Bajhang were able to improve their position by taking advantage of their family ties to the Nepali central élites (relatives of the ruling class, political clients to the central elites in former times); their social networks enable them nowadays to take advantage of the most lucrative resource in Nepal, that is the state institutions. The temporary migrants to Bangalore lack this type of relationship. When they come home, many of them bring savings, but hardly one of them has subsequently managed to attain a leadership position. These positions are already taken by those who can handle supralocal links leading to the Nepali capital, and hence state institutions.[7]

Migrants venturing into the outside world have to overcome a twofold distance:

- The actual spatial distance depending upon the time which is required in order to shift places.

7) In view of the very low level of economic development participation in supralocal links with entrepreneurial networks have not yet emerged as a forceful resource.

- The tremendous social distance between the local society and the urban centres. Members of rural societies in remote mountain areas have great difficulties in coping with the increased complexity away from their local context. Depending upon their class position their disposition to handle the outside world varies.

The lack of transportation facilities does not hamper mobility. It may even affect mobility positively since lack of food and very high commodity prices (because of high transportation costs) compel men to go outside even when they have some cash in hand. Transportation affects of course men's choices when it comes to paying transportation fees. The low stratum of the local population walks to Kumaon while the more resourceful "Bangalories" (the name of Bajhangis who work in Bangalore) are able to fly from Bajhang to the Indian border. Besides money, social ties decide where a man is heading to.

In the context of spatial movements, the rural social structure has to be modified by considering the importance of time/space distance to urban centres, which translates into social distance. The transition from rural to urban areas is one towards societal complexity. Even those with a high social standing at home very often lack crucial properties (such as participation at supralocal networks; information, skills) which are required in order to acquire dominant positions within societal centres (politicians, bureaucrats, entrepreneurs). More often than not the lower the social standing at home, the more difficult it is to make a successful step into the outside world at Bangalore. Social standing determines peoples' abilities to calculate their chances and to act accordingly; to influence their future by practical induction; or even to take risks by weighting the possible against the probable. Peoples' dispositions to consciously shape and improve their fate results from the societal conditions.

Migration and Social Status

According to SHRESTHA (1990), *"in general, migrants from the subordinate class cannot make a strategic choice (...). Their migration, regardless of its form and duration, is a survival move, an indication of their perceptual or actual realization that they are unable to eke out their subsistence by adapting to the existing social relations of production, or of their inability or unwillingness to revolt against the existing socioeconomic order, in their source areas*[8]*. In contrast, dominant class members have various socioeconomic alternatives at their disposal. (...) they may view migration as a sound economic strategy and decide to move to a new area at least for two reasons. First, migration serves as a vehicle for them to expand the geographical sphere of their power base*

8) Or just to protest against some of the inequalities, or strive to achieve some rights.

Most bulk imports like food grain and consumer goods have to be portered or carried by sheep and mule caravans. Chainpur, the administrative centre of Bajhang is a three days' walk from the nearest roadhead.

and economic horizon. Dominant class families, therefore, dispatch certain family members to areas where new lands and/or opportunities are available, thus leading to a "migration of dispatchment". Second, migration is a mechanism to minimize potential risks associated with an expanding family size in an economic environment where even dominant class households may find local opportunities too limited for further advancement. This becomes an important consideration, especially when the possibility of the expansion of landholdings is almost nil."

The majority of Bajhang's migrants who move temporarily to Bangalore and the surrounding urban areas are neither members of the subordinate class, nor do they belong to the upper stratum of the local society. They go to Bangalore either because they are not able to satisfy their needs beyond mere subsistence (such as consumer goods, schooling of children), or because they want to improve their living conditions by buying additional plots of land (which can be rented out); seldom by establishing a small business (usually a retail shop); or by striving to shift to a less marginal area (usually the Terai).

The chances of middle farmers depend upon their standing at home. They lack knowledge in order to use their experiences in the outside world for other improvement than some money savings. Those who go to Bangalore have land,

but they lack a sufficient amount of school education which would enable them either to earn cash at home (e.g. as teachers) or to enter into administrative service. Those who can find a "white-collar" job do not go to Bangalore. Local "white-collar" jobholders may envy the "Bangalories" for their earnings but they look down on them as being simple.

Different from the members of the upper class, middle farmers going out of the area do not have the opportunity to establish new contacts; they are taking advantage of the already existing networks. Their option is not expansion of their resource base by enlarging their social horizon. What they hope and can do is to find a "little Bajhang" in an other place - in the case of Bangalore about 2 000 km from home. Their venturing outside does not allow for a future expansion of family ties. What is more important is that, due to already-established links seemingly only one existing option opens up, that of being a watchman which is an occupation not requiring any special skills and thus not demanding the development of any new skills. Thus, Bangalore is truly a "little Bajhang" and as such it is a dead-end. (For importance of the interlinkage aspect new skills/technology, refer also to Madhan Pokhara, page 61).

How "Bajhangi" Farmers adjust in the city

From the local perspective, seasonal migration to Bangalore is a step from local scarcity to the external potential of plenty. People hope to make their luck outside, and indeed, their opportunity is by Bajhang's standards significant: about two thirds of the men come home with savings, few remain in Bangalore (hoping to go back one day); but the rest have to sell some of their possessions in order to repay external debts.

Practically all the men from Bajhang are watchmen in Bangalore. One can either become a watchman at a factory gate, guard a governmental institution (a governmental shop) or guard a section of a bazaar. Guarding a factory usually provides a modest salary, but here a watchman usually gets a (modest) place to sleep.

These few watchmen working at governmental institutions and at some large privately-owned enterprises (e.g. large daily newspapers) earn besides a substantial salary (including daily allowances) a pension - so that they stay for many years away from home, gradually bringing their families to Bangalore. Guarding a bazaar can be very lucrative and earn one up to 6 or 7 000 Indian Rupees a month. Many strive to guard a factory (securing a place to stay) and to guard a bazaar (which may be rented out to other Bajhangis on a fifty-fifty basis).

However, one has to "buy" a bazaar, that is buy from a predecessor the right to guard it. This needs an investment of up to NRs 80 000 and, in the first place,

this is an area of enrichment for big moneylenders who of course only loan money if they are provided with land as security. Thus, chances in Bangalore depend largely upon one's economic standing at home (PFAFF-CZARNECKA 1991). Needless to say that the journey to Bangalore costs several hundred rupees. The majority first have to walk for several days to the next motorable road; then they have to take a bus to Gorakhpur or Delhi; and from there they travel by train to Bangalore for about 45 hours.

On arrival at Bangalore, the men's chances depend upon their social relationships. Relatives and friends (village-fellows) provide them with shelter for the first days, and they help them to find work if the men didn't arrange for it already at home. Thus, social relationships are precious resources for the Bajhangis. On the other hand, Bajhang's society in Bangalore depends upon the conduct of individuals since the ability to find the lucrative jobs as watchmen is the outcome of the reputation which several generations of Bajhangis have acquired here as brave and sincere workers. Nowadays this reputation is under stress. Increasingly, Bajhangis are becoming known as drunkards and gamblers. Furthermore, local population starts resenting the fact that well-paid jobs are given to foreigners. Still, by and large employers trust the Bajhangis more than the local population. This trust continues to be the Bajhangis' major potential.

However, the Bajhangis' aspirations are presently rising. The younger generation, able to study because of their fathers' occupations, increasingly resents the fact that their fathers earn money that they consider by begging. This holds true for those watchmen who guard bazaars. They have to show up in the beginning of every month in front of every shopkeeper and ask for money, receiving from every one some five, seven or ten rupees. They are able to earn much - but at the cost of their honor and partly of their authority. While their fathers are losing the prestige they enjoyed at home as landowners, their children who were able to come to Bangalore lose their link with the home-area, hoping they will never be forced to return.

Social networks are also necessary in order to raise money and in order to make savings. Bajhangis seldom bring their earnings to a bank but they participate within rotating credit associations which they call "lotteries" since this practice is connected with some risks. In the beginning of every month, men meet, pool an equal share of money (between 200 and 500 IRs) together and decide by bidding who will take the money in a particular month. The more urgently the money is needed, the higher will a man bid in order to make sure that he will get the money and not one of the lottery partners. He will get the difference between the amount of money in the pool and the sum he was bidding. Example: when 5 000 IRs are in the pot and the person bidding highest offers 2 600 IRs, he will only receive the difference which are 2 400 IRs. Therefore, the capitalized interest is 2 600 IRs. Thus, the more somebody

needs money, the smaller the amount he will get. Normally, those men who can wait, will get the highest share because towards the end only few bidders remain. However, waiting may be risky because some men who take their share disappear with the money - especially when they live in remote areas of Bajhang, or, which is seldom the case, are not from Bajhang.

The smooth running of the lottery depends upon its manager. A manager takes the risk of assuring the smooth functioning of the lottery. He has to have a high social status by Bajhangi standards which partly results from his standing at home and partly from his situation in Bangalore. It is also significant that lottery managers (in spring 1992 there were around 60 lottery circles running parallel with approx. 20 to 200 participants each) are usually physically strong or live even with some relatives who form a strong gang, so that they can use muscle power when all entreaties fail. The benefit of a lottery manager is that he can take the full amount put together in the first month, and he can use the money remaining in the pool till the next month. Some of them are, besides being watchmen and lottery managers, also moneylenders as well as managers of drinking and gambling cycles.

Drinking and especially gambling are also important reasons why men need money urgently and enter lottery cycles. The debts keep the men in Bangalore as long as their cycle is running. There is hardly a way of paying for lottery while staying in Bajhang because it is difficult to raise cash there. Thus, participating in a lottery cycle may determine a man's length of stay. Many men have to face the necessity to stay away from homes much longer than they have anticipated - by being forced to pay constantly for a debt which they took far ahead.

Thus, the life of Bajhangis away from their homes consists in working as watchmen, usually when others are sleeping; in enjoying city life, but while living at the very edges of the cities; in meeting other Bajhangis with whom they are connected in manifold ways while very seldom entering into relationship with the Indian population; in staying away from homes and the closest family members (approx. 90 % of cases), partly enjoying the freedom but often not knowing how to stop enjoyments. Very few men were so far able to improve their situation so much that they could start a new, more prestigous, occupation. Only few of them ever return home. They and their closest family will shift from the marginal region to places where they can develop their abilities to the full.

Role of Kinship

The existing **intermediary structures** in Bangalore allow Bajhangis to easily shift between the rural and the urban world. The fear of the unknown, the lack of knowledge and skills lead farmers to areas where their social networks are waiting for them. The existing social networks are limited in their functions by the very fact that they grew in a marginal environment in Bajhang, and having found a niche in Bangalore, they ceased to develop. Though having financial resources at their disposal, their lacking links to the upper strata of society and their lack of education affect their chances of taking advantage of opportunities which urban life could offer them.

While failing to develop their skills in accordance with the complexity of economic opportunities in Bangalore, their chances to meet similar requirements at home are equally small. Even though Bajhang is only marginally affected by market integration, state institutions have entered Bajhang. The life of the local population is increasingly affected by state action such as prohibition of hashish production, nationalisation of forests, establishing civil law. On the other hand, the state is increasingly able to give something to the people of Bajhang: irrigation-projects, training, credits. Only some migrants do not learn to be prepared to deal with complexities entering their homeland. They neither emerge as leaders who would be able to deal with state institutions, nor are they able to take advantage of new opening economic options. For instance, only one former "Bangalori" has emerged as a contractor to governmental projects. Only two men emerged as big merchants who are presently able to expand their business.

Working as a watchman brings amounts of money which are striking by Bajhang's standards. The ability to take advantage of the less experienced fellows at drinking and gambling parties justifies the investments. However, more and more men in Bangalore start asking themselves what makes them invest substantial amounts of money in a bazaar when their capital would enable them to venture into other types of business in Bangalore (e.g. bicycle rental and repair shops). Increasingly, men point out that their social networks are necessary but also compelling them to partake in social activities which may be harmful (drinking, gambling cannot sometimes be refused). One successful businessman who came to Bangalore from elsewhere in Nepal at the age of 16 to work as watchman and who today (at the age of 40) runs two factories, has stated that it was his luck not to be from Bajhang and thus not to have been forced into Bajhangis' social codex and activities.

The quest for earning cash is the major reason driving men from Bajhang to Bangalore. The feeling of neglect as inhabitants of one of the least developed areas corresponds to the social vacuum in the urban context they are living in. Cooperation and conflict characterize the relationships within social networks. The salient feature of the urban social life is the quest for money. In this quest,

men acquire new value orientations. Social strategies such as mutual responsibility, management of common property resources, authority and leadership patterns which are important at home in a rural context do not match with the strongly differing reality based on atomized individualism which men face in Bangalore. Their new orientations have impact on their life at home. While money can buy hardly anything in Bajhang, social relationships and social support are still very crucial. Even if cooperation is equally important in Bangalore, the networks established there are not of use at home. The necessity to cooperate in order to make money drives the "Bangalories'" attention away from the fact that at home much must be done collectively which doesn't have money as the major objective. Furthermore, the Bajhangis' way of life (drinking, gambling, relations with prostitutes) in Bangalore often alienates them from relatives at home; frequently social conflicts emerge with sons quarreling with their fathers; or spouses being torn apart.

The existing intermediary structures at the Bajhangis' disposal result from their limited knowledge of the complexity of the outside world. In Bangalore the Bajhangis have managed to find an economic niche they are able to exploit, but in their niche **their economic marginality is perpetuated**. And their social capacities, necessary for the life in Bajhang, get eroded and lost.

What do migrants bring home ?

They bring money, and the helpless feeling that something ought to be done in Bajhang. There are several village organisations which emerged in Bangalore with such aims as erecting a new school building, establishing a communal building, constructing a grain-store where local inhabitants could borrow rice and the following year return 125 % of what they took. But the drastic difference between the urban and the rural life in a remote mountain area is paralyzing. With the lack of basic infrastructure and conductive social services, life in Bajhang after Bangalore appears all the more unendurable. Whoever can afford it, seeks for solutions outside. The Bajhangis bring their sick to hospitals in southern India, and try to send their sons to boarding schools (which few can afford). Many men who have returned from Bangalore claim that it becomes increasingly difficult for them to remain at home forever. Seasonal migration then becomes an additional opportunity to escape for some time from problems at home which appear unsolvable.

Of course, life at home is also changing without the impact of the migrants. The increasing - though still rather minimal - availability of governmental services, especially development works, made active those men who are able to enter into a relationship with aid-donating institutions, to take advantage of the new resources, and, hence expand their power base. In comparison to them, "Bangalories" may be coming home resourceful but they lack authority, and they are successfully prevented from taking up leadership. Thus, two pro-

cesses merge and reinforce each other: by staying away, the migrants are partly alienated from local concerns, while upper strata take the advantage of their more resourceful supralocal networks.

