

Critical Constraints to Economic Growth of Nepal

analysis & recommendations on 5 sectors



Published by
Samridhi, The Prosperity Foundation

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Samriddhi, The Prosperity Foundation

September, 2012

Foreword

Nepal's richness in natural resources and possibilities for being a prosperous nation are subjects of all discussions in Nepal's political economic discourse. Yet, despite these resources and potentials having existed from the very beginning, turning the dream of a prosperous Nepal into reality still seems like a long road ahead. "Critical Constraints to Economic Growth of Nepal: analysis and recommendations on 5 sectors" is a book that tries to bridge the gap between the possibility and reality by offering insight into the five sectors which have the potential to drive the economic growth of Nepal in a positive direction.

As agriculture, education, hydropower, (transport) infrastructure and tourism are taken as five important sectors for the realization of Nepal's economic growth potential, this book puts together ten articles on the mentioned five sectors, addressing each sector by two articles. Agriculture being the largest sector of the Nepalese economy while hydropower and tourism being two areas of comparative advantage, transport infrastructure stands as the backbone in driving the economy. Similarly, education remains a strong component from an economic viewpoint in producing skilled human resource necessary for economic growth.

In this way, the book seeks to present a comprehensive picture of Nepal's economic growth scenario. The combined strength of good performance in these five sectors presents a promising picture for Nepal's economic growth. Existing challenges need to be identified while measures to mitigate the challenges and to optimize the overall productivity need to be taken for these sectors to show good performance and drive the growth process. The ten articles presented in this book take a step forward in that very direction: the articles present a situational appraisal of the five sectors and subsequently highlight the key challenges and provide recommendations to mitigate them.

The articles presenting the findings based on previously carried out studies and consultations are complimented by the understanding and analysis developed

over many years of practical experience and exposure in those areas through the guest opinion articles. Hence, the five study-based articles and the five expert opinion articles seek to present a balanced view of each of the sector. This book offers a comprehensive analysis of these five important sectors for students of the Nepalese economy, policymakers, political and business leaders, journalists, government officials and bureaucrats and persons interested in Nepal's economy.

At this point in time in Nepal's political economic situation, where frustration over the stagnant economy and failure of the Constituent Assembly to deliver the new constitution is growing, the government and private sector should together channelize their energy into reviving the Nepalese economy and delivering hopeful signs to the people for Nepal's future. In this context, I believe this book will help both the government and private sector in identifying key areas to focus on in order to start taking action.

While finding useful statistics and information on different areas of the economy is also quite a struggle for economists, scholars and journalists in Nepal, this book not only presents key statistics on the aforementioned areas, but also helps understand the areas better by presenting a sound analysis on the overall status of each sector. Independent policy institutions add value to the expansion of the knowledge base of our country. I strongly believe that through such initiatives, Samriddhi, The Prosperity Foundation will be successful in building a greater discourse for independent input to Nepal's policymaking process and overall growth.

Radhesh Pant

CEO, Nepal Investment Board
Government of Nepal

Introduction

Nepal's economic health is in a frail condition more than ever before. The country is one of the least developed countries in the world, as witnessed by its rank as no. 157 out of 187 in 2011 in terms of the UN global human development indicator. Nepal has been struggling to keep up with the pace of economic development ever since the introduction of democracy in 1951. The early 1990s saw a major shift in the economic development of the country with the introduction of liberal policies. However, it was short lived due to the initiation of Maoist insurgency in the country.

The decade long insurgency left the country with a major economic setback. After the end of insurgency in 2006, the country saw some hope of regaining its economic strength, however, the political unrest and social turmoil further pushed the country's economy in a downward spiral.

The economic growth rate of Nepal was at an average of 4 pct. in between 2005/06 and 2010/11. The preliminary estimation for 2011/12 is 4.6 pct. owing to the good agricultural harvest due to a good monsoon rainfall in the previous year according to the Ministry of Finance. In the years after 2006, the service sector has been growing constantly. Yet, the industry sector has been declining every passing year, with an estimated growth rate of as low as 1.6 pct. in 2011/12.

Power shortages, as long as 18 hours a day, struggle between employers and labour unions, escalating foreign migration of labourers in

search of better jobs, strikes and bandhs, lacking transport infrastructure, inefficient education and low-productive agriculture are some of the major challenges hindering the economic growth of the country.

While the country has been performing feebly in the economic arena forcing people to look for better opportunities in foreign land, the country has been engrossed only in sorting out the political power play. The political turmoil, especially after 2006, along with the failure of the constitution building process have pushed the country's focus on political issues further alienating economic issues from the national agenda.

More and more businesses, financed by both domestic and foreign investment, have been closing their doors due to power shortage and labour problems. The villages are emptying with as many as 45,000 people per month migrating to obtain foreign employment in the Middle East, Malaysia, South Korea, etc. On one hand the existing industries complain about labour shortages while on the other hand programs to cater to unemployed youth are being introduced one after the other without showing positive effects. This shows that there is a serious problem with matching skilled labour with market demand, since there are too few skilled workers and too many labourers without sufficient skill sets.

Furthermore, the average inflation rate of the country was 10.4 pct. over the last three years of 2009-2011. The degrading business environment coupled with the increasing prices of food and commodities are contributing to fuel the criminal activities as well as social unrest in the country. The limited attention given to the economic issues and growth is likely to direct the country towards another civil unrest, which if not addressed in time would be a bigger catastrophe to the nation's socio-political economy than the decade long insurgency itself.

The Nepal Economic Growth Agenda (NEGA) is a project that seeks to fulfill this need for putting economic growth on the front page of overall discussions. The project was established as a cooperation between the Federation of Nepalese Chambers of Commerce and Industry (FNCCI) and

the independent policy think tank Samriddhi, The Prosperity Foundation, and was initiated in August 2011.

The cooperation led to the study into five economic sectors that were assessed to be the most important for the future growth of Nepal, namely, agricultural, education, hydropower, infrastructure and tourism. The study highlighted the current economic status and performance of the sectors, as well as identified the major bottlenecks that dominate the sectors and act as a brake to economic growth.

Based on the emerging picture of the sectors' performance a number of policy recommendations were suggested to policymakers in order to eliminate the factors that currently restrain the sectors from contributing to the development of the Nepalese economy.

The outcome was the publication "NEGA, Report 2012" which was launched in July 2012. The NEGA, 2012 report summarizes the findings of the individual sectors in focus. Following this report five detailed reports were launched, providing in-depth information and background details on each of the five sectors. The detailed reports were thought of as documentation behind the findings of the NEGA report itself and as sources of further reference for readers who sought more insight into the discussed issues.

The idea behind the NEGA Report 2012 was to bring together the views of different stakeholders, including from the private sector and from civil society. FNCCI and Samriddhi worked together to facilitate this process with a goal to present to policymakers the most important policy needs in order to spur economic growth in Nepal.

The NEGA report is important as an example of civil society cooperation that contributes to the broad economic debate in Nepal on how to speed up the economy and make markets work better. The report reaches out to parliamentarians, policymakers, civil society organizations, sector experts and others involved in transforming policy ideas into operational conditions for Nepal's economy.

However, there is a need to reach further towards common people and citizens of Nepal, not necessarily being policy or technical specialists. The economic development of Nepal is of concern to everybody, and it is therefore important to engage more people in the discussions on how to unleash the potential for sustainable economic growth.

This book takes the form of a compendium where the findings and recommendations of NEGA Report 2012 on the individual sectors are presented in a non-technical way. With the objective of reaching a wider network of individuals outside the policy realm, the findings and recommendations of NEGA reports have been presented in an easy-to-understand manner. To further add additional perspective on each of these five sectors, the compendium also includes opinion pieces of recognized sectoral experts of each sector. These additional writings try to bring forward any issue missed and even add emphasis on the hurdles that have been crucial in hindering the development of these sectors.