There are many options for migrants who come home, but - as already said - these options are shaped by the chances "outside" as well as by prevailing local conditions. There are several examples from other parts in Nepal of returnees emerging at home as local élites and taking on different social roles. For example, there is much evidence of former Gurkha soldiers buying land from their fellow-villagers and making them dependent; there are other examples of Gurkha returnees emerging as successful social leaders who set new social rules which enable local communities to improve at least some aspects of their living conditions (prohibition of drinking and gambling; cutting costs of rituals). Also in Bajhang the returnees from Bangalore were able to initiate some activities, for instance by putting together funds in one village in order to build a school. In this particular case the "Bangalories" were successful because they could cooperate with some local leaders (mainly schoolteachers) who are permanently at home. However, with their loosened ties to their communities and with their inability to cooperate with local (district) and supralocal (national level) officials and politicians, and due to their low authority, their radius of activities is hampered. Thus, the majority invests its money and energies in buying land, commodities, moneylending, and migration.

Upper strata people are able to use their skills, economic resources, and supralocal links in order to take the advantage of external institutions and their resources which find their way into Bajhang. The great majority of the men working in Bangalore does not acquire such skills, not to speak of the poor whose energy is consumed by "eating outside". Within the process of crucial societal changes occurring in Nepal in the last decades, only the upper strata of the society are able to utilize their familiar ties in order to improve their opportunities by entering into higher ranks of the encompassing complex world. As opposed to those, many migrants lose even partly their family ties, and thus elements of social security which such links could provide.

Conclusions

In view of the economic and social stresses resulting from temporary migration from Bajhang it is important to conceptualize "rural development" anew or afresh. It is obvious that there is no way to keep all the migrants "at home". Migration to urban areas will continue in the face of rural resource scarcities as subsistence farmers use this option as survival strategy. However, strategies need to be designed that will not attack the issue of mobility as such, but consider options

- eliminate physical and social stress: if men migrate, women are burdened with additional work but have none or only limited decision-making power (e.g. in irrigation conflicts.)
- shape the migration pattern, among other things by improving opportunities in nearby towns within Nepal to reduce migration distances, and
- see how migrants could use their potentials (capital, skills) while returning home.

It is difficult to assess whether any outside interventions would support the social process in connection with migration. However, it is important to learn from the already-existing evidence, and it is important to find ways so that external inputs do not increase social stresses upon local population - living between underdevelopment und unmanagable complexities of urban life - which are already severe.

PART 3: ANALYSIS AND INTERPRETATION

3.1 COMPARISON AND LESSONS FROM CASE STUDIES

The case study areas provide a basis for cross-comparison in examining the dynamics and problems of rural-urban interlinkages. Based on our subject case studies of vegetables & fruits, metal and migration, the points elaborated below emerge which serve to highlight the role rural areas play in urban development and, vice versa, the role that urban areas play in rural development in Nepal. In addition, the differences also show some tangible and other not so tangible interlinkages that bind the two, the strengthening of which may possibly be to the benefit of both. These case studies highlight some of the interactive elements described in the analytical framework. As a first step, the results of the comparative analysis are presented on the basis of the co-evolutionary framework outlined in chapter 1. The major interlinkages among the socio-economic subsystems are:

(1) Exchange of Goods and Role of Markets
(2) Technology Diffusion
(3) Resource Mobilization and Exploitation
(4) Migration and Employment
(5) Information and Value Exchange
(6) External Effects

(1) EXCHANGE OF GOODS AND ROLE OF MARKETS

There are no clear cut boundaries for "rural" and "urban" goods. An important conclusion is that neither urban nor rural areas are closed systems, nor is one rural area linked to one urban system. Interlinkages extend across many different levels of systems and geographical boundaries. The trade with carpets within the world market drastically illustrates the interlinkages between consumers in Europe and labourers from Dolakha.

One of the ways in which this interlinkage is expressed is in the exchange of manufactured goods. This means that setting the boundary of rural-urban systems is dependent on the goods in question. Because of the nature of the modern world economy, this would mean setting the boundary to include all the world. However, in order to economize the analysis, one can define such interlinkages based on the quantity of flow of population, goods and capital.

Markets are the interface between rural and urban areas. An important, though not surprising, insight to emerge was that the products are not as wholly "rural" or "urban" in their character as was originally thought. Vegetables in hill towns or roadheads like Tansen, Charikot or Jiri were often "urban" products coming all the way from Kathmandu or Butwal. Obviously, even the "Kathmandu" vegetables must have had rural origins either from its hinterland,

the Nepali Terai or even India. In this case, it could be seen that this was not a case of rural-to-rural cooperation: a Kathmandu or Tansen vegetable seller may possibly not even know of the existence of a place called Charikot. The rural farmers are responding to the possibility of a benefit; and those giving out the signal of such a benefit are the markets and traders in Butwal or Kathmandu. The system of information, the people in command over that information, the money necessary to buy the products and transport them to where the demand is, constitutes the urban market.

When the price of onions and garlic shot up because of high prices in India, the vegetable dealer in Charikot (see page 43) who sold his vegetables in Kathmandu was a rural farmer supplying an urban market; but in the reverse instances, which occurred more often, when he was bringing in vegetables from Kathmandu to Charikot, he became the extension agent of an urban business environment. Conversely, Kathmandu's hinterland, in this case, is also the plains of the Terai, with Charikot functioning as the urban extension of Kathmandu linking it to the rural lands of the Terai.

The case of metals was almost as amorphous. While money of the raw materials did flow from the urban centres to the rural areas, the skills and labour that added value to the metal sheets or scrap were often rural, and in some favourable instances (see page 81), the final products did flow to urban areas.

Balance of Trade. Food grain and other imports from urban or other rural areas exceed exports in all rural areas of our case studies. In terms of commodity products only selected produce find their way to the urban market in significant quantities, such as ginger and milk in Palpa, potatoes and livestock in Dolakha (as well as magnesite from the Kharidunga mine). The distance from the market, and the transportation facilities, among other factors, determines the competitiveness, especially for perishable goods. However, the appearance of fruit from Himachal Pradesh (India, approx. 1 000 km from Kathmandu) in Palpa and Dolakha illustrates the importance of information and logistical interlinkages in marketing rural products.

In Dolakha and Palpa, road construction has stimulated the importing of goods more prominently than exports. The income to pay for these imports stems from remittances, an expanding administration extending to smaller towns and rural area and, in the case of Dolakha, from LJRP/IHDP investments in that area.

Changes in the Terms of Trade. Copper pots of Palpa or the iron plough tips and hoes manufactured in villages of Dolakha compete with the urban products. Our case studies have shown that creative value adding, which is generally the prerogative of the urban centres, has been done in the rural areas as well, in competition with urban products. This is to be expected since the skills of blacksmiths are there to be tapped as are their labour hours. Urban

areas may control the flow of metals, their prices, as well as the ancillary inputs such as sulphuric acid or even the necessary credit. Surplus may also be extracted as happened with the tax on imported raw materials and the road tax *(chungikar)* when rural value adding simply does not offset the exorbitant raw material price.

(2) TECHNOLOGY DIFFUSION

Urban areas are the basic source of technology and innovations. New technologies applied in rural areas originate from cities from where they spread to small centres and finally to rural areas. This diffusion is not a neat process since adjustment to local conditions are required at every level. Technology diffusion can also be seen as a type of commercial information exchange. In terms of technological information, improved seed for vegetable production, fertilizer or disease control measures for fruit represent new technologies from the urban area, in some instances urban areas beyond the boundary of a country. Creative entrepreneurs such as the entrepreneur of the Tansen soap factory (see page 92) or the vegetable producer of Madhan Pokhara (see page 67) import urban technologies to rural areas.

The growth of vegetables appears to be least demanding in terms of technological requirements for rural farmers. Both Palpa and Dolakha areas have seen a significant increase in vegetable production and consumption after road construction. However, the technological requirements for fruit, livestock and metal products are more complex. Hence success stories shed light on the other factors such as accessibility of credit and information. This is illustrated by the metalworker in Tansen (see page 75).

The role of transport technology. The diffusion of transportation technology to rural areas such as construction and maintenance of roads and the appearance of motorized traffic is a critical element enhancing rural-urban interlinkages. Proximity to a market centre determines the level of economic activity in a rural area. Before the construction of the Lamosangu-Jiri road, it took seven days to reach Kathmandu from Jiri, now it is a one-day trip. In contrast, Butwal was only two days away from much of Palpa and to reach Chainpur in Bajhang a three days' trek is needed from the nearest roadhead.

The immediate consequence of this was that many elements of modern culture, such as electricity, import of industrial goods such as cigarettes, sugar and alcohol occurred much faster in Palpa than in Dolakha or Bajhang. Palpa was perceived as a more "developed" place than Dolakha and Bajhang even before the advent of modern roads. When roads did link Palpa to Butwal a decade earlier than Dolakha to Kathmandu, a further widening of the developed distance was to be expected on this count alone.

Any developmental intervention such as a major road is bound to induce changes in the characteristics and behaviour of local actors. So the most rapid change one did observe was that central government civil servants and other urbanite development workers were more mobile, as were the students, businessmen and politicians (Palpa and Dolakha). However, the new type of mobility, enabling direct and fast interlinkages between rural and urban areas, is mainly taken advantage of by males. Women have to take care of the household (children, livestock, fields) and therefore the advent of road mobility has not changed the status of women (page 69). On the contrary, roads have initiated commercialization of rural products, but in general the men control these market interlinkages and the use of such cash income. This fact highlights the role of intermediate towns: if an urban centre is within a day's travel (such as Butwal from Madhan Pokhara), the influence of household (and hence the controlling role of women) is not diminished. If, however, the urban centres are further away (Kathmandu from Dolakha or Bangalore), women's role is adversely affected.

Technology diffusion needs time. The fact that certain fruits and vegetables could be exported for profit first required that idea to filter through (which was helped by the mobility of students, businessmen, development workers etc.), then it required changes in the cropping pattern. This latter change does not work in a simple mechanistic "one cause one effect" manner but is influenced by the level of parallel changes in allied areas. A few brave souls had to experiment, such as those in Madhan Pokhara (page 61) who tried sprinkler irrigation or in Kavre (page 46) experimenting with improved varieties. Their successes and failures had to be socially digested, reliability of inputs and a market had to be assured and, most important, confidence had to be built up between those who assured the reliability of inputs and the growers of fruit or vegetables.

The comparison with roadless Bajhang is interesting. In the absence of roads, the exchange of labour is with monetary remittances and the basic necessities that it can provide. Some of the technologies and the new skills that the migrants have acquired in the metropolis cannot be diffused in Bajhang because it is not physically linked with the market with a technology such as road and motorized transport. At the same time, however, as with every other technology, roads are a necessary condition for modernization but they alone are not sufficient as demonstrated by Jiri. A social climate must have either pre-existed or been developed parallel so that the road can be exploited to the advantage of the rural areas.

(3) RESOURCE MOBILIZATION AND EXPLOITATION

Unbalanced taxes. Resource exploitation between the urban and rural areas occurs primarily by the underpricing of rural goods and the overpricing of urban ones. The ability to do this is linked to a range of factors such as the relative lack of information in the rural areas, the road tax at transportation junction points in towns which allows urban areas to tax goods eventually sold in rural areas. Such rules and regulations controlling rural products as well as the underpricing of agricultural produce, favour urban consumers.

In Palpa the laxity of central government control has meant greater investment and less surplus extraction. It is estimated that only 25 to 40 thousand individuals pay taxes in Nepal, and the basic tax income of towns is the road tax *(chungikar)*. Remittances are not part of the formal tax base. While this applies to both the IHDP area as well as the Palpa area, it is the latter that seems to have developed a better arrangement for investing or using it. The reason could simply be the earlier development of this region; but it may be that a degree of autonomy has allowed more fearless investment.

Whether central administrative presence results in sustainable economic growth is also worth considering. Tansen enjoyed an enviable administrative position in the past. However, the opening of other adjacent urban centres with the development of roads such as Butwal and Pokhara, has contributed to reducing its development more than the shrinking of the size of the district has. Butwal has enjoyed less administrative presence than Tansen or Bhairahawa: it has grown faster than either of these two towns.

Limited accessibility to natural resources. Despite all the concerns about deforestation and the illegal status of charcoal production, urban areas such as Butwal or Tansen continue to be the attractive point for villagers to sell firewood or charcoal for an additional income. The carpet industry in Kathmandu as well as the brick industry catering to the urban housing boom in the valley continue to consume tremendous amounts of firewood. Both industries are producing considerable pollution through emissions in air and water.

Accessibility to water is a crucial element for both rural as well as urban households. Vegetable production without irrigation is not feasible during the dry winter season and hence only lucky or powerful farmers may have access. Even in the case of Madhan Pokhara upstream water resources are exploited to an extent that farmers at lower altitudes have no water any more. In Dolakha IHDP has significantly increased accessibility to drinking water, however due to unsettled conflicts, lack of training etc. maintenance of the schemes is generally poor.

In order to satisfy the growing urban demand for water in Kathmandu, brought about by the growth in population and industry, the waters of valleys adjacent to Kathmandu are being appropriated for the latter's needs and to the detriment of agricultural interests in the former. In this sense, rural-urban interlinkage is indicative of resource mobilization from villages to urban areas.

The fact that rural areas supply raw materials and labour indicates that the deterioration of the terms of trade vis a vis urban areas - as it is assumed for Nepal - benefits urban areas. Since significant changes in the terms of trade result in subsequent labour migration (to urban areas) the rate of deterioration appears to be significant for our case study areas, from where many people move to urban areas. This is most prominent in the case of Bajhang.

Exploitation of human resources. Commercialization of agricultural products and related cash earnings are controlled by men, especially if marketing distances exceed one day of travel. Then the family member in charge of marketing has to stay away overnight. Staying overnight makes marketing from the traditional gender relations' viewpoint a business for men. If marketing is in men's hand, substantial amounts of cash earned are spent on drinking, gambling or other urban goods or services. The consequences observed from male domination in marketing are that the women who invest increasing amounts of labour e.g. into vegetable farming, are worse off than under the traditional subsistence agriculture setting. Counterevidence is put forward from the vegetable marketing in Madhan Pokhara. Here markets of Butwal or Tansen are within a day travel and hence, marketing decision-making remains in the hands of at least the better-educated women.

The evidence from the carpet-making situation shows that the exchange of this foreign exchange earning commodity to the world market is occurring at a tremendous social cost. The exploitation of the labour engaged in this industry in economic terms, but even more so in terms of deprived health and sexual misuse of female employees, is severe.

(4) MIGRATION AND EMPLOYMENT

When it comes to the flow of population, the picture becomes more diffuse. The movements comprise different time horizons (seasonal, long term or even permanent) and can occur stepwise from rural areas to small towns and then to Kathmandu and/or to foreign cities in India, the Gulf states or Japan etc. The case of Bajhang illustrates that direct interlinkages may extend from remote hill areas in Nepal to big cities like Bangalore in India. Family and kinship relations play an overriding role in making the decision to migrate.

In rural Nepal, where a family's economic wellbeing is expressed in terms of how many months a year a family can feed itself and for how many months some seasonal work has to be found, a migrant economy dominates. Yet, migration flows were from the rural hills to cultivated land in the rural Terai (GURUNG 1989), but with increasing land scarcity migrants will show up in towns in Nepal and India. These interlinkages are in terms of much needed cash income, employment and the security of jobs in these areas assured by old

interlinkages and knowledge of interlinkages through family and friends. New interlinkages with new urban areas develop all the time.

The administrative history of an area seems to play some part in determining the course of development of rural and urban areas, the interlinkage between them and the course that migration takes. If a certain location becomes an administrative or political centre, it is the concentrated embodiment of economic and political power, attracting in its wake those searching for jobs, justice, influence etc.

Palpa has enjoyed a more autonomous history even during the Rana rule than Dolakha which was more firmly controlled from Kathmandu. It is said in Palpa by the elderly, that when Jung Bahadur Rana became the unchallenged ruler of Nepal and the raja of Kaski and Lamjung as well, he favoured civil servants from these areas which also included much of the old Palpa areas. The result, they say, was that these feudocratic civil servants were able to exploit other areas of Nepal and invest the earnings in Palpa. Whatever the truth of this, Palpa under the exiled Rana rulers was able to invest in crafts, education and water supply a shade better than Dolakha. This relative autonomy must have also allowed greater interaction with the larger Indian plains and consequently greater economic independence. It was observed that many more people served in the Indian and British Gurkhas in Palpa than in the Dolakha area.

The Bajhang example also makes interesting comparison. Unlike poor blacksmiths from Palpa who flee to urban areas to escape usury in villages and thus represent a breakdown of social order under exorbitant stress, Bajhangis represent migration internalized by the social order as a means of survival (page 105). In this case the social order is merely transported in space, and Bajhangi feudal relations find their expression in Indian cities such as Bangalore.

(5) INFORMATION AND VALUE EXCHANGE

The role of intermediary institutions. Social values and institutions of villages and cities are linked through an exchange of information. While the spread of technological knowledge can also be termed "commercial information exchange", for the purpose of this analysis the term is used with a larger connotation including the flow of education, values and codes of behaviour expressed through accepted rules and regulations. In the rural-urban context, the case studies show that a system of intermediary institutions exemplify the strength of exchange of social values and behaviour pattern.

The **time lag** found with road construction probably explains why Palpa-Butwal has seen the emergence of a better system of intermediary institutions between the farm family and the urban market; but it is not the only explanation. As was seen in the case study of vegetables, a very perishable pro-

duct, and fruit which are less so, the farmer who grew the product was fully occupied doing so: it would hardly be fair to expect him to market his harvest as well. The state, which is not an intermediary but a supra-institution, attempted to fulfil this role through arrangements such as the Agriculture Inputs Corporation and the Food Corporation. These bodies have been created with the mandate to supply farmers the necessary input such as fertilizers, seed, improved saplings etc. and to buy what the farmer grew with adequate support prices and other such encouragements. A state fulfilling such an intermediary role only invites trouble upon itself primarily because it cannot mandate itself to look at only one small geographical area but has to cover the entire nation. The result is that economy of scale takes a backseat to inefficiency of size, inadequacy of resources, insufficiency of manpower and a host of other problems. Meanwhile, Jiri farmers feed their apricots to buffaloes and Ramechhap tangerine growers consider going back to grain which can at least be stored and eaten later, even though state-sponsored bodies promoted these enterprises in the first place.

Institutions are the social vehicles which acquire and process social information. Besides the state and the family which are at the two extreme ends of the scale, there are intermediary institutions in between which use information to the advantage of their constituents.

A successful intermediary institution is the clan or kinship unit, such as Newari *guthis* or Tamang and Rai *kipat* arrangements. Some form of kinship arrangements that provide interlinkages across space has been at work behind every successful farmer or trader, and also the migrants' success depends on kinship linkages in the urban environment. A Jirel or a near landless Tamang cannot enter fruit marketing unless he is able to first understand the benefits that would accrue from a larger market, then to link with a network that provides necessary information on urban markets (prices, alternatives etc.) and some economy of scale as well as insurance of risks.

Each of these steps is fraught with pitfalls; and, compared to the social dangers that lurk in such attempts at "social engineering", planting an apricot tree and watching it mature is relatively easy. Some metalworker groups have found arrangements in formal NGOs with urban interlinkages; but for the vast majority of villagers stepping into development through the goodwill of foreign-aided projects, the absence of intermediary institutions reduces further sustained development.

The role of middlemen. Only the potato farmers of Dolakha have been lucky: they had traditionally a functioning institution of middlemen traders who adjusted to trucking via Kathmandu rather than portering through Sindhuli (see page 49). They were not dependent on the state trading institutions to expand their bureaucracy and arrive at their doorsteps. The case of ginger marketing in Palpa illustrates that middlemen in a monopoly situation manipulate prices to maximize their own profit (see page 58).

Success in development is also dependent on the ability to gather and manipulate information. Indeed, the very concept of a "free market" is that it is the most economically efficient form of resource allocation provided there is perfect information. Much of the money that individuals and groups lose to an individual who becomes very rich is based on the lack of some knowledge or information to the former that is available with the latter. In the final analysis, the primary basis of wealth creation in commercial capitalism is the command over information regarding supply and demand that neither the supplier nor the buyer have in full.

The losers and the role of education. In development too, the losers have always been those poorer in information. Certain ethnic groups, or even higher caste groups in poorer areas have little or no education and even less of an awareness and their ability to take advantage of the market or state sponsored organizations is severely curtailed. Benign states or social order attempt to help such groups and provide the necessary education. In the case of Nepal, however, with a state that is poor in revenue and not very encouraging of non-governmental efforts in this direction, not much has been achieved in empowering the villages with the information necessary to take advantage of the market.

Education and the familiarity with rules and regulation allow villagers to benefit from the market: their absence leads to exploitation. Many village blacksmiths of Palpa may have liked to sell their products in Butwal or in Kathmandu where the prices are better; but any policeman at checkpoints can confiscate their goods or in general harass them with the might of the state to extract payoffs and the blacksmiths are powerless to resist because of the lack of knowledge of administrative and legal machineries. Similarly, the poor of Dolakha who generally migrated to towns in Nepal or India in search of seasonal work now find a lucrative source of income through barter trade with the Chinese in Tibet; but their lack of knowledge of Nepali laws as well as administrative doings means that they are at the mercy of middlemen and corrupt officialdom who extract a profit without taking any risk.

In contrast, a large measure of Madhan Pokhara's success is the role that education has played in its development. More than just information imparted, it has contributed to a sense of confidence in the villagers. It has allowed them to fight against that which they consider unjust and have not been inhibited by state institutions or functionaries arrayed against them. It has enlarged their horizon beyond their village or district, seeing potential and possibilities where none were apparent before, such as the sprinkler irrigation system. Finally, it has given them the ability to manipulate state institutions to obtain a link road, electricity and now telephones.

This same phenomenon is evident in the case of Those, a village of traders and schoolmasters. Even though the crossroads nature of their town was seriously hampered by the termination of the Lamosangu-Jiri road at Jiri, they were agile enough to shift part of their operations to Jiri itself and adapt to the changing environment. Now, because of the benefit of education that allows them to understand how the government budget-making functions, they have been able to get the state to initiate road construction from Jiri to Those. In a political and administrative setup where the state controlled all the development expenditures, the inability to manipulate the administrative machinery could mean relegation to the backwoods of development. Similar capability was exhibited by Dolakha, an old trading and cultural centre which, despite significant migration of the educated to Kathmandu, still maintained enough educated people as well as enough interest in their home country on the part of the educated emigres to assure state support for infrastructure development.

The role of entrepreneurs. The development of an active entrepreneurship in rural areas would be a crucial factor in rural-urban linkages. Experiences in entrepreneurial development efforts in the Dolakha and Palpa area were not very impressive. Lack of entrepreneurial attidudes, lack of credit, a formal education system aiming at the production of civil servants and an insecure legal status of informal sector activities together with the fact that the possibilities to earn money more quickly in trade and real estate are a disincentive to invest in the productive sector.

Institutions are the carriers that determine the dynamics of change in social values. If the old value system of the Jirels dictated that it was below their dignity to sell vegetables, the value changes are being induced with the interaction of the larger market that may erode this belief. This is already evident in the way some of the more entrepreneurial ones are entering the transport business.

(6) EXTERNAL EFFECTS

The process of development, if it is urban biased as occurs in many instances, means that long-term costs are borne by the rural areas for short-term gains. A poor village family's cash needs are immediate and can be met by selling some firewood, charcoal or even their children as labourers (carpet example) to the urban economy that demands it. It solves their short-term problems but forces rural families to live with the long term effects of deforestation, of deprived schooling to children or ultimately of deprived human dignity.

The role of risk insurance. Development has been broadly defined as "the increase in available options and decision-making capacity of persons and collectivities in respect of their own lives". Increasing this degree of freedom commensurately implies reducing the potential risks. Villagers of Nepal are often thought of by the educated urban elites as ignorant; but the fact is that a villager is a shrewd calculator of overall risks, long-term and short-term, and his behaviour is conditioned by his perception and assessment of the pitfalls and dangers in any enterprise. Often, in instances of dire poverty, short-term needs are so pressing that long-term risks become insignificant: the villager does not see how long-term risks matter to him when he is probably not going to be there if he does not survive the short-term.

The villagers' proverbial inertia in matters of development efforts, be it in family planning or adopting a hybrid variety of seeds, is only an indicator that they are not quite comfortable with the risks involved. When they do adopt a development effort, and it fails, it is probably because they assigned a high value to the words of an extension agent who is motivated by longer term concerns from a broader national perspective. When family sizes were limited and infant mortality took its toll, reducing the "old-age insurance benefit of children", when massive planting of tangerine trees left a glut, when bank loans did not take into account the possibility that a buffalo would die or frost would kill the vegetables or not enough oil seeds would be available for the oil extractor, the villager would have miscalculated by placing excessive trust on the state or development institutions. The inexorable mathematics of mounting interest payments would resemble the old usurious village moneylender, not a benign state that had come looking for him and seduced him with sweet talks of a development heaven.

Rural credits. In many instances, traditional state-sponsored banking has failed the villagers in rural Nepal. There are individual success stories, especially in the area of small power turbines, or sprinkler irrigation in Madhan Pokhara. But in the vast majority of cases, the amount of collateral land with the rural development banks is increasing, collaterals that cannot be easily auctioned to recover the debt.

Success in rural development is linked to increase in rural productivity, sale of such items to earn an additional income by the producer, and the use of such income to increase the available degrees of freedom, either by clearing ancestral debt or re-investing in better, more productive ventures. Credit is a key element in facilitating this process. It is needed by the village blacksmith to buy necessary raw material or tools to which and with the help of which he adds his labour value and attains a profit. The absence of credit prevents him from acquiring the tools of the trade leaving him with idle time, skills and general underdevelopment.

Credit in the rural areas is primarily informal, as is to be expected with the predominance of the informal economy in rural Nepal. By the late 1980s government banks were not able to recover outstanding loans and as a consequence stopped new credit engagements for entrepreneurs in rural areas (PDP 1988, INFRAS 1989 a). In the case of both Palpa as well as the Dolakha area, the

successful entrepreneurs have managed to stretch their credit across space to take advantage of the urban market. In some instances, as with the metalworker in Tansen (see page 75) it is the strength still inherent in the traditional moneylending institutions, while in that of others, such as the vegetable dealer in Charikot (see page 43), it is the ability to use to advantage the credit insurance provided by the extended clan or kinship relationships. Ethnic groups not blessed with this institutional richness have not had the security of credit insurance and have thus not been able to take advantage of the market in urban areas, either to sell vegetables or metal products.

One difference that is highlighted between rural and urban areas is when one examines these two locations from the perspectives of risk and uncertainty. To a villager migrating in search of seasonal or permanent work, the city represents the high probability of finding a job as a labourer or of a better profit as a semi-skilled craftsman such as Palpa carpenters near Tansen who migrate to Butwal because of the better salaries than in their own villages. Indeed, for the carpenters, the obligation to help their neighbours to maintain their houses as per Magar traditions has meant a loss of income which they could earn for similar work in Butwal, leading to some breakdown in social arrangements induced by urbanization and cash economy.

The certainty of profitmaking or, correspondingly of assured jobs, could be transferred to the rural areas so that rural people engage in work in rural areas. Madhan Pokhara has shown that this is possible in vegetable growing. Dolakha has shown that this is possible with potatoes and Bagale has shown this with metalworking. However, in all these areas, reduction in uncertainty has been achieved in various ways such as road construction (Palpa, Dolakha), kinship relations, informal credit arrangements and migration.

Land tenure. Addressing the question of risk and uncertainty in rural areas is incomplete without addressing the risk and uncertainty posed by land tenure arrangements. It is not only the size of landholdings but the nature of those holdings, too, that determines the flexibility and innovativeness of the villagers. In the predominant case of absentee landlords who own land in the villages but reside in cities holding civil service jobs or doing business (and such landlords range in ideological spectrum from right wing ex-panchas to leftwing marxists), village produce is used to sustain an urbanite in a powerful but low-paying civil service job, thus indirectly taxing the rural areas to sustain an urban occupation. From the perspective of a villager, such an arrangement paralyses his creativity: since he does not own the land, he cannot take initiatives to make innovations, nor can he choose his cropping pattern, switching over to vegetables or fruit when he sees benefits because his one-third or half interest rate on yield may have to be paid in grain.

The size of landholdings also stymies creativity. With subsistence agriculture, and that too under landlordism with an expanding population already operating

under precariously marginal conditions, farmers cannot take the risk of innovation since failure can mean hunger. It is only those with larger landholdings that can experiment. The fruit grower in Bagale was a rich man who could venture into experimenting with fruit (see page 59). The brothers of Madhan Pokhara too could innovate since they had the security of a teaching job (see page 64). Even then, the impetus to modernize did not come without a major catastrophe in the form of a flood. Indeed, Madhan Pokhara farmers enjoyed larger landholdings than farmers elsewhere which must have contributed to their sense of security and the willingness to experiment with new cropping patterns on a part of their holdings. Elsewhere, farmers would feel safer growing grain which they can store and eat rather than vegetables they may not be able to sell and then face hunger.

Credit, risk and access to information are seen as the key elements in impoverishment of villages and the flow of resources to urban areas. If the terms of trade are stacked in favour of the urban areas, risks are externalized by them to the rural areas in exchange for the short-term benefits of the farmers. When this process of impoverishment continues unabated, a degradation of the environment will occur as more and more social costs are heaped onto it both by an urban elite getting richer and the villagers desperate for survival.