The hope is that this compendium therefore spurs the discussion by delivering various views and ideas on which policy reforms are necessary. It is an attempt to take the discussion further, ideally to grass roots, organizations, academics, policymakers, students, journalists and other groups as so many parts of the Nepalese society have interests in putting economic growth on the agenda. The compendium will not be the only way that discussion around the NEGA project is initiated. Also other ways of reaching out to the public will be carried out, e.g. discussion forums and media events, with a view to ultimately inform decision makers. Yet, this compendium should act as a useful tool in the decision making process.

The reports, on which the five articles of this compendium are based, are not merely based on the study done by Samriddhi Foundation, but have been developed through a rigorous consultation process. The sectors included in the study were selected through a number of consultations conducted individually as well as in groups with various experts, researchers, policymakers, entrepreneurs, etc. Based on the important roles and potentiality of the sector in its contribution towards the economic

growth of Nepal, various sectors were highly discussed and debated before selecting the final five—Agriculture, Education, Hydropower, Infrastructure and Tourism. Similarly, a number of consultations on various stages and on regional as well as national levels have contributed to the findings and the recommendations put forward in the report.

The individual sectors have in general been chosen because of their importance—currently and potentially in the future—to the national economy. Yet, some sector-specific traits have also been among the reasons for choosing the sectors.

Regarding Agriculture this is the largest sector of the entire economy and has also historically held this position. There is therefore a significant economic reliance on this sector, but its growth rate is low which is an important explanation of the slow overall economic growth of the country. It is therefore relevant to take a closer look at the problems the sector faces. The main issues tend to focus on the low productivity and the lack of commercialization that should help bringing produce from the fields to the markets. The chapter on agriculture deals with the economic situation as well as the barriers to its economic development and how such barriers could be removed by adopting the right policies.

As countries develop from being agricultural economies to relying on their industrial sectors and further on transforming into service producers and knowledge economies, education is central to the transformation. The world economy has in recent years seen education turning into a market of its own, with a huge demand for development of human skill sets at all levels. Also Nepal has witnessed this trend of the private sector expanding on a market that was previously dominated by public schooling. However, there are many issues that need to be solved to improve the functioning of the sector, and this is dealt with in the chapter on education. Focus is on how to improve the economic outcome of education, and issues are centered around the lack of skilled human resource and of private return on schooling investment, as well as promotion of technical training. The suggested recommendations are closely related to these important challenges.

Hydropower has a huge potential in Nepal due to the abundance of rivers and streams. At the same time there is an increasing demand for energy in general as the economy grows. Other sources of energy such as fossil fuels are depleted and expensive imports have become necessary. Despite these benevolent conditions for economic growth in this specific sector, only few hydropower projects have seen the light of day. These facts make it necessary to investigate further into which specific challenges actually hamper hydropower development. The chapter on hydropower provides an overview and identifies these obstructing factors, as well as gives recommendations on how to initiate more projects. The main issues are the lacking investments that are necessary to establish big hydropower projects capable of meeting the electricity need, and the reasons to why the investments do not materialize.

The infrastructure sector is an important underlying factor for how economic activity in Nepal performs, and especially the part of the sector that covers transport. The constitution of the road networks and the performance of the road operators are central elements for economic performance for the sector, and thereby for all other sectors. Despite the priority given to the transport sector it is clearly underdeveloped, which is why it is taken up here in the NEGA project. The issues acting as 'road blocks' to a well-functioning national infrastructure are broadly the lack of investment and of engagement of the private sector. These challenges – and how to dismantle them – are presented in the chapter on infrastructure.

Tourism is also among the most important sectors though it does not make up a major part of the total production figure of the country. On the other hand there has been a long history for welcoming international visitors and Nepal holds many natural and cultural attractions that could be further developed and as such contribute much more to the needed economic growth and build up foreign exchange reserves. Part of the potential owes to the prospects of hugely increasing numbers of visitors from China and India. As with hydropower the large potential is not utilized at the moment, and it is therefore an important area to deal with in the NEGA context. The chapter on tourism looks into the reasons why the

huge tourism potential is not being utilized, as well as points to what could be done to tap into the tourist development possibilities.

Though the five sectors are quite different by nature, a number of common challenges threaten their functioning. The lack of business-friendly environment within the sectors makes it difficult to run a business due to frequent bandhs, labour issues and political interference. The private sector is generally not encouraged to get involved, as licenses, financial constraints, distorting subsidies etc. work in a discouraging manner. Policies are often instable and hindering investors to invest and policies that are designed to facilitate the investor are often not implemented. Moreover, non-competitive practices are increasingly being applied, e.g. by government monopolies and syndicates. Here, the transport syndicates are strong examples of entities that have disabled free competition within the sector by dictating prices and choosing operators that can run a business. Finally, low levels of public spending and investment in the sectors contribute to keeping these markets underdeveloped, which in turn rules out the possibility of reaping their huge benefits.

The selected sectors have been evaluated from an economic perspective, i.e. they have been appraised with a goal of identifying how they can actually contribute to total economic growth. The sectors have therefore not been looked upon from e.g. their sociological or environmental potentials and contributions, which is the main limitation to the study.

Since the process behind putting economic growth on the agenda led to identification of the five sectors with the assumedly largest potentials for economic development, there has been a choice of excluding other sectors of the Nepalese economy. In this choice lies a limitation, yet, it has been a necessary choice since it is not possible to give priority and focus to all economic sectors in an equal manner.

In analyzing the challenges of the individual sectors, further choices had to be made: Many constraints to releasing the growth potential exist, but priority must be given to the most serious challenges. Making such a priority also constitutes a limitation.

In addition, the evidence-based research that underpin the conclusions of the NEGA report has primarily been carried out as desk studies in which data from existing sources, such as reports, policy papers, research publications and databases, have been used as input to the work. Due to the wish to conduct the studies within a limited time frame direct-source data have only been used on a small scale, as this type of data normally requires more time in order to be processed and validated correctly. However, interviews with experts and consultations with stakeholders on the desk studies have been carried out in order to cover the selected issues as thoroughly as possible and ensure a high quality of the evidence behind the policy recommendations.

As mentioned earlier, NEGA aims at taking the discussion on a roadmap to economic growth and prosperity in Nepal to the front stage. This compendium presents hands-on ideas on how to ignite the economic activity and it lets external opinion writers deliver their perspectives to the debate. However, the discussion should not stop here. Readers of the compendium should form their own opinion about what is the right way to economically develop the economy.

To sum up, the readers are therefore greatly encouraged—be it members of civil society, academics, students, bureaucrats, or in general people with a broad interest in Nepal—to make up your own minds and consequently engage in the discussion. It is after all highly important to start up the economic discussions now if economic growth is to pick up tomorrow.

Peter Heller & Prabhat ‘David’ Shrestha

September, 2012

Agriculture Reform: Growing Beyond Subsistence

Introduction

Most countries have relied intensively on their agricultural sector in their economic development process. Some countries have even kept their dependence on farming after they have transformed into developed economies, e.g. by specializing in large-scale and efficient production of specific agricultural products. Nepal is no exception in terms of heavy dependence on agriculture: In 2010 this sector contributed with more than a third to total GDP. However, there is a huge potential for improving the efficiency of the production. This article encircles the current problems of the sector and the solutions that can lead to economic contributions to the national economy.

Large sector...

Agriculture made up 35 pct. of total GDP in 2010 and the sector is therefore significantly larger than the industrial sector that contributed 20 pct. to GDP. Only the services sector with its share of 42 pct. of total GDP is larger. (World Bank, 2010)

As 66 pct. of the workforce is employed in agriculture the sector is by far the largest employer of the economy. Furthermore, of all the households

in Nepal 74 pct. are engaged in agriculture and own land, indicating that land possession is often a strong reason for taking part in agricultural production and that agriculture therefore is so widespread across Nepal. (World Bank, 2010)

...but low productivity and little commercialization

Yet, despite its economic weight in Nepal's total production agriculture is one of the sectors with the lowest productivity. The sector employs two thirds of the labour force, but produces only a third of GDP. By comparison, the services sector contributes 42 pct. to GDP, but only needs around 20 pct. of the workforce to obtain this result (World Bank, 2010).