3.2 SOME ANALYTICAL CONSIDERATIONS IN RURAL-URBAN INTERLINKAGES

Nepal, a developing country at the low end of the scale of standard economic indicators, has a rich history of urbanism, especially in the Kathmandu Valley. These old settlements have seen different dynasties of rulers as well as ethnic groups, growth and stagnation as well as rejuvenation as is occurring at present, perhaps not in the aesthetic sense if one considers congestion and pollution, but certainly in the sense of an increase in activity and dynamism.

Urbanization in Nepal - is it a case of feudalism ?

Although urban studies are mostly biased towards urban planning there are some studies that attempt to analyse the forces and processes at work. BRAUDEL (1979) describes the feudal town as the prototype of modern times: when the modern state and the national economy were born, city states served as the model and they remained the scene par excellence of capital accumulation and wealth. He describes the feudal society as a combination of several "societies" existing side by side:

- The seigneurial society binding the local landlords and the peasants together.
- The theocratic society that bound a larger population together in faith.
- The weak territorial state.
- The proper feudal society that insinuated itself in the upper reaches of society and filled the gaps vacated by the failure of the state.
- The towns which appeared as states apart, societies apart, civilizations apart and economies apart. They ultimately came to dominate all of the above.

At present, there is tremendous disagreement among historians and social scientists about what the nature of feudalism is. There is, however, considerable agreement that Asian feudalism is quite different from European feudalism. One element of feudalism, however, stands out as common. It is the rent-seeking character of society in economic matters.[1] Simplified grossly, a feudal society takes its social rewards in the form of rent by first creating and then maintaining a scarcity of productive resources such as land and anything it can impose its will on such as cross border or cross-regional trade. On the other hand, a capitalist society, as a phenomenon historically different from the feudal, prefers to get its rewards in the form of profit which comes from a self-feeding cycle of investment, production and increased profit.

In the development of cities, a feudal character imparts to a city a rent-seeking character. The municipalities in Nepal still get windfall profits from the road tax *(chungikar)*, a quasi-feudal practice of rent seeking executed simply by setting up a barricade on the main road and extracting toll[2]. While Butwal too does the same, the initiative by the Butwal municipality to prevent wholesalers of vegetables in its haat bazaar, which would have made it easier to collect rent if any, is indicative of a more profit-oriented mindset. Excessive rent-seeking however, drives production underground in the form of protective guilds which emerge above ground into the open economy only when they are well established with a good political base (RUTENBERG 1988).

Role of Cities in Case Study Areas

Kathmandu: JACOBS's line of reasoning runs counter to the prevalent views on urban and city planning where the messiness of the city and its unplanned growth are seen as a scourge. What such items of evolution are doing are filling an economic vacuum that planners and administrative managers are not

1) "Rent seeking" is a term increasingly used by the new political economy school (also known as the neo-classical radicals) to explain the use of position to attract inducements from businessmen and industrialists. GALEGHER 1991.

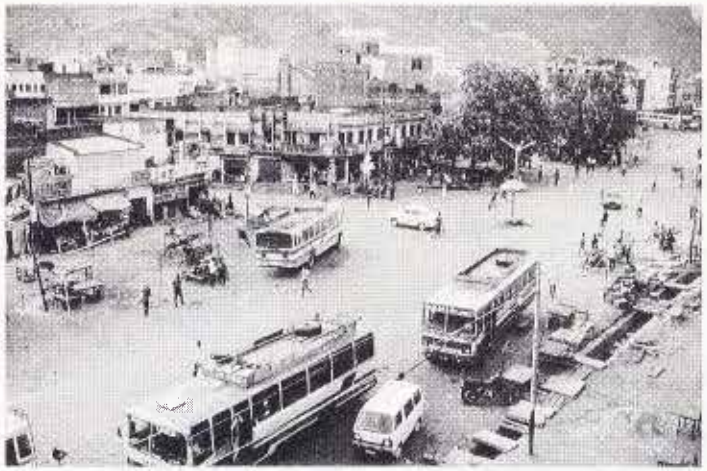
2) Manufactured goods are taxed at 1 % of their value at each checkpoint. Basic needs products are not taxed. This tax brings up to 75 % of town revenues, but for example in the Kathmandu Valley local revenues (incl. road tax) contributed only 4 % to the construction of urban infrastructure (80 % are provided by the Central Government and 16 % by foreign aid (HMG 1991).

able to anticipate or regulate. Kathmandu has about 30 "hot spots" of slum growth, most of them providing affordable housing to the immigrant labour from adjacent hill districts coming to Kathmandu for the attraction of working in the carpet or construction industries. Some of these semi-legal settlements have managed to acquire electricity and even standpost water supply. Butwal's *Pushpa Nagar* is a quasi-legal slum dwelling that has managed to pull itself into the position of a respectable ward of the municipality. While Butwal's bazaar may have provided the trading shops and the "venture capitalists", it is Pushpa Nagar, the first refugee centre for migrants from all over Nepal, that has provided the skilled people.

The inflow of migrants and the booming tourism, carpet and foreign aid sectors have led to a sprawl of Kathmandu. The traditional "compact city" is breaking up while distances between homes and jobs are increasing. In the absence of effective land use control Kathmandu is spreading over fertile paddy fields.

Butwal: The examples from our case studies are instructive in the light of JACOBS's position. Upon completion of the north-south and east-west highway axes, Butwal enjoyed a locational advantage over and above what it already had as the point where the hills met the Terai plains, and became the centre of modern vehicular traffic. Even then, Bhairahawa continued to enjoy the patronage of capital and of a richer locational advantage as the point where Nepal met India. To explain the changing dynamics between the two one has to look at the creativity of the smaller Tansen businessmen, new emigres to Butwal, who were able to take advantage of not just the Indian trade but also the grow-

ing international third country trade that was bringing Nepal's overall trade diversification from 90 % dependency on India to only 55 %. Similarly, new industries were introduced as older ones became less competitive. Oil mills proliferated when it was necessary to take advantage of the communication network. Oil mills were supplanted by workshops and recently, with mechanical works reaching a saturation, the city has begun to divert into textiles and spinning mills.



Butwal: the fast growing city is located at the junction of the east-west highway and the highway connecting Pokhara with the Nepali/ Indian plain. The metal workshops in Butwal, originally initiated by foreign aid (UNM), have grown to a significant business offering employment in increasingly specialized fields (e.g. overhaul of buses and trucks). Having faced saturation, Butwal's industry is now diversifying into spinning industries.

Tansen: After the construction of the highway took away its roadhead advantage, it has begun to focus on becoming the centre for education (with its school and campus), health (with its excellent mission hospital), tourism and cottage industry. While the former two are doing fairly well, the latter two suffer because of lack of water. The town already spends one third of its total energy consumption on pumping drinking water. While Tansen had been successful in weaving *dhaka* design cloth, it is being pushed back in this activity by more creative Madhan Pokhara which has succeeded in transplanting "urban work" into the rural areas. This it has done with a creative entrepreneur not spending money to build a big factory (as was done by the first entrepreneur in Tansen) but taking the weaving looms to village households. This

saved him the cost of the premise and provided him the cheaper labour of rural housewives who were more than content with slightly lower wages in lieu of the privilege and comfort of working at home.

Dolakha Area: Those shows indications of similar creativity. The traders managed to bring in electricity a few years ago, albeit a two-phase line. Now they want a 3-phase line "so that we can operate electrical machines for agro-processing". There were also expressions of interest whether the iron mines could be reopened to at least supply pig iron for the surrounding village blacksmiths at a rate cheaper than imported iron if only electricity could be made available from the nearby river.

The task at hand is to understand the role cities play in rural development at present as Nepal makes a transition from feudalism to capitalism. JACOBS shows that in modern times, a city re-invents itself in the countryside, a process that is being called rural development. Urban areas are economic factors in themselves, and markets function as a social phenomenon inducing change in its surroundings, not merely a meeting place for producers and consumers.

In the current Nepali context, Kathmandu and Butwal exhibit the capitalist phenomenon to some extent and justify the position that these centres redefine the rural areas with their demands. Mashyam and Koldanda were just as primitive and backward as any other village areas of Nepal without the benefit of a large adjacent market; but Butwal redefined their agriculture by transplanting its requirements for fruit and vegetables. The comparison between Mashyam and Madhan Pokhara too is significant. While the former has effectively become a rural hinterland orchard of Butwal, the latter is independently taking initiatives trying to become a creative "city" on its own.

The role of the informal economy

The informal economy has been defined as one "that captures resources by (1) increasing private access to community resources beyond the normative allocation; and (2) partially or totally evading public monitoring or entry into the general accounts as well as any obligatory or reciprocal corporate assessment (i.e. tax)" (SMITH 1989). The informal economy consists of many activities in cities ranging from repair and maintenance to vending or even manufacturing and construction. The entire field of subsistence agriculture is also in the informal sector. It is interesting to observe that charcoal making, done in every village, is illegal according to the current forest laws of Nepal; but, no village blacksmith can operate without charcoal; and without a village blacksmith producing metal implements such as plough tips and hoe, subsistence agriculture is not possible. Hence one could argue that all of subsistence agriculture in Nepal is illegal. Conversely, it is the informal economy that dominates Nepali agriculture as a society apart as described by BRAUDEL above.

The argument is that the informal culture has driven creativity. Cities as centres of creativity too have an informal sector, and they also link to the larger world of the rural informal economy. Urban-rural interlinkages are dominated and maintained by this powerful bond, whether in the form of clan relationship-based marketing or the unofficial banking and credit system. The trick in development intervention is, possibly, to enhance this bond and coax it into formalizing itself by attractive offers from the state, not by means of punitive legislative means threatening more taxation or other rent-seeking measures. Recognizing existing institutions that may not be formal organizations, whether in trade or in irrigation management, may be the first step in this direction.[3)]

The conclusion from JACOBS's line of reasoning is that successful rural development is city work transplanted, that rural production is the creation of city consumption. Indeed, when one looks at an ordinary "local" Nepali chicken, one is reminded of the countryside. However, when one looks at the hybrid leghorn and improved breeds of chicken that feed the country's tourism industry, this type of poultry farming is an urban occupation dependent on a host of urban products from feed to vaccines, and it is more profitable to keep it next to the demand centres. Many urban dwellings in the core of Kathmandu have poultry farming on the top or bottom floors. It is only when better rent can be had by keeping students or international volunteers there, rather than chicken, are the chicken shifted to peri-urban areas. In such instances too, the new rent value of the premises must more than compensate for the added transportation cost of the input as well as the output products.

Evidences of our case studies confirm JACOBS's and FRIEDMANN's position arguing that successful rural work is nothing but urban work transplanted, questioning in the process the premises that lay behind the vast investments going into rural development, which end in the hands of either the urbanized rural elites or the urban middlemen. Arguing that the rural areas are not starved of funds, ROY (1991) writes about India: "It is an open secret that rural development funds get siphoned off by middlemen protected by politicians and dishonest bureaucrats; the rural elite is the main beneficiary of government subsidies and they are a lobby in itself to see to it that the genuine rural poor on the starvation line remain untouched and inaccessible to the government." LIPTON (1977), however, argues that compared to the rural elite, the formally and informally well organized urban elite controls more resources than the rural elite and tends to be the ultimate winner.

One of the prerequisites for a city to be creative, according to JACOBS, is a certain degree of messiness or one with "clumsy institutions"[4)]. Neat cities (i.e. company towns where everything is predictable) are on the road to decline, primarily because they breed complacency, and the city does not have to export its creativity to survive. No economic reciprocating system is created where the export of cities and the goods and services that locally support that export do not positively feed into each other's cycles. Only repetitive work survives which sooner or later will be supplanted by some other more creative city.

3) The Tuki system in IHDP is an example of the formal system trying to build bridges to the informal.
4) The concept of clumsy institutions is from Thompson. See SCHWARZ & THOMPSON 1990 and DOUGLAS 1986.

The parallels with towns like Kathmandu, Tansen or Butwal is striking. The latter, a malarial settlement, is nowadays one of the most rapidly expanding urban areas in Nepal. Its locational advantage of being of the crossroad of two national highways is only one factor. The other is the creativity of its population in constantly generating new jobs.

The Role of Institutions

Government institutions in Nepal show highly centralised decision-making despite earlier decentrlisation efforts. Local governments (districts, towns) depend on the central government for revenues, expertise and authority to act. The rural and urban elite control a strong network of formal and informal organizations to influence policies. The strengthening of local government appears to be essential for successful synergistic development of rural urban interlinkages. Local governments and NGOs are "closer to the people". However, as long as this propinquity does not induce action and develop mechanisms of accountability, decentralisation efforts fizzle out.

Intermediary institutions are not part of the formal administrative organization of a nation state. Public investments and development projects channeled through state institutions have tended to overlook the role of such intermediary institutions (middlemen, cooperatives, community groups etc). Promotion of such intermediary institutions, oriented rather to 5-star hotel conference rooms rather than to fieldwork, with heavy external inputs did not in many cases result in an uplifting of their performance in favour of the poor. In Nepal, this failure can be related to mainly traditional sociocultural value systems. Other intermediary institutions, however, provide more efficient information exchange and technology diffusion between rural and urban areas (and vice versa) than top-down approaches by central governments. Such institutions are able to create opportunities for informal and spontaneous promotion of self-help initiatives.

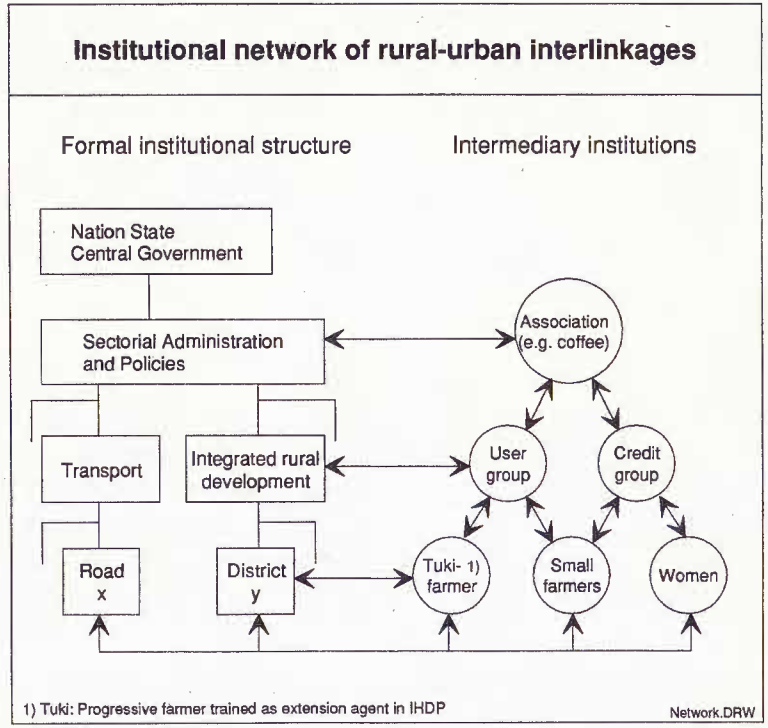


Figure 13: Intermediary institutions are of great influence in interlinking various levels of decision-making as well as rural and urban regions of the country.

Gender representation within the formal state structure reveals that from the central government down to household level women are underrepresented. There is some representation of women at the level of the national Parliament, but this drops drastically at local government level. Whereas the representation at Parliament level reached 5 % (1991) it is as low as 0,5 % at district and village level governments. On the other hand, women constitute a significant proportion of the informal sector labour force (carpet industry, construction, subsistence agriculture). They earn lower wages compared to men. Still marriage and the family are the backbone of their institutional security. Evidence obtained from the carpet industry indicate that girls who live outside the institutional framework of the traditional household are often sexually exploited.

Relation to Macro-Economic Policy Discussion

Rural and urban development projects are effective if they generate agglomeration economies in a broader sense (productivity gains, specialization and diversification etc.) allowing better competition in the local and regional market and an increased competitiveness in international markets. Neither sectorial rural nor sectorial urban policy measures will be able to achieve this. Rural-urban interlinkages are a highly interdisciplinary process that requires flexible policies. The dynamics of rural-urban linkages request from market forces the impact of sectorial policies as well as macro-economic policy parameters, such as realistic exchange rates, control of budget deficits etc. Table 4 in Annex B illustrates the different economic policy discussions in Nepal with the major issues governing rural-urban interlinkages. Table 5 provides an overview on major proxi-indicators and data sources for observation and evaluation of rural-urban interlinkages.

Systems Analysis of Rural-Urban Interlinkages

The concept of systems analysis is widely applied to qualitatively analyse complex socioeconomic systems in order to identify the most sensitive elements and causal relations (VESTER 1990). Especially the realization that relatively complex systems can be adequately described and analysed with a few variables if their relations are known systems analysis provides a methodological entry point to the analysis of rural-urban interaction.

Systems dynamics as a method is widely applied for network analysis of cause-effect relationships, time lags of feedbacks. It visualizes the interdependences of variables. Such cause-effect networks, however, tend to get too complex. They therefore become difficult to display and to communicate. Furthermore such models tend to overemphasize quantifiable and easily observable variables (e.g. migration) whereas social or psychological aspects are more difficult to link (e.g. acculturation in the city).

HÖGGER 1990 is critical about the explanatory power of systems analysis. He argues that the multi-dimensionality of most socio-economic phenomena, such as the rural-urban linkages, are complex multi-causal processes. Even further indepth analysis by improved differentiation and more networking (of causal relations) does not necessarily allow one to understand human behaviour more comprehensively.

Figure 14 illustrates a systems analysis model for the Dolakha-Kathmandu case study. It identifies the driving forces pushing urban growth and the causal network of the rural-urban system.

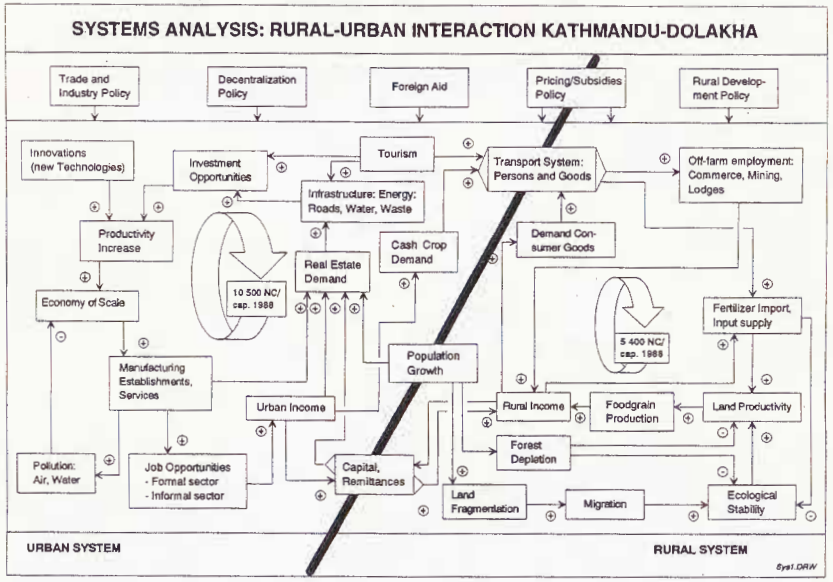


Figure 14: Systems analysis of the major factors of rural-urban dynamics in the Kathmandu-Dolakha case. Agglomeration economies, technical and social innovations in the centre increase productivity of labour and capital. In short, this fosters a cycle of specialization of production -> employment creation -> higher incomes in cities -> migration to cities.

Key factors for the urban engine are agglomeration economies: economies of scale (big markets, proximity of producers and consumers) and specialization, through innovations and an increasing division of labouur, cut transport costs as well as unit costs. As long as external costs (pollution, social exploitation) are not reflected in production costs through taxes and regulations the urbanization boom will continue unabated. Only if urban costs are rising, and urban incomes sink compared to rural ones, the migration from rural areas becomes less attractive. However, a strategy to internalize the urban external costs has yet to be developed and must find the acceptance of urban politicians and urban inhabitants.

3.3 COMPARISON WITH OTHER EXPERIENCES

Rural-urban Dichotomy or an Urban Continuum ?

Prevailing development concepts start from rural-urban dichotomies. Such concepts suggest clear boundaries between rural and urban areas. However, the rural-urban dichotomy has been replaced in industrial countries by an "urban continuum" for quite some time. There is no point between megacities and small villages where urbanization stops and rural areas start.

In industrialized countries the preindustrial rural-urban dichotomy has been increasingly dissolved during this century by urban dwellers moving to nearby rural areas as a consequence of the motorized transport revolution. In the developing countries the vanishing rural-urban dichotomy is mainly caused by intensive labour movements (commuting, seasonal migration) to urban areas. Together with the increasing reach of urbanized mass media even in poor developing countries the rural-urban dichotomy becomes a fuzzy term. There remain virtually no pure peasant societies in Nepal since part-time off-farm employment with subsequent cash income has significantly increased in all our case study areas. There are hardly any rural areas left which remain unconnected to markets, media or urban areas.

KOPPEL concludes similarly to JACOBS (see previous section) that there is no such thing as "rural development" since development is basically an urban term or associated with urban values. "The idea of a rural-urban continuum has been recognized, but applications have generally faltered because definitions of urban have been coterminous with development. The result is a continuum within the urban category, not between the rural and urban categories" (KOPPEL 1991) .

This can also be illustrated with our case study findings (popularization of telephones and television in prosperous rural areas like Madhan Pokhara) and new urban services provided in growing rural subcentres (video rental in Charikot etc.) make a clear separation of urban and rural regions and products increasingly fuzzy.

Migration and Economic Growth

It has already been stated that economic reasons are believed to play an overriding role in migration processes (GILBERT et al 1982). Evidence given by McGEE (1991) from the analysis of growth patterns in urban core areas in selected Asian countries over the past 30 years suggests that:

- Countries with a high economic growth and accelerated industrialization, with a corresponding drop in agricultural employment have significantly increased the percentage of the population living in urbanized core areas (e.g. Taiwan, South Korea, more recently Indonesia and Thailand).

- Countries with low economic growth and a lack of industrialization maintained their proportion of agricultural employment and the urban core areas did not significantly expand (e.g. India, Bangladesh, Pakistan).

This yields evidence that economic growth stimulated by urban-based industries and services is a major factor for the transformation of the spatial economy and the reason for a rapid shift of rural population to urban areas. This, however, increases regional disparities unless government policies to support infrastructure, employment creation or education in rural areas are effectively implemented.

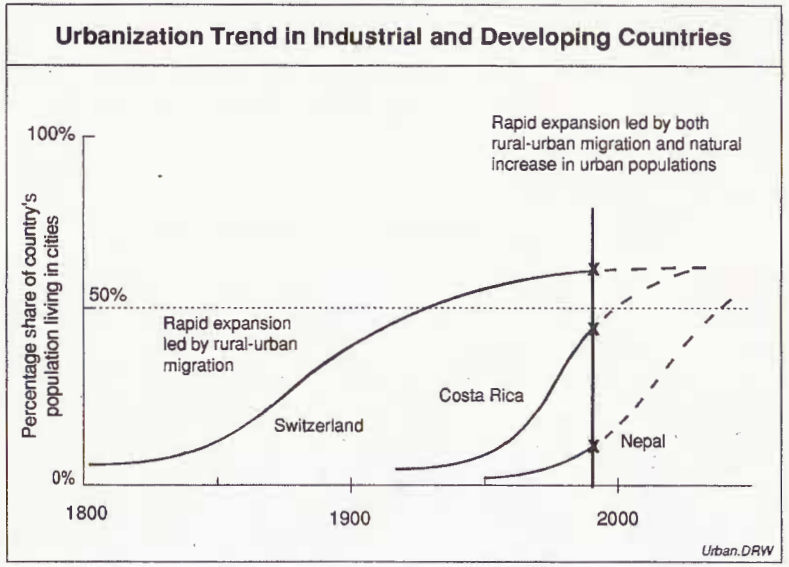
Figure 15 illustrates the urbanization trend in Switzerland, Costa Rica and Nepal. Switzerland's 19th century urbanization was essentially due to migration (high mortality rates in urban areas), whereas urbanization in developing countries is the result of high natural population growth in the city as well. Therefore, urbanization trends are expected to proceed more rapidly in developing countries.

Demographic development in India and Nepal did not exactly follow this pattern: a stagnant overall economy during the last decades and a relatively small urban economy have not (yet) induced major population shifts to urban areas. In Nepal the major growth boom of urban areas so far, we assume, was due to a food shortage caused by severe droughts at the end of the 1970s. Lessons from other countries indicate that Nepal might face an urbanization boom during the next decades which, however, will not be as rapid as in some Latin American or Asian countries.

Rural-urban experiences from Switzerland

Although the hills and mountains of Switzerland were historically not the primary settlement zone (as in Nepal), the role of economic and cultural processes observed in Switzerland might also contribute to the understanding of rural-urban processes in Nepal. In the context of the national research programme on "Regional Problems in Switzerland" which was conducted between 1978 and 1984 the efforts on regional development were evaluated.

Until recently the (implicit) traditional regional development policy in Switzerland was that of a "passive rehabilitation" of problem or low-income areas through migration out of those areas. This migration resulted in local labour scarcity and induced higher wages in rural areas (evidence for this trend could also be found in the Dolakha-Kathmandu and Palpa Butwal case studies). For decades, in many Swiss hill and mountain areas migration out was perceived to



Figur 15: Urbanization Trend in Switzerland, Costa Rica and Nepal (Source: adapted from HAGGETT 1979).

be as more normal than staying in the rural area. To stay was considered as conservative and especially the youth were flocking to the urban areas to look for employment or education opportunities. Only few returned later to their ancestral villages. Consequently, rural hill areas have continuously lost populations, whereas the middle centres and especially the agglomeration belts of cities grew. Only in tourism zones, hill populations remained stable or grew.

These trends could not be significantly reversed by explicit policies dealing with regional development implemented from the 1970s onwards to foster the economy of peripheral zones of Switzerland. The implemented measures ranged from infrastructure investments, employment creation, innovations to credits and securities for the hotel industry.

The research programme concluded that strategies had to be tailored to objectives and according to the type of region (e.g. level of natural resource endowment etc). There is no single strategy which could balance rural versus urban, respectively, centre versus periphery disparities. To cope with all objectives such as reduction of regional disparities and concurrent macro-economic growth a palette of different strategies, tailored to the specific needs of a re-

gion, would promise the best outcome. Table 2 values the suitability of the most important strategies.

The challenge of conflicting objectives will be illustrated with the strategy "innovation promotion". As also seen from our case studies in Nepal the urban areas are the centres of excellence for new innovations. Hence innovation promotion might be neutral in terms of rural-urban balance, might contribute to overall economic growth through productivity increases (labour, land or capital) but could lead to new technological dependencies (repair, maintenance etc.) for the rural area.

The selection of appropriate strategies must therefore be tailored to the socio-economic potential of a region. Regions with a low economic standard and little perspectives will not be able to take advantage of infrastructure development. On the other hand fast-growing urban centres are in a better position to increasingly pay for their economy of scale and resulting follow-on problems (e.g. pollution). The internalization of external costs and decentralization of political power and decision making appear to provide the best effectiveness to achieve the objectives. Employment generation, mobility increase and infrastructure development need to be evaluated and tailored to certain types of areas (e.g. infrastructure development in very remote areas cannot be achieved sustainably and with reasonable costs).

Strategies	Reduction of regional disparities	Macro-economic growth	Self-reliance	Environment
A: Direct strategies				
- Infrastructure development	+ / -	+ / -	+ / -	+ / -
- Employment generation	+ +	-	+ / -	-
- Innovation promotion	+ / -	+ +	-	+ / -
B: Indirect strategies				
- Mobility increase	-	+ +	-	+ / -
- Internalization	+	+ +	+	+ +
- Decentralization	+	+	+ +	+
- Distribution of wealth	+ +	- -	- -	+ / -

Legend:
+ + very suited
+ suited
+ / - partly suited
- unsuited
- - very unsuited (counterproductive)

Table 2: Suitability of different strategies for regional development in Switzerland (FREY quoted in BRUGGER 1985).

Illustrative is also the case of road construction in the Swiss hills. Traditionally road construction in remote areas of Switzerland fulfilled strategic purposes

meaning that no economic cost/benefit calculations were made prior to road construction. Comparing this with Nepal, where cost-benefit considerations play an important role together with political considerations, one could hypothesize that many infrastructure projects (especially roads) in the hills of Switzerland would not withstand a critical economic review.

AlpTransit, the largest infrastructure investment in transportation in Switzerland, consists of two new railway tunnels through the Alps which will come into operation by 2005 or later. It provides evidence for the hypothesis that infrastructure development is often not justified on cost benefit considerations only. AlpTransit was conceived to shift the transport of north-south transit goods through Switzerland from road to railway transportation. Yet there remain considerable uncertainties about the volume and directions of the future flow of goods in Europe across the Alps. Cost/benefit calculations at best indicate a limited economic viability at present. Other calculations suggest that in most of the likely scenarios one tunnel would provide sufficient capacity to deal with the expected future transit volume. Political considerations to increase acceptance among various regions have resulted in a more expensive final project design submitted to the Parliament and later to a referendum. The referendum passed with 65 % yes votes. The political success of the project for the time being seems to have justified the extra investments made to win political support from all parts of Switzerland.

The conclusions drawn from this is that developing countries also have minority problems. Sometimes an extra investment in infrastructure may be justified if this helps a country to proceed on a development path of regional balance.

The case study areas of Bajhang and Dolakha and even parts of Palpa must be considered as areas with limited natural resource endowment where a relatively low demand for physical infrastructure exists (as a result of limited purchasing power). The economic level does not provide the basis to repay or sustainably maintain aid financed infrastructure with local resources and hence investments serve mainly the purpose, of balancing regional development.