The end-use of the agricultural production indicates that there is a potential for commercialization: More than 85 pct. of the agriculture produce are consumed by households themselves and only 15 pct. are sold on the market. The sector is thereby characterized by a high degree of subsistence level farming. (United States Agency for International Development [USAID], 2010)

Undeveloped small-scale farming with long way to markets

The allocation of rural land is distributed mainly in the Hills and Terai, with little agriculture in the Mountains. The average parcel of land is very small – 0.7 ha per farmer (equal to 13.8 ropanis per farmer or around 1 bigha per farmer) – and has been declining over time. Even though the average land parcel is 0.7 ha more than 50 pct. of the farmers have land possessions below 0.5 ha (Central Bureau of Statistics [CBS], 2011). This fragmented structure of agriculture indicates that large-scale farming is almost non-existent.

Another trait is that irrigation is limited to just above 50 pct. of the land, making farmers largely dependent on rainfall. Farmers are typically

equipped with very basic and manual tools. Only around 1 pct. owns a tractor and just above 50 pct. possess a plough. The level of mechanization within farming is therefore very low. (CBS, 2011)

The basic geographical structure of the agricultural sector takes the form of a high number of small producers dispersed over the country. Their goods are traded at main markets, such as Kathmandu, Pokhara and 6 regional cities in Terai, as well as on smaller local markets. The producers are situated in the hinterlands of the markets, where some are close to these trading spots while others are placed far away, including in the Mountain region. (United Nations World Food Programme [UNWFP], 2007)

What is the problem for the sector in order to become more productive?

The agro-sector has a great potential for adding more to the national growth of Nepal. Farming needs to undergo a process of becoming more commercial, so that the sector can generate more domestic and foreign trade and avoid being dominated by subsistence level farming. Yet, key hindrances to achieve this exist.

Small-scale farming limits effectiveness

As farms are very small in size and are numerous, it is difficult to obtain the advantages of large-scale farming, such as effectiveness, low costs per unit of production and homogenous quality levels. Today's fragmentation of agro-production has led to very little export of agricultural products as most products are consumed locally by producers and their families themselves. The fragmentation is also holding back a broader mechanization process as the many small farmers have little knowledge about modern farming and scarce resources to invest in modernizing production methods.

Difficult for farmers to obtain capital

The agricultural sector also suffers from difficult access to capital from banks and financial institutions. Unconstrained liquidity is important if farmers are to invest in their own production and improve effectiveness and capacity. The limited credit access is mainly due to the fact that there is no insurance system that can cover farmers in case of failure to harvest and livestock outcomes.

Squeeze on fertilizer use

Chemical fertilizers are important inputs of the agricultural sector as they are necessary to increase the output of crops. The government has established a publicly owned company, Agriculture Inputs Company Ltd. (AICL), which imports fertilizer products and distributes them to farmers in the different regions of Nepal. Farmers can subsequently buy the fertilizer at specific sales points at a subsidized rate. Private companies are allowed to import fertilizer as well, but as the government pays no subsidy to private importers, the only supplier in the fertilizer market is AICL. The problem is that the company cannot accommodate the high demand from farmers and there is a serious lack of supply which in turn means that production output is significantly hampered.

Fewer employees to work in the fields

The general problem with immigration of workers to the Gulf and South-East Asia also spills over to the agricultural sector, which has problem with recruiting the necessary amount of employees. This labour shortage is in addition intensified because a transition from agricultural employment towards industry and service sector employment is taking place. This trend can mainly be explained by the low return on investment in agriculture compared to higher returns in the other sectors.

Lack of technical knowledge of agricultural production

Many small farmers still apply the same production methods that

have been used for generations. These methods are not consistent with highly effective production and modern technologies. Knowledge of how to carry out modern farming is another necessity for improving sector output and productivity.

Not enough markets and limited access to them

The regional markets where the produce is traded are few and not well developed. First of all, producers are poorly connected to these markets because of lacking physical infrastructure. Though the main markets are linked to each other, their connection with the many small farms is poor. Secondly, the market places themselves are not set up with modern storage and cooling facilities. This low degree of market development implies that prices generally are driven up due to additional costs to the producers. If e.g. storage facilities were accessible it would lower food prices and create higher returns to farmers.

Anti-competitive practices in transportation of agro-produce

Moreover, the existing anti-competitive practices within the transportation sector also imply that the agricultural sector growth is held back. Transport syndicates limit the free competition for transportation companies which move agro-produce between producers and consumers. This translates into higher transportation costs and a significant price difference between the price received by agro-producers and the price paid by consumers can be observed. Due to these anti-competitive practices, transport prices are much higher than they would have been under free competition and they help fuel general inflation, while letting consumers pay more for the products to the detriment of sector growth.

Lacking assistance of agricultural research

Finally, little agricultural research and dissemination of the results are being carried out which also limits the potential for growth in the agricultural sector.

How to overcome these sectoral problems?

In order to develop the agricultural sector into a commercialized sector with high trading and export potential, a number of recommendations should be taken up.

Political spotlight on restructuring farming

The government should focus much more on making the sector productive by establishing a large and effective agro-market for farming products, instead of maintaining support to subsistence farming. More focus includes providing incentives to the private sector to invest and establish efficient farming, but also a parallel focus on regulations that allow entrepreneurs to lease farms to farmers on a larger scale, i.e. contract farming should be considered.

Better access to capital and inputs

To overcome the problem with limited access to capital, specific insurance programs to manage agriculture production risks should be developed. Existence of such schemes would allow banks and financial institutions to provide access to capital to producers. It would also make it attractive to banks themselves to invest in the sector.

If a private market for chemical fertilizers can gradually be established this will work to eliminate the large input need among farmers. To this end it will be necessary to dismantle the existing subsidization scheme which is the basis for AICL, the government-owned distributor of fertilizer. The company should be privatized in order for it to compete with other private enterprises that will be allowed to import this important product. The government should instead encourage investment in stable procurement and distribution of fertilizers, and could assure the quality of imported fertilizers by setting up a quality control system.

Scale-up of farming knowledge

By disseminating technical knowledge among farmers about effective methods of agricultural production, the government can facilitate technical progress within the sector. Courses and schooling should be central elements to this end. Improved production processes will also have a positive effect on the problem with lacking manpower as a given production process could be made more effective and be carried out by fewer workers. Technical progress could moreover be achieved by establishing stronger incentives to import new and better tools and machinery.

Parallel to these efforts, increased public funding and engagement of the private sector in agricultural research will also develop the production methods and improve the efficiency of the sector. Also, schemes to disseminate any developed research knowledge among farmers must be set up. Such public “extension systems” are mandatory in order to make knowledge of e.g. improved methods and inputs usable to the end-users in a practical manner.

Development of strategic market centers

Small markets could be turned into larger and more advanced markets by investing in strategic market centers. Inspiration can be found in the so-called *Mundi* system, an Indian market place system with easy access to farmers. The system improves the functioning of free markets by providing price information directly to producers and thereby the trading process becomes more competitive, also to the benefit of consumers.

The market centers could at the same time be used as information points for farmers by providing new information, e.g. on productivity-increasing methods, local market conditions, new developments regarding communication technology, etc.

By attracting private sector investments via public-private partnership models the centers could also be equipped with advanced storage facilities, such as chilling centers and silos.

Conclusion

Nepal's development puts huge dependence on the agriculture sector. Thus, strengthening of this sector is of primary priority. However, the growth of agriculture is not possible without transiting from policies and programs to assist subsistence level farming towards policies of commercialization. The challenges have not changed much in the sector over the years, and neither have the policies. Thus, a major shift towards commercialization policies and programs is the only prescription for the growth of agriculture sector and consequently the economy of the country.