PART 4: CONCLUSIONS

4.1 CONCLUSIONS FROM CASE STUDY ANALYSIS OF RURAL-URBAN INTERLINKAGES

The evidence obtained from our case studies in Nepal investigating the factors shaping rural-urban interlinkages in the vegetable and fruit, metal and migration cases provide the basis for the following insights on the key questions presented at the beginning of this study. The conclusions are based on our qualitative field research at micro-economic level complemented by literature analysis and integrative efforts. Conclusions are put forward as qualified hypotheses. They are structured according to the co-evolutionary analytical framework presented in Figure 4.

(1) Exchange of goods and role of markets

- **The dynamics of urban areas exceed those of rural areas. Economic growth rates are higher in urban areas.**

  New demands created by growing urban areas and increasing incomes are a major engine fostering rural-urban interlinkages. Growing urban systems continuously invent new employment. This appears to be a global phenomenon intrinsic to the present world economy. However, micro-economic factors (as investigated here) and macro-economic factors constantly redefine potential opportunities for different rural areas.

- **All integrated rural development projects in Nepal have overlooked the urbanization aspect in area development.**

  The evidence forwarded on the exchange of goods between urban and rural markets is that the opportunities created by rural investments largely benefit the more dynamic urban system. This is found to be the case both when rural vegetables are sold on urban markets and the cash thus earned is partially spent on urban goods or services (vegetables for Butwal, Kathmandu markets), or when urban goods are sold in rural areas through the newly-established interlinkages (metal crafts). Rural centres which are developing into small towns are confined to road corridors and have favourable geographic locations.

- **Rural infrastructure should be perceived and justified on the basis of the synergistic development that it induces in the long run.**

  From a traditional economics' point of view the development of rural-urban interlinkages needs infrastructure as a precondition, especially if development is seen as a result of improved market access. However,

physical infrastructure, like a road or electricity, is something that is necessary but not in itself sufficient for rural uplifting. To trigger broader development impulses, education and the ability to take advantage of information, for instance, must be present in a region or society if it is not to be bypassed by development or taken advantage of by those who are already more developed. This requires well-established intermediary institutions like kinship interlinkages, cooperatives and community groups for the successful marketing of agricultural produce. In that respect NGOs and community groups do play a very important role. The manner in which infrastructure induces social changes, social perception and behaviour patterns can be positive and favourable for synergistic development, if "software" such as education and skills are promoted at the same time. Otherwise, severe marginalization or exploitation by urban areas may result.

- **Often economic growth does not improve the living conditions of poor or disadvantaged social groups such as women.**

  Commercialization of agricultural products and related cash earnings are controlled by men, especially if marketing distances exceed one day of travel (staying out overnight makes marketing a business for men). The consequences observed from male domination in marketing are that the women who invest increasing amounts of labour in, for example, vegetable farming, are worse off than in the traditional subsistence agriculture setup. Marginalization is fostered by the virtual absence of women in formal organisations (central and local governments).

  The evidence from the carpet industry shows that the marketing of this foreign exchange-earning commodity on the world market is occurring at a tremendous social and environmental cost. The exploitation of the labour engaged in this industry in economic terms, but even more so in terms of deprived health and sexual misuse of child and female employees, is severe.

(2) Technology diffusion

- **Most innovations originate in urban areas and there is a time lag till they reach smaller towns and rural areas. Rural development depends on the ability to absorb technology diffusion and urban values.**

  The example of plastic pipes and sprinklers as well as modern poultry farming (Palpa case study) shows the diffusion of technology originating in urban areas being adapted to rural settings. The process of adaptation is a social one. Its sustainability is dependent on the quality and health of the rural social system as well as the quality of linkages with the urban

environment (transport, telecommunication). From the point of view of penetration or acceptance of innovations, successful rural development is city work transplanted Though creativity and adjustments are needed to make urban technologies sustainable, development of rural areas is often determined by the diffusion of urban values.

- **Rural technology introduced through development programmes and government institutions in rural areas were often not proven technologies.**

  The cultivation of new fruit varieties requires adapted species, adequate know-how and secured inputs (e.g disease control). Compared to vegetable production, the risks and profits of fruit production - if successful - are higher. After a period of 3-10 years only, investments start to pay off. Vegetable cycles are much shorter. Development efforts made by government institutions were not able to provide the necessary risk insurance and many fruit farmers ended up with high debts.

- **In the absence of effective risk-insurance instruments only rich farmers can successfully play the role of innovators and agents of change.**

  In Palpa and Dolakha all successful fruit and vegetable farmers were comparatively rich and controlled enough resources such as land, political power, or kinship relations to take risks and experiment with new technologies. Technology diffusion by development programmes and government schemes were only partially successful (e.g. ADB/N) in providing credit and risk resilience to poor and small farmers.

(3) Resource Mobilization and Exploitation

- **Most policies aimed at promoting sustainable rural growth through capital investments have failed, including integrated rural development.**

  The traditional view that rural economic growth can be significantly increased by capital investments merits overhauling. In many cases, including particularly our case study Dolakha-Kathmandu, rural investments have been siphoned off by either rural elites or urban areas. Generally, profits of rural elites are reinvested in urban areas partly in businesses and to purchase land. Irrespective of development efforts, rural areas have not developed or "taken off" on their own. High population growth and low productivity in agriculture forces rural people to search for alternative income. The best alternatives are found where income prospects are highest and most reliable, as in big cities.

Although rural-urban disparities in terms of access to water and sanitation appear to be narrowing in Nepal[1]) they remain significant in economic terms. Rural development efforts ultimately have contributed to the growth of urban areas. They were, however, not the driving forces behind urbanization.

- **Rural-urban linkages are synergistic developments that cannot be planned top-down in a deterministic fashion.**

  Where rural development fails urban development does not necessarily offer better perspectives. Rural-urban interlinkages are significantly shaped by processes of social and value changes, by sectorial policies as well as by macro-economic measures. Rural-urban linkages are a highly interdisciplinary process. There is no way to define an administrative institution responsible for planning the dynamics of rural-urban interactions. They cannot be engineered by a single (sectorial) policy, but are rather the result of many different and sometimes even conflicting policies. Subsidiariness and flexibility at policy level minimize risks and open possible avenues of co-evolutionary opportunities (for example rural electrification, diffusion of sprinklers following road construction).

- **Money is a vital element of rural-urban interlinkages. However, the formal finance and banking system has either failed in the rural areas, or worse, contributed to severe rural exploitation.**

  "When interest rates cross 5 % forget infrastructure development; when they cross 10 % forget industrial development, when they cross 15 % forget all development (local Nepali wisdom). The formal banking sector interest rates are 18-19 %. The interest rates in the informal sector are often as high as 48 %. Formal interest rates, for the user, end up close to the informal rates because of feudalistic rent-seeking practices in state institutions. Productive investments in agriculture, industry or trade usually do not permit a return in investment of 15 % or more. Higher returns on investment are obtained from risky but unproductive import/export businesses (smuggling) and urban real estate. This phenomenon leads to resource transfer from rural to urban areas into "unproductive" investment in land and buildings. In addition there are striking shortcomings in the formal sector performance with regard to risk assessment and risk sharing. The prevalence of high interest rates in a society is an indicator of inadequate budgeting discipline on the part of the government, lack of faith in the future and an overvaluation of present benefits - all of which are indicative of the confidence people have

1) Between 1985/87 and 1987/90 the proportion of rural households with access to services (health, water, sanitation) has increased faster than in urban areas. But the level of access to services in rural areas of Nepal is significantly lower than in cities (UNDP 1990 and 1992).

in their social institutions. Where people are confident of their social institutions such as family and kinship ties, they invest for a future at low discount rates in, for instance, education of children. Where they are confident of property ownership institutions (family-owned farms), they invest in irrigation and conservation of forest resource. Where they are not confident of the social institutions (state agencies, government-owned banks etc.), they refuse to put up money even for the repair and maintenance of already-existing infrastructure (roads, irrigation canals).

(4) Migration and Employment

- **Migration from rural to urban areas is a survival strategy in a poor subsistence economy.**

  The dynamics of migration patterns depend on resource scarcity in the rural area on the one hand, and perspectives on employment and added income in urban areas on the other. Migration is not always an entirely family affair. Farm families export individual members to city jobs such as government jobs, carpet factory work, watchmen.

- **Migration without social development can only lead to economic marginality being perpetuated.**

  The evidence gained from the Bajhang-to-Bangalore-migration, carpet factory labour, or villagers escaping excessive usury (blacksmiths of Palpa) indicates that poverty caused by unjust social relations in the migrants' area is perpetuated in the new urban setting either by importing those social relations (Bajhang-Bangalore) or new exploitative, humiliating relations in the new urban work places (women in carpet factories). During the past decades rural development efforts were not able to reverse this trend.

- **Employment and resource use do not respect national and administrative boundaries.**

  Rural-urban interlinkages expand beyond administrative boundaries and the national state. Prevailing development concepts start from rural-urban dichotomies. However, there is no clear-cut point between megacities and small villages where urbanization stops and rural areas start. Similar to industrialized countries the transport revolution presently observed in big cities contribute to a vanishing rural-urban dichotomy. Together with the increasing reach of urbanized mass media even in poor developing countries such as Nepal, the rural-urban dichotomy becomes a fuzzy term.

The success of multinational enterprises is a recognition of the validity of this statement. It holds great lessons also for aid agencies which have been dealing with similar problems across regions and all over the globe, but with less success. The lesson from rural-urban interlinkages and transnational migration is that donor intervention exercises must learn to free themselves, at least mentally if not legally, from the straitjacket of a national state and administrative boundaries, and learn to deal with the city, its hinterland and the problems that link them.

- **The recently advanced concepts of "desakota" and the "virtuous circle" models[2] offer conceptual frameworks that highlight the role of intermediary towns and local governments in rural-urban interlinkages.**

  Desakota and the virtuous circle model stress the relevance for rural-urban interlinkages of intermediary spatial units such as small towns and densely-populated rural areas between urban cities. The field research presented here provides evidence of the beneficial role of intermediary towns (Palpa-Butwal case study) vis a vis centre-periphery interlinkages (Dolakha-Kathmandu case study) and remote areas (Bajhang case study). The promotion, through appropriate and flexible policies, of smaller towns, can reduce migration pressure on big cities and allow rural people to take advantage of both urban employment opportunities and the security of their nearby rural social settings.

(5) Information and value exchange

- **Mental changes are a precondition for new technology acceptance.**

  Brahmins adopting poultry farming in Madhan Pokhara and Kavre and Jirels or blacksmiths growing vegetables for their own consumption - these are activities which were previously taboo and are now lucratively pursued. These mental changes reflect value changes which have occurred over a period of time, or when the younger generation is exposed to new values in urban areas different from rural areas.

- **Value exchange occurs effectively through intermediary institutions such as rural cooperatives, community groups, informal credit systems, schools, media etc.**

  Schoolmasters in Palpa, NGOs operating poverty-alleviating programmes, Newar clans spread from Dolakha/Charikot to Kathmandu, are all conductors of values and value changes between the urban centres and the rural hinterland. A richness in intermediary institutions

2) See Section 1.4 of this report

leads to a better-balanced value exchange than if the state attempted to fulfil this function through state-owned arrangements. Besides inherent inefficiency in such arrangements, state-led propaganda institutions do not enjoy the credibility that organizations closer to the grassroots do.

(6) External Effects

- **The urban boom is subsidized by non-internalized costs and low tax levels.**

  Urbanization in Nepal is presently indirectly subsidized by relatively cheap imports from the overvaluation of the local currency and by the power of urban areas to externalize social and environmental costs to either the rural hinterland or to the national economy. Significant financial resources are extracted from the national economy to finance urban development (e.g. Kathmandu generates only 4 % of its investments by revenues, the rest is borrowed from the central government). Urban systems, though facing tremendous growth and infrastructure development problems, should be able to mobilize urban wealth and resources to maintain and develop urban infrastructure and service networks.

- **Rural areas are the first victims of technology obsolescence and changes in national policy.**

  A trade and transit deadlock between Nepal and India resulted in a significant reduction in the household incomes of seed collectors in Palpa (*chiuri* is a raw material for soap production). The blacksmiths of Jiri found it difficult to compete with imported hoes. The Tamang iron diggers found their occupation irrelevant when gun-making stopped in Those. Deterioration in the terms of trade or in the macro-economic policy framework affects disfavoured areas such as remote, inaccessible mountain and hill areas first.

- **There are no easy, ready-made indicators at hand to gain quick insights into rural-urban interlinkages.**

  Depending on project objective rural-urban interactions can be analysed and interpreted best by observing the flows between those areas: flow of persons, goods and capital characterize key factors at work. Indicators can easily be developed for elements such as flows of natural resources goods or funds: They, however, cannot easily be developed for the relationships between such flows. Prevailing social, technological and institutional factors shaping the rural-urban interlinkages are of political and qualitative nature.

4.2 IMPLICATIONS FOR DEVELOPMENT COOPERATION

Rural-urban interlinkages provide a framework to assess how synergistic development could be induced. They play a crucial role in the development of any country. Generalizing from the research in Nepal, the following points appear especially relevant for future development cooperation:

1. **For sustainable development, investments in future will be needed in urban and rural areas in a complementary manner to induce synergistic cycles.**

   Despite heated historical debates on where resources should be primarily channeled (industry = urban versus agriculture = rural), there is no clear empirical evidence supporting or opposing either option. Rather in favour of a interdisciplinary perception of rural-urban linkages, development cooperation should promote mutually-reinforcing complementarities between rural and urban areas. Examples of such complementarities are the promotion of agricultural marketing facilities (example Butwal market), education and training of local governments, intermediary institutions and the legal support of the informal urban sector (which absorbs migrants and provides off-farm income).

2. **With the growing proportion of developing countries' population living in urban areas the importance of urban systems will significantly increase in future.**

   Due to this demographic transformation in developing countries development cooperation in future will have to consider more specifically the role and management of urban areas. Evidence from Nepal and recently-developed models perceive small towns as crucial links between rural and urban areas. However, in view of the urgent urban problems, rural types of government-oriented projects transplanted into urban areas are most likely to produce marginal benefits or failures. In principle urban areas in developing countries are the centres of wealth and know-how and should be capable of solving most problems by internal resource mobilization.

3. **Decentralization of the central power to local governments (such as cities, districts and community groups) is a prerequisite for sustainable development.**

   This issue is neither new nor does it specifically relate to rural-urban interlinkages. Yet only a decentralized management of natural and financial resources enhances sustainable solutions. In this respect it is important that there is a provision to control their own staff and budget, and to raise local taxes. In this sense development cooperation can foster rural-urban interlinkages by focusing on:

   a) small and intermediate cities or desokota type corridors with stronger forward and backward interlinkages to the rural hinterland;

   b) enhancing the management capability of urban areas so that they can earn and manage revenues to pay their investments, reducing the need for government subsidies;

   c) supporting in diversified income (incl. credit schemes) to increase risk resilience in rural areas. This allows them to take risks and to adapt innovations resulting in productivity increases in agriculture.