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This article is the summary of key findings and recommendations of the detailed report "Review of Agriculture Sector and Policy Measures for Economic Development" prepared by Mr. Bimal Wagle, Mr. Pradipan J. Thapa and Mr. Prabhat 'David' Shrestha for the Nepal Economic Growth Agenda (NEGA), Report 2012 published by Samriddhi, The Prosperity Foundation in partnership with Federation of Nepalese Chambers of Commerce & Industry (FNCCI).
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References

Central Bureau of Statistics [CBS]. (2011). Nepal Living Standard Survey 2010/11. Kathmandu: Government of Nepal.

United States Agency for International Development [USAID]. (2010). Nepal Economic Recovery Assessment.

United Nations World Food Programme [UNFPW]. (2007, February). Food and Agricultural Markets in Nepal.

World Bank. (2010). World Development Indicators 2010.

Contemporary Nepalese Agriculture: Issues and Policy Options

Bharat P. Upadhyay

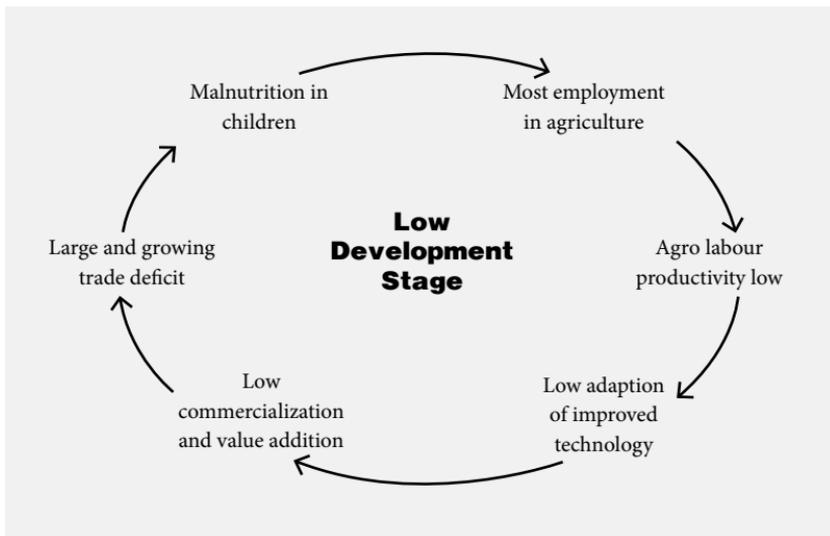
Country Context

Nepal's current agriculture scenario is in the stage of transformation from subsistence to commercialization. In this transitional phase, farming practices are gradually shifting towards adoption of high-value-commodity-based commercial agriculture. The contribution of a high value sector to overall agriculture growth, particularly in the areas of vegetables, fruits, dairy, tea, coffee, vegetable seed, poultry, fishery, honey and mushroom, has been growing. Meanwhile, the majority of the population is engaged in agriculture. The sector continues to be constrained by low productivity and competitiveness, limited adoption of modern technology, growing food trade deficit and high malnutrition. Although the contribution of high value subsectors is increasing, the scale is not yet sufficient in lifting a large number of farmers out of poverty and making a dramatic impact on reducing malnutrition and assuring food security. Figure 1 depicts the scenario of contemporary agriculture in Nepal.

By and large, since the beginning of the implementation of the Agriculture Perspective Plan (APP) in the ninth Five Year Plan in 1997, Nepal's agricultural sector has witnessed transformation towards commercialization resulting in improvement of living standards and the sector's overall performance is better than in the past. Productivity and

infrastructure have improved, and poverty has been reduced. However, some indicators such as food and agricultural trade deficit and land per capita have shown a decline.

Figure 1: Scenario of contemporary agriculture.



Source: Adapted from ADS Assessment Report, GoN/ADB (2011)

Whatever little growth has taken place has been slow and the economy of scale is yet very low, showing little visible impact on the national economy. This scenario becomes more apparent when compared to the sectoral growth in the neighboring countries of China and India and in many other countries of South and South-East Asia. Nepal's growth in agriculture has not only been slow (about 3 pct. p.a.), but also very variable and has even exhibited a slight, but negative trend. Nepal has moved too slowly; and its youths and some of the most productive labor force have looked for jobs elsewhere. About 300,000 migrants left Nepal in 2010 and there has been a growing trend of migration for the past 10 years. The migrants have sent home huge amount of remittances, estimated at more than \$3 billion per year (representing more than 20 pct. of GDP), but most

of these resources have gone into consumption and loan repayment rather than capital formation and investment (ADS assessment, 2011)¹.

Over the past 16 years, there have been major changes in Nepal. First, a conflict that lasted over 10 years, which ended after the Comprehensive Peace Agreement in 2006, seems to have had several adverse effects on the agricultural sector. Hundreds of thousands of rural households have left the land behind and moved to the cities—mostly to Kathmandu Valley; others have moved abroad, leading to labor and investment scarcity in rural areas. Moreover, large tracts of peri-urban fertile agricultural land (i.e. land areas surrounding the cities) have been converted for residential use (ADS Assessment Report, 2011).

Second, politics has been unstable and unable to make a continued effort in implementing policies, plans, and programs. For example, over the past 17 years, 17 secretaries in the Ministry of Agriculture and Cooperatives were appointed by the respective governments and their average tenure has been that of less than a year.

Third, several policies have proliferated in this period, often in favour of agriculture, but in many cases policies have been inconsistent and populist, without addressing the growing mass apathy towards the government's development action.

Fifth, both public and private investments have been limited. During the first 10 years of the APP investment in agriculture by government, number of development partners declined and no significant private investment took place.

Sixth, capacity of human resource is limited. Incentives for civil servants are inadequate and skilled professionals or laborers often look for jobs abroad.

The ADS (Agriculture Development Strategy) assessment (2011) indicates that the APP was a plan of mixed performance. In some cases

1 GoN/ADB et al (2011). ADS Assessment Report

such as those in respect to roads, horticulture and community forest, targets were nominally met; in the case of livestock and irrigation the performance was mixed; and overall agricultural GDP growth was weak. APP implementation was poor because of limited support in terms of resources, policies, and institutions needed to carry out the program. There are several lessons to be learned from the APP experience that will be very valuable for the formulation of the future agricultural development strategy.

One phenomenon that occurred during the conflict period and continued even during the post-conflict period is the pivotal role played by non-government (NGO) sector in sustaining the pace of agricultural development actions. The NGO sector could sustain the pace of action by placing their development agents close to target communities and applying people-friendly social mobilization approaches and making interventions matching the local priorities and resources. In many ways, these approaches had implication on conflict mitigation aimed at socio-economic empowerment. Center for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED), a national development NGO, can be cited as an example. CEAPRED has, over the past 22 years of operation, created an impact in terms of social and economic empowerment resulting in livelihood improvement of the poor and ultra-poor rural people through a variety of development initiatives. These have particularly covered off-season vegetables, vegetable seeds, other high value commodity sub-sectors through effective social mobilization, local capacity building and institution building. Presently, the direct impact is measured in value of billions of rupees among more than 175,000 households across 60 districts.

This article aims to address the contemporary issues in agriculture development based on the author's informed knowledge and CEAPRED's experience. Focus is on transitional agriculture—transition from subsistence to commercialization—and on the grassroots perspective of development issues.

Issues constraining agricultural growth

Inadequate policy environment: The strategic framework provided by the APP (1995-2015) and the National Agricultural Policy, 2064 (NAP) remains the official policy framework for all interventions for agricultural development in Nepal till date. This framework is supplemented and augmented by a range of specific sub-sector/sector policies, such as the (i) National Seed Policy 2000, (ii) National Fertilizer Policy 2002, (iii) National Irrigation Policy 2003, (iv) National Water Plan (NWP 2005), (v) Agri-business promotion policy 2006, (vi) Agriculture Bio-diversity Policy 2007, (vii) Nepal MDG Progress Report (Draft 2010 by NPC), (viii) Nepal Master Plan for the Forest Sector (25 year plan 1989–2014), and (ix) Agriculture Extension Strategy, 2007. In addition, the Ministry of Health and Population prepared a Nutrition Assessment and Gap Analysis (NAGA) in 2009 which builds on the strong situational analysis provided by the Nepal National Plan for Action on Nutrition, 2007, and reviews and makes recommendations on evidence-based and feasible interventions for health, agriculture, education and welfare sectors. The analysis reviews systems supporting food and nutrition interventions and the opportunities for building capacity needed to deliver interventions likely to achieve the Millennium Development Goals (MDGs) in a cost-effective way (GAFS funding proposal, MoAC 2011)². Complementary to these policy actions is a comprehensive National Food and Nutrition Security Plan (NFNSP) aimed at enhancing food security and household nutrition.

The above policy interventions, in many ways, seem adequate in addressing the challenges of the contemporary, transforming agriculture in Nepal. However, effective implementation of the policies is always debated, particularly in terms of transforming Nepalese agriculture into economically viable commercial agriculture with geographical and social inclusion.

The assessment of sector programs implemented so far provides learning with regards to policy gaps. The impact of introduced policies has

² MoAC (2011). Country Investment Plan for GAFS

not been able to trickle down to the community level, and thus, the poor people in rural areas have not greatly benefitted. A defective service delivery mechanism at community level is visible. Remarkably, the past and ongoing interventions have resulted in polycentric service providers encompassing public, private and community actors. In many ways, their service delivery is not mutually supportive and often competing and duplicating; as a result, resources available at community level are not optimally used and the results are not very visible.

Recently introduced policies of subsidizing the prime production inputs—seeds and fertilizers have not adequately increased the poor's access to these inputs. Timely supply of these inputs is always a constraint. The problem of supply is further aggravated by the poor quality of the products delivered. The existing regulations permit quality monitoring; but due to poor implementation capacity of the regulatory authorities, the monitoring is not effective.

Similarly, the government has introduced a policy of providing partial grants to the user groups for construction and operation of small rural infrastructures such as collection centers, micro and small irrigation infrastructures, approach roads for increased connectivity, storage facilities etc., all in support of commercial agriculture. The investment for building these infrastructures is still below optimum; it is not synchronized with the local development plans and the programs run by NGOs, donors and the private sector. Cumulatively, the impacts of the investment of limited resources in promoting the commercialization are not realized.

Institutionally, the government has identified three pillars for development—public, private and cooperatives. What is the synergy among these pillars? Are they competitive or complementary? How should the resources be mobilized and prioritized? These are the key questions arising in the present context of the policy environment.

Poor packaging of production inputs: The APP stresses the packaging or bundling of five priority inputs—technology, fertilizers and

seeds, agricultural road, credit and irrigation—to obtain the desired result within a feasible geographical boundary. Unfortunately, the responsibilities for an individual subsector remain scattered among different organizations under different ministries, and there is an absence of an empowered coordinating and implementing body at higher level, although this responsibility is assigned to the Ministry of Agricultural Development (MoAD), but with no control over the plans and resources of other ministries. MoAD has control over technology, seeds and fertilizers, but not over irrigation and agricultural roads. This naturally creates lapses in packaging for commercial farming.

Responsibility for district level coordination and allocation of resources for APP implementation lies with the District Development Committees, which have remained unrepresented by the elected bodies for more than a decade, each being governed by a civil servant. Moreover, district institutions do not have a harmonized implementing structure and resource mobilization plan. For example, irrigation and cooperative agencies are organized in divisions overseeing more than a district—poorly linked to the spirit of devolution as provisioned in the Local Self-Governance Act, 2055. This has naturally created hindrances in packaging of inputs in the spirit of the APP, and has diluted the implementation according to local priorities and potentials.

Inadequate focus on value chain development: Commercial agriculture is organized along subsector based value chains linking producers (farmers), input suppliers, technical service providers, infrastructure suppliers, product buyers and consumers. The public extension and research systems are insufficiently oriented to the value chain approach. An exception is non-government organizations, such as CEAPRED, which has given due focus to value chains since the very beginning of its program implementation targeting poverty reduction and livelihood improvement.

The government's policy of public-private-partnership (PPP) is inadequately supported by the mechanism of building this partnership with supportive roles differentiated among the actors and the resource

allocation in a complementary manner. The private sector's role is of utmost importance in the promotion of value chains. As the public sector initiative from the center to grassroots in this aspect seems weak, response from the private sector has not been so overwhelming—although this sector is seeking a favourable policy environment.

The producers and the product buyers are insufficiently informed about dynamic market functions, market and price information. Both are equally poorly equipped with modern information tools. The farmers usually do not have knowledge to compute the cost of crop/animal production in order to use this as a base for negotiation with the buyers. The infrastructure of the trading centers is inadequate to cater efficiently to the service needs.

Growing shortage of farm labor: Given the dismal growth of employment in Nepal, migration of the productive labor force from rural areas towards domestic towns or abroad is increasing. The impact of this outmigration has more adversely affected agriculture as the farm sector has been facing acute shortage of labor to run farm enterprises. A study (CEAPRED, 2012)³ shows that the shortage is serious during peak seasons, and has eventually limited the growth of agriculture production and productivity. The study further finds that two thirds of the households faced shortage of labor when attempting to run the peak operations such as planting and harvesting of paddy. At present, farming in Nepal is largely in the hands of women and aged population, and timely performance of major farm activities is seriously constrained by the shortage of productive labor. The government's present program towards farm mechanization and rural employment generation is not very adequate and is at the same time underinvested.

Inadequate technology and knowledge management: In the past, the technologies developed through national and international sources

3 CEAPRED (2012). Study on Food Security in Terai in support of formulation of JICA's country assistance strategy.

has no doubt remarkably contributed to increased productivity of selected crops, mainly of cereals (paddy, maize and wheat) and vegetables (potato, fresh vegetables). This has also supported increased farm diversification by introducing and scaling up new subsectors such as community level vegetable seeds, non-timber forest product (NTFP), dairy, fishery, tea, coffee, ginger, honey, mush room, etc.

However, considering the emerging need of making Nepalese agriculture economically more viable and sustainable, the need to increase the competitiveness of agriculture in domestic and international markets is pressing. The farm products are not able to compete in markets with respect to price and quality. This state is primarily, due to low economy of scale and application of high cost technology, dependent on exogenous production inputs. Technologies supportive to competitive commercial farming is still insufficient.

Nepal Agricultural Research Council (NARC), a public sector research organization, continues to focus its research on food security commodities and its investment in commercial technologies is still below optimal. This is mainly due to inadequate funding to NARC by the government. NARC, as a facilitating national research agency, has not been able to attract funding for research from non-government and private sectors due to inadequate policies in this area. In support of commercial agriculture, the role of the private sector is very crucial as this sector has access to global knowledge of commercial technologies such as hybrids and processing technologies.

Another important issue is sharing the knowledge scattered among different agencies—be it public, private, community and global level entities. The national system lacks a common platform to share such knowledge for the benefit of commercial agriculture. Some agencies such as CEAPRED have initiated action, but on a very limited scale.

Suggested policy alternatives

In view of the context of Nepal's agriculture sector and the issues outlined above, the following policy options are suggested. These recommendations call for wider dialogue involving a broader range of stakeholders from top to bottom.

Revitalizing the local governance structure and functioning:

The Local Self-Governance Act and Rules have provided ample latitude to coordinate local development agencies for identification of local potentials and priorities, integrated planning, harmonizing the resource mobilization and enhancing the service delivery functions. During the initial phase of implementation of these regulations, many districts prepared district visionary plans and periodic plans to address local needs. This process needs to be restarted, particularly in the present context of evolving geopolitics of the country. The key to this revitalization is placing people—elected representatives in the District Development Committees (DDCs) and Village Development Committees (VDCs)—and strengthening of local government cadres and delivery capacity.