4. **Know-how, the software aspect of development, is at least as important as capital flows and infrastructure investments in rural and urban areas.**

   Again, this idea is not new and has been discussed in many places before. It has, however, not yet managed to penetrate the "hardware" approach of traditional donor agencies. This thinking has also not penetrated into the power structures in developing countries where investment-led development is promoted because it is more visible, assures politicians a greater popularity and involves big flows of money. The development of know-how and human resources such as promoting rural cooperatives, community groups that would empower the villages relative to cities would, on the contrary, diffuse political power and hence weaken a central politician's hold which, in a feudal context, is based on dispensing privileges.

   While the provision of a physical infrastructure such as roads, electricity, schools and water is crucial, a more critical concern for future development cooperation is to enhance the capability to effectively operate, manage and maintain these facilities by central and local governments and beneficiaries.

5. **Mental transformation in socio-cultural relations and values is a necessary precondition for the development process.**

   Economic development is a transformation process in which the mental and socio-cultural aspects are more important than capital inflow. This transformation is the essence of "structural adjustment". Mental transformation processes and value changes take time to take root. It is unrealistic to expect such processes to show visible impacts within a project lifespan of 5-10 years. Development projects cannot speed up the mental transformation process with the standard approach of the past (fund flow dominated), which has led to aid addiction on the part of the recipients and donor fatigue on the part of the donors. A paradigm which is oriented less to a flow of funds and has a greater commitment to support "good governance" in rural and urban issues on behalf of donor agencies is required.

6. **Sustainability of development intervention in rural and urban areas is a function of the strength of social institutions.**

   While one may create pockets of a high level of development in rural and/or urban areas through development projects and government interventions, such ventures are not generally sustainable and collapse after the intervening agency withdraws unless they have been based on or linked with the ground aspirations and ground constraints through local institutions. Development cooperation should support the creation of such intermediary institutions (NGOs, cooperatives, community groups etc.) linking rural producers with urban consumers. For the empowerment of local governments and intermediary institutions an independent, critically reflecting and educated local elite is necessary.

7. **Development cooperation must foster the role of small towns in rural-urban interlinkages.**

   Small towns are the catalysts in economic and social terms between villages and big cities. Future flows of migrants in Nepal will increasingly be diverted from rural to urban areas. The growth of the Kathmandu Valley has already caused severe downstream problems (urban sprawl and destruction of cultural heritage, air and water pollution etc). Regarding the role of intermediary towns in rural-urban interlinkages, development cooperation should foster the role of Terai towns in providing employment opportunities for hill migrants, service facilities for agriculture and markets for rural produce (vegetables, fruit etc.). Economically hill towns face developmental difficulties because infrastructure development is costly. Road construction and maintenance in the hills implies high transportation costs, and water is scarce.

8. **Donor agencies and cooperating governments must conduct serious soul-searching.**

   Aid agencies and cooperating governments and institutions must reassess their capital investment philosophy. Failures of development intervention often have their underlying causes in the internal paradigms upheld by these organizations as well as the sociology of power within these bodies. Aid agencies must show honest soul-searching in order to gain legitimacy in the developing as well as in the donor countries.

4.3 OPEN QUESTIONS FOR FURTHER RESEARCH

The most pertinent questions which could either not be covered by this study or which emerged from the case study findings are:

1. How can development cooperation effectively support decentralization in a situation where modern trade and commerce are creating a global village market on the one hand and yet on the other hand people's attitudes are being moulded by rising nationalism and regionalism?
2. What does rural development mean when development is seen as a urban-rural continuum, and as city work transplanted ? Is it just a case of increasing the available degree of freedom and options?
3. Given the nature of credit and risks in the rural and urban context, how does one seriously examine the phenomenon of markets and privatisation in developing countries? What are the stresses and strains, the pain and sorrow that is to be expected?
4. What role do interlinkages have among urban centres for their hinterland? Are they the prerequisite for the dynamics of desakota type of regions?
5. Infrastructure is anything that is felt necessary, but generally cannot be financed commercially. Interest rates play a vital role in infrastructure development. More research is to be done on **what values** are inherent in interest and discount rates.
6. Integration of the local economies into globalised markets causes increasing social and environmental costs (pollution, labour exploitation). How can these as yet externalized costs be internalized? How can market forces be made to respect human rights and human dignity?

ANNEXES

ANNEX A: GLOSSARY

balighari	a feudal system of bonded labour
bari	rain-fed agricultural land
chungi kar	road tax (octroi)
chyuri	fodder and fruit tree with nut that yields oil (bassia butyraceae)
dhaka	traditional fabric of Palpa for caps (topis) with designs imported by Palpali migrants from Dhaka, Bangla Desh
dharma	an ethically determined way of life for each calling or profession, often equated with religion
gagro	an approximately 20 liter vessel for carrying and storing drinking water
ghee	clarified butter
guthi	a clan/kinship traditional intermediary institution
haat	a traditional weekly or biweekly bazaar
hasiya	sicle
kabadi-walla	one who collects kabadi or recycleable material such as scrap iron, bottles etc.
kami	caste of blacksmiths
karnol	a trumpet like musical instrument
kharka	pasture land for grazing
khet	irrigated paddy land
khetala	agricultural labourer who works for wages
khukuri	curved national Nepali knife
kipat	communal land holding arrangement
kodalo	hoe
lal purja	formal certificate of land ownership

lekh	cool temperate areas generally hill ridges as opposed to valley bottoms
madhisey	colloquial hill term for a plains dweller
pewa	dowry
pharuwa	similar to a kodalo but with a wider blade
rakshi	alcoholic beverage
ropani	500 m^2
sal	tropical hardwood
sahu(ji)	merchant or shopkeeper
ward	administrative sub-unit at community level
taulo	large convex bottomed cooking pot

ANNEX B: FIGURES AND TABLES

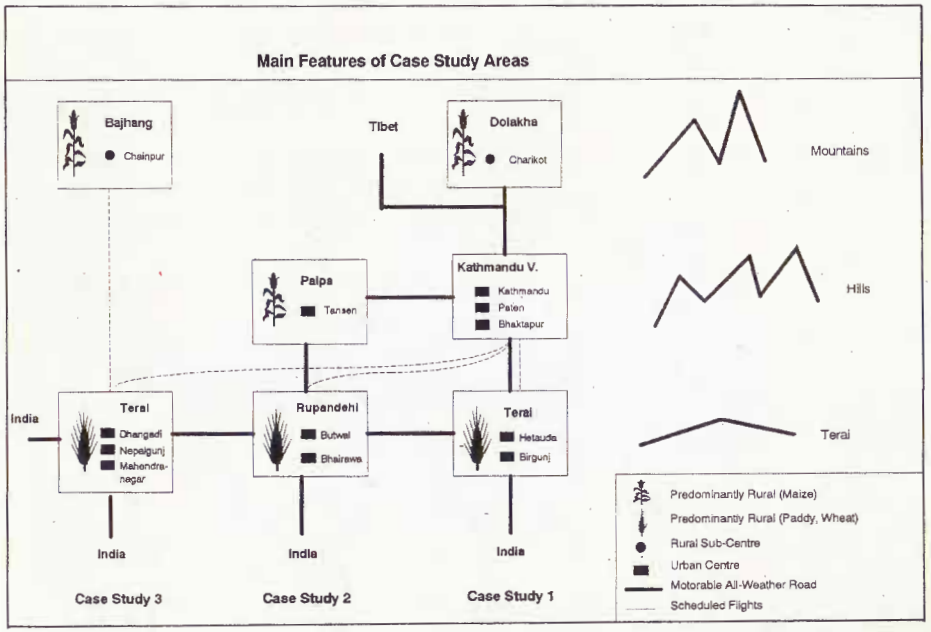


Figure 16: Ecological characteristics and accessibility of the three case study areas.

PROFILES OF CASE STUDY DISTRICTS

		1	2	3	4	5		6	7	8	9	10	11	12
		Population 1981	Growth Rate 71/81	Urban centres	% Urban Pop. 87	Literacy 1981 Male	Female	Students per 1000 persons 86/87	Cropped area p.c. 86/87	Grain Prod. 86/87 in kg/pc	Cattle/ Buffalo p.c.	Manufacturing pers. empl. 86/87	Annual Change 72/86	Value added per empl. in NRs 86/86
1. Kathmandu/Dolakha														
Rural	Dolakha	150 000	1,5 %	-	0 %	28 %	7 %	0,13	0,20 ha	290	0,8	59	-3 %	28 000
	Nuwakot	203 000	1,6 %	Bidur	3 %	28 %	8 %	0,16	0,20 ha	340	0,7	235	24 %	10 000
	Rasuwa	30 000	5,5 %	-	0 %	15 %	3 %	0,12	0,22 ha	330	0,7	36		19 000
"Urban"	Kathmandu Valley	770 000	2,0 %		50 %	54 %	30 %	0,21	0,08 ha	190	0,1	51 800	16 %	25 000
	Kathmandu	421 000	1,8 %	Kathmandu								30 300		16 000
	Lalitpur	185 000	1,7 %	Patan								15 400		10 000
	Bhaktapur	160 000	3,8 %	Bhaktapur								6 100		
2. Palpa/Butwal														
Rural	Palpa	214 000	0,1 %	Tansen	8 %	41 %	16 %	0,24	0,19 ha	210	0,9	1 175	18 %	10 000
	Gulmi	238 000	0,5 %	-	0 %	49 %	16 %	0,20	0,13 ha	170	0,8	48	8 %	11 000
	Syanja	289 000	0,1 %	-	0 %	46 %	13 %	0,24	0,15 ha	220	0,8	123	16 %	7 000
"Urban"	Rupandehi	379 000	4,5 %	Butwal, Bhairawa	21 %	31 %	14 %	0,12	0,35 ha	420	0,5	6 700	9 %	28 000
3. Bajhang														
Rural	Bajhang	120 000	1,3 %											

Table 3: Profile of case study areas: overview of selected key indicators. Source: HMG 1987, CBS 1988, INFRAS 1991.

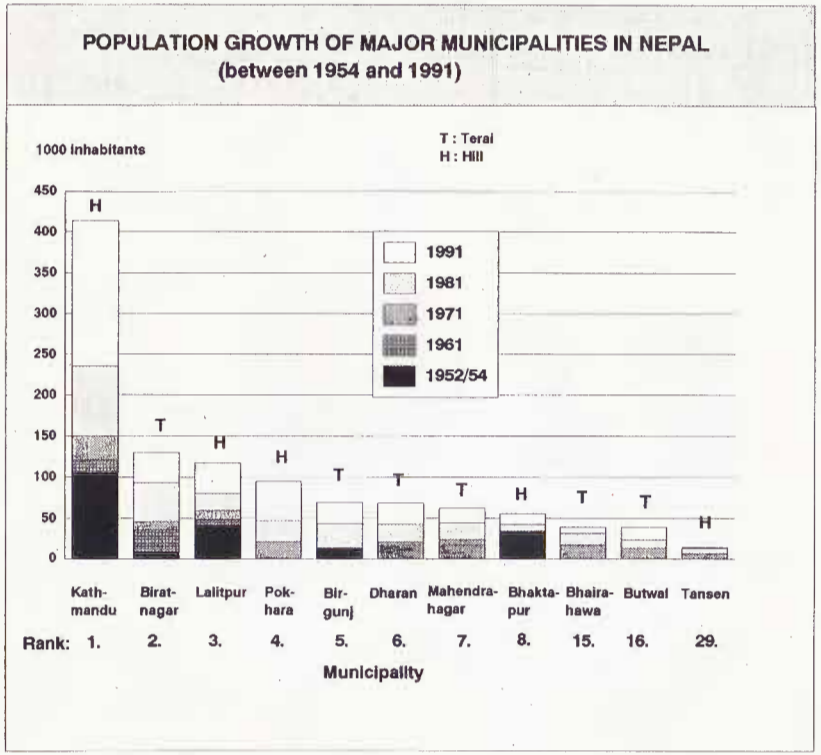


Figure 17: Development of urban population in the biggest municipalities in Nepal. Between 1971 and 1981 the Terai towns grew more than double the rate Kathmandu valley towns did (ca. 8-10 % versus 4 % annual growth). This trend has somewhat changed during the 1980s (Kathmandu and Pokhara grew between 6 and 7 %, average Terai towns only between 4-5 % annually). Source: Census 1971, 81 and 91.

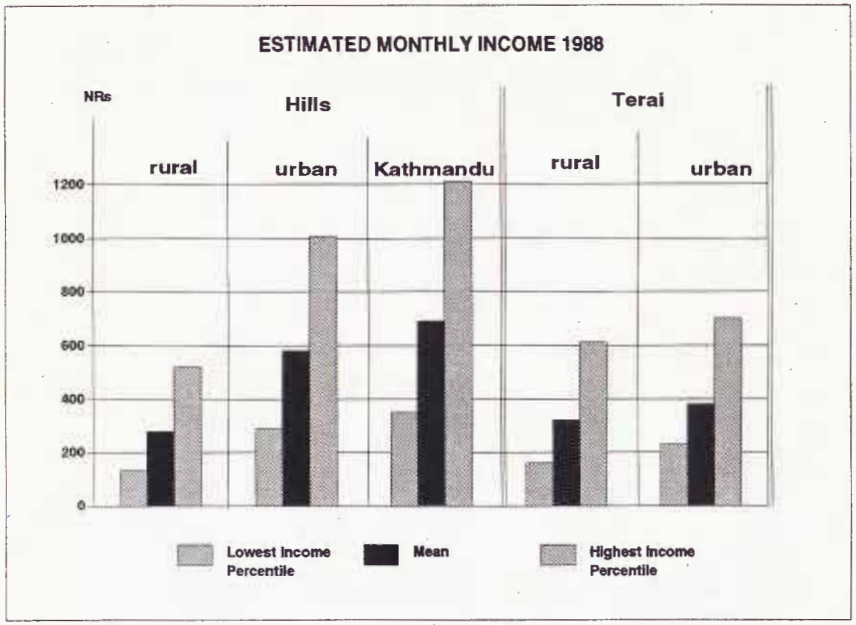


Figure 18: Estimates of monthly per capita income in different regions. Income levels are higher in urban areas (and significantly higher in Kathmandu compared to other urban areas). Income disparities among different social groups appear similar in all regions. Source: UDLE, quoted in PADCO 1990.