Strengthening community research, extension and service delivery functions: This is an area which can be designed and enacted drawing on lessons from the NGO sector. For example, CEAPRED, over the past 22 years has consistently applied a three-pronged strategy across the programs. The first strategy has been to implement social mobilization customized to varying needs of the farming communities which ultimately prepares the community to take up an enterprise based on local priorities and potentials. The next strategy has been the local capacity building for the promotion of enterprise selected by the community. This entails a wide range of interventions comprising technical, organizational, physical and financial capacity building. The result of this sets the environment for local institution building, which makes the third strategy. Establishment of cooperatives has been an outcome of this strategy which is sustaining the impacts created during the project period.

Experience gained through implementation of community based programs of technology development, dissemination and knowledge documentation and sharing has given enough evidence to support these policy options. The impact demonstrated in sustainable off-season vegetable production and marketing in eastern hills (Dharan-Basantpur Road Corridor) during the early 90s by CEAPRED is noteworthy. Recently, community based vegetable seed production in remote hills by CEAPRED which has been successful in establishing import substitution by 20 pct. is also worth mentioning, in order to support this suggested policy option. Similar examples of community based technological interventions are available—MITs promoted by IDE and Winrock International, Community Biodiversity Program by LiBIRD, sustainable soil management by Helvetas, Department of Agriculture (DoA) and CEAPRED and community forestry are among the noticeable examples.

Increased investment in technology development, dissemination and knowledge management: As stated earlier, technologies supporting the emerging need of commercialization are inadequate. The increased and synchronized investment at all levels, vertically from the national to grassroots levels and horizontally across the public, private, non-government and community organizations, is very necessary. Investment has to go under a broadly accepted programmatic framework at these levels.

In this context, the private sector seems very potential in contributing to technology development. It can introduce high-tech competitive technologies in support of commercialization. Similarly, I/NGOs have the demonstrated potential to customize technology development and dissemination to suit local needs. To meet this strategy, a very comprehensive, inclusive and precise technology pathway needs to be defined, harmonized and enacted.

Often, agency to community transfer of knowledge is proposed and advocated. The need to enhance community to community knowledge

transfer is usually overlooked. This is an utmost necessity for faster dissemination of successful practices—demonstrated or documented at community level. This process speed growth.

Strengthening the pluralistic service delivery mechanism:

Over time, a wide range of service providers (public, private, cooperative, community and individuals) have emerged to cater to growing service needs. The services required by the farmers are diverse—from technology to consumers, input suppliers, output buyers, market information providers, fund providers, social mobilizers, transporters, credit and insurance providers, governance, etc. as the key intermediary service providers creating an enabling environment for growth. A comprehensive strategy and plan of actions applicable across sectors and subsectors and levels—macro to micro are necessary.

Strengthening and scaling up the credit flow: The growing microfinance institutions, cooperative based saving and credit functions as well as commercial banks should be further strengthened, oriented toward delivery to downtrodden poor people and expanded in number and capacity.

Thus, in present transitional phase of Nepalese agriculture from subsistence to commercialization, adoption of commercial high value agricultural technologies has shown significant rise. However, low economy of scale and less competitiveness of agriculture, in particular, have not been able to show a visible impact on rural livelihood improvement and commercialization to a degree that many South and Southeast Asian countries have recently achieved. Looking into the micro-level issues correlated to macro policy environment, large part of the rural community has not benefitted from the introduced policy reforms.

Several issues at the grassroots level still persist, which need to be addressed. The first and foremost solution to these issues lies in the revitalization and strengthening of local bodies in the spirit of Local Self-Governance Act and Rules. On the supply side, emerging pluralistic service

providers need to be coordinated through an effective local coordination mechanism supported by VDCs and DDCs, and delivered by the local service providers functioning at community level. There is a scope to debate on these issues and work out a comprehensive local sector plan matching the local priorities and potentials, as envisaged by the local governance rules. Some of the policy options that are to be introduced in priority are: (i) strengthening community research, extension and service delivery functions, (ii) increased investment in technology development, dissemination and knowledge management, and (iii) strengthening and scaling up the credit flow.

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Education for Economic Growth: A Practical Approach

Introduction

In many aspects, education is highly important to a country because it serves several purposes. Overall it is a strong tool for development of the society. From an economic perspective, it can lift people out of poverty (Khan & Williams, 2006). Education can also ensure that citizens make better and informed choices, and that they partake in social and political development.

The current education system in Nepal, however, suffers from a number of deficiencies. This article identifies where the problems are and provides a list of actions that decision makers must take in order to correct the flaws of this important system and make the most of human resource in Nepal.

Status

Nepal's educational system can be divided into 3 parts—or modes—of education. The formal mode comprises the traditional schooling system of primary school, lower secondary/secondary school and the tertiary level (universities and higher education). The non-formal mode includes technical schooling (such as schools for educating craftsmen), often referred to as technical education and vocational training (TEVT), as well

as trade schools. The informal mode consists of adult education and on-the-job training.

Since the beginning of opening up education to the broader public around 1950 the changing governments have chosen to focus their efforts on improving literacy in the Nepalese society. Compared to 1951 where the literacy rate stood at 2 pct. (Isaacson, Skerry, Moran & Kalavan, 2001), it is today around 61 pct. (Ministry of Finance [MoF], 2012) for citizens above 6 years of age. Yet, education as a basic service to Nepalis has over the years been unevenly distributed, and today a bit more than 70 pct. of the men are literate while this is the case for 50 pct. of the women (Ministry of Education and Sports [MoES], 2011). It is also a fact that 35 pct. of the population never attended school (Central Bureau of Statistics [CBS], 2011).

Of the students attending school today the majority, around 72 pct. (CBS, 2011) out of the total 7.5 million (Federation of Nepalese Chambers of Commerce and Industry [FNCCI], 2011) students are enrolled in public schools and colleges, indicating that the private educational system has a significant share. There is a multitude of primary schools and lower secondary schools—more than 33,000 and more than 3,000 higher secondary schools, together with 5 universities (MoES, 2011).

However, it is noteworthy that 85 pct. of the children attending school fall out of the education system without obtaining any working skills. (Sharma, 2008)

Other important statistics can be drawn out of the evaluations of Nepal's education system based on UNESCO's (United Nations' Educational, Scientific and Cultural Organization) four pillars of education. The pillars cover different areas of society where a well-functioning education system will have a positive effect. Based on the UNESCO pillar system it is possible to evaluate whether countries' education systems improve the societies in which they are established.

The first pillar covers countries' preparation of students for higher education. Here, the case for Nepal is that a large proportion of students drop out in all parts of the educational system: Around 80 pct. of a generation enrolls in primary school, but only around 10 pct. of the same generation enrolls in tertiary level institutions. (CBS, 2011)

Social well-being is the focus area of the UNESCO second pillar, and a number of development measures are often used to measure how effective the outcomes of a country's education system are. Nepal, with a poverty rate of around 25 pct. (CBS, 2011), ranks currently as no. 157 out of 187 countries at the United Nation's index for human development. The national social well-being is therefore significantly limited, even though progress has been made over the last decades.

Access, equity and inclusiveness are the areas covered by the third pillar. Here, Nepal has seen an increase in disparity between its citizens, so that the difference between rich and poor has grown quite much over the last 15 years.

The fourth UNESCO pillar looks at whether education creates the human resource that the market demands. The Nepalese work force grows with 2.5 pct. more workers per year as projected by the International Labour Organization (ILO), but these are not sufficiently skilled, which is documented by the fact that 47 pct. has never attended school. (CBS, 2009)

The resources allocated to the education sector in the annual government budget make up 3.4 pct. of GDP (MoES, 2011). This figure has been fairly stable over the last decade which has seen 3-4 pct. of GDP going into the sector. However, only around 10 pct. of resources allocated to the primary schooling system are directly targeted the students, while 90 pct. go to administration, including teacher salaries. (Education Financing Reference Group, n.d.)

Challenges

While the national education system has developed much since the middle of last century and many schools, especially at the primary level, have been set up, students of today struggle with many problems on their way through the system towards the labour market. The evaluation of the system based on the UNESCO pillars also document that the educational sector does not contribute sufficiently to the economic development of the country. The major flaws of the educational sector are outlined below.

Few possibilities for students dropping out of the formal system

As mentioned, an overall priority for the educational sector has been to reduce illiteracy. The applied means to achieve this has been to increase the rate of enrollment on all levels within the formal education system. The strong focus given to making students graduate to the next levels of the formal education system has led to much less attention given to students falling out of the formal system. This leaves little resources for systems targeting drop-out students, primarily development of basic skills training at the secondary level where drop-out is significant.

Also, it is critical that there are only few alternative options to support drop-outs' with their further education. The consequence is that these students enter the labour market as unskilled or low-skilled labour, because they only possess 'school knowledge' that is not transformed into skills that are directly usable for employers.

The large group of unskilled labour results in falling productivity of the economy and low quality of services. It also makes it difficult for the individuals within the group to raise their income level and qualify for higher-level jobs. Many workers choose to immigrate to countries paying higher salaries but do not get a higher level of education. Furthermore, they help to diminish the group of better-educated Nepalese, a group which is highly sought by the employers and too little to match their demand.

Outdated contents of formal education and no international recognition of certificates

The curriculum of the formal education is furthermore not updated frequently, which is a problem as society and technology change rapidly. Outdated knowledge leaves students with insight that is not usable at the labour market, and is part of the problem that the educational system does not prepare students for the skills the labour market demands.

Parallel to this, the Nepali education system is not directly adaptable to international systems. International educational institutions do not recognize the national certifications which make it difficult for students to study abroad, as they need to supplement their existing certificates or take entire classes over again.

Underdeveloped non-formal education system

Related to the problem of the high number of drop-outs and their few possibilities is the specific issue of technical education systems. Both public and private investment in technical education and vocational training (TEVT) has been falling, and is now at a level of below 2 pct. of the total educational budget. (Ghimire, 2012)

Therefore, there is little opportunity for people to obtain technical skills which are in high demand on the labour market. Also, the drop-out students of the formal system have very limited possibility to enroll in the technical programs. This tendency is documented by the fact that only 10 pct. of failing SLC students are enrolled in such TEVT programs. (Council for Technical Education and Vocational Training [CTEVT], 2011)

Inefficient use of resources in the educational sector

The financial problems of the technical education system in fact apply to the whole educational sector. Around 15 pct. of the national budget is allocated on average over the last 10 years for education. Around

three quarters of this amount comes from tax payer funding, while the rest is foreign aid.

However, the quality of public educational output is low, as witnessed by the high level of drop-out students and the low degree of enrollment for tertiary education. Also the much higher pass rates at the SLC exam for private school students compared to public school students makes it evident that the allocated means are used inefficiently. The internal allocation of the spending on formal education illustrates the point as administration and salaries make up a large part of the total budget.

Lack of common standards to recognize different types of education

There is at present no system in place that provides a common standard for the different modes—formal, informal and non-formal—of education in Nepal. The lack of standards prevents the integration of the educational system, since the curriculums of the different levels are not smoothly connected, and there is no guarantee that a student changing from e.g. the formal education system to the technical education system can make the transition without having to supplement classes already taken.

At the same time, corruption flourishes because there are no common requirements for how to assess the tests taken by students trying to qualify for the next educational level within one type of education. Also, no tradition of certificates for non-formal education exists, making it difficult for students to have their qualifications recognized.

Finally, there is also a lack of “public” recognition of non-formal skills from society at large. The perception that non-formal education is inferior to formal education is not least nurtured by the missing government recognition of this important mode of education.

No surveys to identify the demand for specific skills and education

There is similarly a lack of surveys identifying which skills and educations will be demanded on the labour market now and in the future. A risk of mismatch between how many graduates the education system produces and how many graduates the private and public sector need is very likely. The mismatch adds to the problems of employees who cannot easily find a job with an equivalent skill set required, and instead they end up with a lower-paid job or as unemployed.

What can be done to cope with the problems?

The following individual recommendations tackle the individual problems outlined above and often they also help alleviate other, related challenges.

Adaptation of the non formal and informal education system and creation of possibilities for drop-out students

Technical education should be part of the formal education system. This could be done by introducing specific technical subjects at the secondary and post-secondary level of the formal system, which would help supply skilled labour to the labour market.

It would also be valuable to lower the enrollment criteria for drop-outs into technical education, since it would help the students who do not fit into the formal system by allowing them easier transfer to TEVT. Similarly, potential technical students could be attracted directly by making enrollment in technical education institutions easier.

Update of course contents in formal education and adaptation to international standards

Efforts should go into providing update curriculums within the

formal education courses. Cooperation with the private sector will be essential as employers are in a position to indicate exactly which skills that students should possess.

To facilitate students seeking to acquire skills from education institutions abroad it would be valuable to adapt the Nepali education system to international standards. Foreign education institutions would then recognize skills acquired at home, thereby saving students the costs of re-examination or duplication of skills.

Development of the non-formal education system

First of all, an increase in budgetary allocations to the non-formal system from today's 1.65 pct. (Ghimire, 2012) to 5 pct. of the total education budget should be established.

The private sector would have an important role to play by participating in the production and provision of skilled human resource. Since business sets the demand for skills at the labour market it should be invited as partner to the government in designing the optimal supply of technical skills. This principle of demand-based skills training will allow for an effective TEVT policy.

Furthermore, the government should ensure the implementation of the TEVT Skill Development Policy which has already been introduced, but not yet implemented. The policy addresses major flaws to the non-formal education system, yet, it needs to be revised on some areas, e.g. it should include recognition of more informal practices among the group of self-employed.

The government should publicly promote TEVT and allow student mobility from other education modes towards this mode. Such initiatives would give value to students obtaining the already existing TSLC (Technical School Leaving Certificate).

There is moreover a large need for providing technical skills to the adult work force. 47 pct. of the participants of the labour market are without education background (Ministry of Labour and Transport [MoLT], 2008), and the introduction of e.g. on-the-job training would help upgrade people's skills while they are at the job. In turn this scheme will increase the productivity and quality of the work carried out, and it will increase income generation while at the same time cover some of the demand for skilled labour that the labour market asks for. Examples, such as the trade schools initiated by employers' organizations, already exist and could be used as role models.

Equal status to the different modes of education

Dual mode education will be a way to ensure equal priority and recognition to formal and non-formal education systems. It allows the students to choose either a university education or a higher level specialization in a technical or a trade school, and with this system in place non-formal education will thereby indirectly be developed.

In general, equal priority should be given to all of the three modes of education. By opening up the three systems it will be possible for students to change their current education path and it will also upgrade the existing skill sets of the working force.

Making the educational sector efficient

More resources should go into financing the education of marginalized groups. This could be by means of scholarships, soft loans and stipends.

An education voucher system where the money follows the student would also be instrumental in creating a more efficient system. At the moment, support is directly targeted schools as they obtain direct funding, resulting in ineffective conditions for production of human resource. By supplying students of economically difficult backgrounds with vouchers

they can choose the school they want and use the voucher as payment to schools, thereby creating competition and quality increases among the schools.

Introduction of common standards to recognize different types of education

A national qualification system that would set standards for the different qualification levels within the 3 modes of education is highly needed. It would ensure a transparent assessment of qualifications and by establishing an integrated system it would increase the mobility for students at different levels and modes in terms of changing their educational path.

Such a system would also reduce corruption often occurring in relation to enrollment. This is due to the opaqueness of the current system and the lack of standards. The idea is that when students have followed specific courses in either of the systems they can sit for a national and harmonized testing, and when graduating they will obtain a qualification diploma no matter from which of the systems they come. Besides giving equal opportunities, this scheme also increases the transparency and effectiveness throughout the education system.