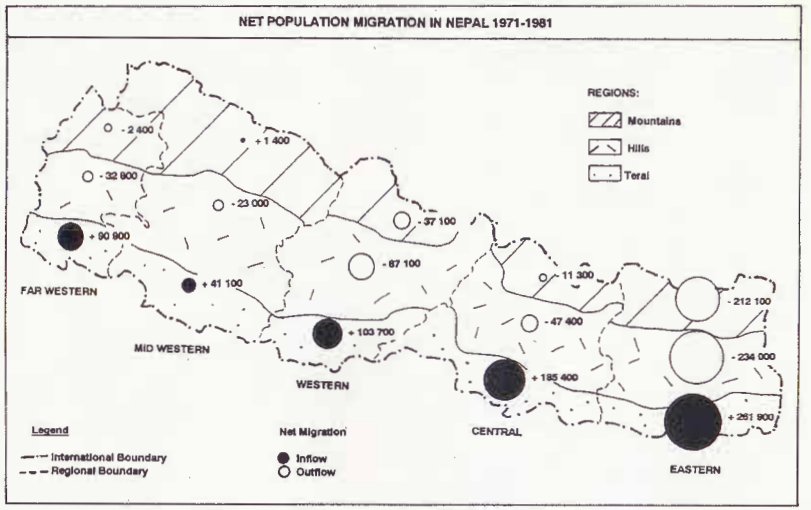
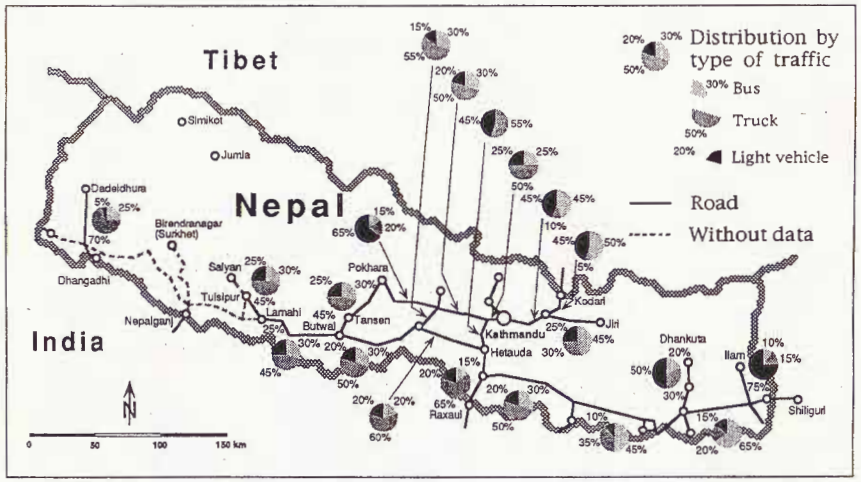


Figure 19: Net migration between 1971 and 1981. The prevalent pattern of flow is from higher altitudes to lower altitudes, where in the Terai still frontier land could be found. In future migration flow will shift towards urban areas in the Hills (Kathmandu Valley, Pokhara) and to Terai towns.



Sources: Topographical Map 1:2000000, Survey Department H.M.G., Transport Sector Profile (Data), 1988 Michael Griesbaum

Figure 20: Nepalese road network and type of traffic. The proportion of light vehicles is highest around Kathmandu, Kathmandu to the Indian border and in the south-east. This indicates a relative affluence in those areas compared to the vast Hill areas without direct road access.

Policies Influencing Rural-Urban Linkages

Level	Aspect/Sector	Evidence from case study analysis
1. Household	Birth Rate	o higher birth rates in rural areas
	Status of Women	o low status in rural and urban areas, high illiteracy rate
	Education	o gap in favour of urban areas
2. Community	Social/Caste barriers	o restricted social mobility, especially in rural areas
	Land Tenure	o unsecure land tenure in rural and urban areas prevents from long term investments (forestry, house improvement etc)
	Resource Mobilization	o priviledge of urbanized, educated persons with strong kinship or personal linkages accross space
3. National	Decentralization	o De jure policy after 1982 de facto only minor changes, power remains at central (Kathmandu) level
	Taxing System	o internal resource (income tax) mobilizationis low, especially for rich persons in urban, partly also rural areas
		o road tax as a disincentive for rural-urban exchange of goods
	Subsidies	o in general benefit urban upper and middle class consumers (electricity, kerosene, food)
	Infrastructure	o availability of basic physical (road access, electricity and modern communication) and social infrastructure (schools, health services) is a prerequisite for synergetic development
		o reduction of transport costs is a primary input to change cropping patterns and attitudinal changes
	Agriculture	o price increases are incentives for producers but disadvantage the urban poor
		o secured availability of water, seed, fertilizer and credit are necessary for agric. innovations in rural areas
	Education and Health	o education of rural people is a basic measure to reduce their exploitation
	Industrial Development	o limited potential in the hills: high costs for transport, lack of land and infrastructure
		o environmental problems in the Kathmandu Valley
	Urban development	o sprawling city growth hampers development of efficient public transport system
		o costs for urban investments (urban roads, water supply & sewage, waste etc) are not covered by the polluter pays principle
	Migration	o out-migration is the basic strategy to adjust to rural population growth and a concurrently stagnant agriculture in the hills
		o rel. high income levels attract migrants to the Kathmandu Valley
4. International	Exchange Rates	o overvaluation hampers exports. Imports are subsidized and indirectly benefit urban areas (the consumer center)
	Tourism	o induces cash flows mainly in the Kathamdu Valley
	Electricity	o unsecure supply , huge potential for local use and export to Indian urban centers
	Foreign Aid	o despite heavy inputs (per capita) overall economic growth induced is marginal

Table 4: Overview of economic levels and policies affecting the dynamics of rural-urban interlinkages. Source: Own case study analysis in Nepal.

Indicators for Monioring Rural-Urban Linkages		
Level	**Indicator**	**Survey type**
1. Household	Income sources (agriculture, wages, remittances)	RRA, CS, QS
	Terms of trade (prices, income)	
2. Community	Migration (rural-rural, rural- urban, urban-urban)	RRA, QS, Census
	Accessibility (roads, trails etc)	RRA, CS,
	Markets (numbers, kind & volume of traded goods)	RRA, CS, QS
	Balance of trade (import/export of goods)	
3. National	Urbanization (population, employment)	Census
	Income levels	OS, QS
	Flow of capital (remittances, investments)	OS, E
	Education and health (literacy, life expectancy)	OS
4. International	Import/export	OS
	Exchange rates	OS

CS = Case studies
OS = Official Statistics
QS = Quantitative Surveys
RRA = Rapid Rural Appraisal

Table 5: Overview of major indicator areas for observation of rural-urban interlinkages. Source: Own case study analysis in Nepal.

ANNEX C: PEOPLE MET AND SUBJECTS DISCUSSED

In discussions with many of the individuals listed below, they were often accompanied by several others who added to the conversation. However, as per prevalent Nepali etiquette, it was not always possible to get down their names or profession. Also in many instances, discussions with villagers or shop owners had to suffer the fate of annonymity since pointed questions regarding name, occupation etc. would have elicited suspicion and a break in information flow.

Palpa-Butwal

1 Hari Prasad Sharma, engineer EAST Consult and key informant on issues between Palpa and Bhairawa. Roads, transportation, administration, history of area.

2 Chitra Shrestha, student and migrant from Gulmi. Migration needs and perceptions.

3 Binod Nepal, student. Aspirations of young educated Palpalis.

4 Shiva and Dhakeshwar Ghimire of Ghimire Nursery in Madhan Pokhara. Fruit, vegetable and coffee growers.

5 Dandapani Panthi from Rupse, first commercial fruit farmer of Palpa. Fruit, sericulture and cottage industry problems.

6 Madhan Ghimire, school teacher + vegetable farmer + jersey cow owner. Farming problems and education.

7 Anne Jansen, livestock specialist PDP. Expatriate experience of several years in Palpa and its manifold problems. Also other Palpa Development Project experts for perceptions regarding Palpa's development: Wolf Andler, forestry; Peter Eppler, organizational expert; Rene Wuest, PDP donor representative; Hubert Trapp, Mr. A. Kayastha, Binod Sharma.

8 Vinaya Kumar Kassajoo, Satya editor. Manifold problems of Palpa.

9 Durga furniture carpenters as well as Chilangdi carpenters.

10 Chhatraraj Shakya, professor and religious opinion leader. Issues of development and Tansen.

11 Pork and mutton suppliers to Tansen, butchers.

12 Ex-soldiers of Chappani, Gothekot. Migration perceptions and urban opportunities.

13 Shop owners in Aryabhanjyang, Tahun, Jabgadi, Hartok and Chhahara.

14 Politicians Kul Prasad Nepal (UML), Kaluram Ranamagar (Congress) and followers. Perceptions of development.

15 Jayaman Shakya (Newar coppersmith in Tansen), Bhugolman (Butwal), coppersmiths and metal dealers.

16 Narayan Gyawali, acting mayor of Tansen. Urbanization problems.

17 Poor sharecroppers of Kazi Pauwa, Tansen.

18 Padma Prasad Shrestha, former pradhan pancha and Ruru hotel owner, Ridi. Baglung-Gulmi-Tansen-Bhairawa trade interlinkages. Tourism prospects.

19 Lochan Man Singh, baidya. Herb collection and trade.

20 Ganesh Man Maharjan, former pradhan pancha of Tansen and first entreprenneur of Dhaka topi. Textile and labour problems.

21 Bhairawa distillery's representative for Palpa. Alcohol marketing.

22 Scrap metal collectors from Bara and scrap metal dealers in Butwal.

23 Tom Moncreif, materials technology manager of Development and Consulting Services. Metal and other industries of Butwal as well as metal works in the hinterland.

24 Durga Sharma, Butwal Wood Industries.

25 Rajendra Pd. Kasodhan, Siddha Baba Bhanda Udyog. Metalworks in Butwal.

26 Bishnu Man Shrestha, owner Satyavati Soap Industries, Tansen. Chiuri trade.

27 Pashupati Ghimire, Nepal Coffee Company, Manigram Butwal.

28 Neelam Kumar Shahi, teacher and social worker, Butwal and Dor Nath Neupane in Kathmandu. Rural Self-Reliance (SWABALAMBAN) Development Center's poverty alleviation program.

29 Indra Krishna Sherchan, owner and manager of National Guest House in Butwal as well as his workers from Palpa.

30 Jagadish Chandra Baral, District Forest Officer, Palpa.

31 Madhan Pokhara farmers: Narendra Panday (vegetable farmer), Dhakeshwar Ghimire (nursery owner), Som Nath Arjyal, Tikaram Khanal, Shiva Neupane, Giriraj Ghimire, Surya Bahadur Bhattarai (poultry farmer), Durga Bahadur Karki (vegetable seller in Butwal)

32 Thakur Bahadur Lohagun of Luhung

33 Shiva Nepal of Nepal Electricity Authority, Tansen

34 Thakali owner of Dhaulagiri Lodge, Tansen.

35 Hari Bahadur Singh, former pradhan pancha, hardware dealer and son

36 Amrit Bahadur Bishwakarma, traditional blacksmith of Bagale - Samar Bahadur, Tul Bahadur, Gun Bahadur, Til Bahadur, Keshar Bahadur, Madhu Ko Baba Amlekhi, also with EAST Consult overseer.

37 Abdul Halim, Aziz Ahmed and Shakeel kabadiwalas of Butwal.

38 Kanchhi Surkini, wife of a fruit grower in central Palpa.

39 Kanchhi Magarni, Palpa, mother of 7 children, gave birth to 11 children out of which 4 died. Her husband served in the Indian army. She decided to undergo a sterilization after the 11th birth. Her husband disapproved of that and threw her out of home under pretext she would have love affairs with other men during his absence. She committed suicide. Context: Marginalization of women and social cost of migration.

Jiri-Kathmandu

1 Shanta Krishna Shrestha, former pradhan pancha of Dolakha and Congress sympathizer. "Why has Dolakha not developed?"

2 Kalyan Gyawali and crew, ITECO engineers at Charnawati Rehabilitation. Perceptions of the modern sector and middlemen trade.

3 Wangche Sherpa, chief of UML, Charikot. Development difficulties.

4 Norbu Sherpa, Sherpa Mo-Mo House Jiri. Vegetable and livestock trade problems between farmers and hotel users.

5 Gelzi Sherpa, Cherdung Cheeze Factory. Problems of livestock management and relation to export of cheese to Kathmandu.

6 Health workers of Jiri Hospital. Health and education problems.

7 School masters of Dolakha high school. Education and general problems of development.

8 Mr. Thami of Dolakha. Dealer of Alampu slates.

9 Agriculture farm staff in Jiri. Vegetable and fruit problems as well as livestock.

10 Indra Kumar Shrestha, owner of Sagarmatha Lodge. "Why Jiri has no future."

11 Several kamis from Those and shopowners dealing in metallic articles. Metal trade.

12 Bishnu Lal Shrestha, Local Development Training Center. Haat bazaar in Mani Danda, herb trade, past history, traditional paper industry.

13 Rudra Bahadur Khadka, manager and owner of Chherdung Lodge in Jiri.

14 H.R. Basnet, Department of Housing Earthquake Rehabilitation Project, Charikot.

15 Narayan Bahadur Thapa and Subindra Prasad Luitel, Agriculture Dept. Livestock Division, Jiri.

16 Bhakta Bahadur Bhujel, poor farmer and SDC watchman.

17 Hardwarer sahujis of Charikot and Jiri.

18 Sravan Kumar Shrestha, vegetable merchant in Charikot

19 NEA electricians in Jiri

20 Jujuman sahuji of Those

21 School masters Ganesh Lal, Shyam Lal and Lakshmi Lal of Those.

22 Coppersmith Ranabahadur Ghimire and son, Jiri

23 Ganesh Bahadur Tamang, small farmer selling vegetables at Jiri haat bazaar from Rasnalu across Khimti

24 Several kamis and fruit sellers in Jiri haat bazaar.

25 Sushma Bajracharya, Kathmandu, former agriculture adviser Palpa Development programme, has been involved in evaluation studies for the GTZ supported Dhading District Development Project (vegetable interlinkages, farmer-managed irrigation systems, role of women). Carpet industry: she is a friend of CWIN (Child workers concern centre in Nepal). CWIN has commissioned several studies on social labour exploitation in the carpet industry (Nepali language).

26 Nar Bahadur Magar Birketar, Sunaula Dhading, farmer, chairman of a user group of farmer-managed irrigation system.

27 Mrs. Ghimire, wife of a vegetable farmer in Dhading district.

28 Chinimaya Tamang, female labourer from a carpet factory in Jawalakhal interviewed.

29 Keshab Nath Upadhaya, Deputy Director HELVETAS, occasionally interviewed on working and inadequate sanitation and housing infrastructure in a carpet factory established next to his house in NE Kathmandu.

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Many studies on either rural or urban development dynamics have been published so far. This contrasts with the need for comprehensive knowledge on rural-urban interlinkages and related policy issues. This study presents a literature review complemented with new empirical insights from Nepal: how do rural-urban interlinkages affect development processes and development cooperation?