Developing ways to identify the demand for specific skills and education

There is a need for effective methods and surveys which can identify the skills and courses that are demanded by employers. Here, the private sector—with its knowledge about the quantity and quality of human resource needed—has an essential role to play. For instance, centers acting as direct interface between job seekers and companies searching for human resource could be set up, and they could directly record the market need for different kinds and levels of skilled labour. This information could be processed on a national level and could feed directly into the detailed planning of the educational sector.

This would overcome the current skill set mismatch and employees would subsequently be in a better position to find a job with the right level of skills, instead of having to take up lower-paid jobs.

Conclusion

With problems like high drop-out rates and limited production of skilled human resource, adoption of different modes and pathways for education seems necessary in the Nepalese context. Also as the quality and relevancy of the education being delivered is questioned, both by private and public schools, it is important to revitalize the curriculum with update content, also including technical and vocational education which will help create a skilled workforce. Similarly, to bring education to an international standard and initiate demand-based learning which focuses on students rather than the administration of the education system, new approaches like that of the voucher system and dual education system needs to be introduced.

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This article is the summary of key findings and recommendations of the detailed report "Review & Overview of Economic Contribution of Education in Nepal" prepared by Prof. Dr. Tanka Nath Sharma and Mr. Koshish Acharya for the Nepal Economic Growth Agenda (NEGA), Report 2012 published by Samriddhi, The Prosperity Foundation in partnership with Federation of Nepalese Chambers of Commerce & Industry (FNCCI).
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References

Central Bureau of Statistics. (2011). Nepal Living Standard Survey, 2010/11. Statistical Report Volume One. Kathmandu: Government of Nepal.

Central Bureau of Statistics. (2011). Preliminary Result of National Population Census 2011 Released. Retrieved from <http://census.gov.np/index.php?view=article&catid=6:home&id=31:preliminary-result-of-national-population-census-2011-released&format=pdf>

Critical Constraints to Economic Growth of Nepal
analysis & recommendations on 5 sectors

Central Bureau of Statistics. (2009). Report on the Nepal Labour Force Survey 2008. Retrieved from <http://cbs.gov.np/wp-content/uploads/2012/02/NLFS-2008%20Report.pdf>

Council for Technical Education and Vocational Training [CTEVET]. (2011). Technical and Vocational Education and Training: An overview. Bhaktapur: Information and Research Department, CTEVT.

Education Financing Reference Group. (n.d.). Financing Education in Federal Nepal. Retrieved from <http://www.ridanepal.org/downloaded/financing%20education%20in%20federal%20nepal.pdf>

Federation of Nepalese Chamber of Commerce and Industries. (2011). Nepal and the World: A Statistical Profile, 2011. Kathmandu: Federation of Nepalese Chamber of Commerce and Industries.

Ghimire, B. (2012, November 6). Where does all the money go?. The Kathmandu Post. Retrieved from <http://www.ekantipur.com/the-kathmandu-post/2011/11/06/metro/where-does-all-the-money-go/227903.html>

Isaacson, J. M., Skerry, C. A., Moran, K., & Kalavan, K. M. (2001). Half-a-Century of Development. The History of U.S. Assistance to Nepal 1951-2001. Retrieved from http://pdf.usaid.gov/pdf_docs/PNACP500.pd

Khan, H., & Williams, J. B. (2006). Poverty Alleviation through Access to Education: Can E-Learning Deliver? (U21Global Working Paper 002/2006) Retrieved May 6, 2011 from <http://www.u21global.edu.sg/PartnerAdmin/ViewContent?module=DOCUMENTLIBRARY&oid=157294>

Ministry of Education and Sports. (2011). Nepal Education in Figures, 2011 AT-A-Glance. Retrieved from http://www.pustakalaya.org/eserv.php?pid=Pustakalaya:3007&dsID=MOENepal2068BS_NepalEducationInFigure2011.pdf

Ministry of Finance. (2012). Economic Survey, 2011/12. Retrieved from http://www.mof.gov.np/ajw/uploads/uploaded_image/Chapter%20All-Final-Edited.pdf

Sharma, T. N. (2008). Technical Education and Vocational Training and Skill Development in Nepal, Skill for Employment Project. Kathmandu: Asian Development Bank.

Envisioning Education for the New Generations

Dr. Bidya Nath Koirala

Historical learning

Nepalese are socialized in a way that they believe formal education equates to social recognition and non-formal and informal education to domestication. They have also learnt that local knowledge limits the learner and global knowledge expands the horizon of the same individual. Furthermore, they understand that lecture, elaboration, illustration, and use of intuition are pedagogies of the formal learning system and that observation, informal discussion, question-answer, experimentation, demonstration, and problem solving through trial and error are pedagogies of the informal and non-formal learning system. Nepalese also hold the belief that formal education requires summative evaluation and is associated with rigid and difficult examinations while informal and non-formal education demand formative evaluation and are associated with easily passable examinations. This understanding has been transmitted culturally through the generations irrespective of territorial, religious, economic, ethnic boundaries and has eventually become part of the sociological structure and anthropological learning.

On the other hand, western societies witnessed frequent changes in their understanding of education and the truth that education should seek. In the 1950s, they were looking for absolute truth. In the 70s they

generated participatory truth; in the 80s they came up with the knowledge of constructed truth; and very recently they look for the blend of subjective and objective truth (Cresswell, n.d.). This paradigm shift in understanding of the truth came along with the shift in development theories: indigenous theories to modernization, modernization to post-structural development, and post-structural to postmodern development, and postmodern development to post-postmodern development i.e. individualization of development. However, Eastern societies, in many ways, failed to revive their glorified past and hence imitated the West.

The comprador bourgeoisies established the Western truth as the truth of the East as well, i.e. the elite classes of the West influenced the perception of truth in the East. The hybridized truth seekers gave the third truth, the truth of the East and the West together in a capsule form (Bhabha, 1994a; 1994b; 1996). The complementary theorists imparted the knowledge that the East and the West were saying the same thing but their ways of saying it and the premises of understanding were different. This shows that people have their own understanding of the truth that education should seek, the pedagogy that it should apply, and the evaluation system that it should follow. Alongside, massive development of computer technology and the emergence of a cyber-generation/digitized-generation/virtual classroom-generation/e-generation have helped generate another truth, the wishful truth (real truth, envisioned truth, virtual truth).

Belief of 21st century

The 21st century educationists believed in (a) change in the intent of education, (b) possibility of blending the local and international contents under a single lesson, (c) use of informal/non-formal pedagogies in formal education system, (d) application of formative evaluation system in the formal education program, (e) reaching the learners' home and workplace with modern means of communication, (f) flexibility of the formal education institution to accommodate the interest of the individuals and the groups, (g) value of knowledge regardless of its origin, (h) the computer technology that can do whatever we dream of doing (Partnership for 21st

Century Skills, 2008), (h) affordable modern means of communication, (i) that a simple machine can work as teacher, taught, resource center, omnipresent classroom at any point in time, and as self-correcting Guru. The educationists also believed that virtual classrooms will enable schools/colleges/universities to pull international resources to their doorsteps and enable students to live and learn across borders.

Envisioning Nepali education

An analysis of 6 decades long educational history of Nepal shows that our education system is aimed at making a child patriotic, self-employable, and practical. But the 21st century does not need such a human being. What it needs instead is a global citizen—an assertive thinker who can be employed and has the expertise to manage available resources to the benefit of all parties. As global citizens, the students of the 21st century should be able to think of their homeland as a locality, countries around them as neighbors, and the entire universe as a conscious being of the creation. This form of education demands that the blend be studied in its entirety: content of the local origin; content of the country that the students live in; content of the neighboring countries and/or the countries they temporarily or permanently wish to migrate to; and the ecology of the globe.

The traditional paradigm cannot address the need of the 21st century: the learners need more than what their predecessors were in need of. This shows that a school cannot make a child an expert. What it needs to do is to enable students to be voracious readers and quick thinkers. This automatically demands the change in pedagogy because a teacher alone cannot teach students everything—students are supposed to learn more than what teachers are supposed to teach. It means that the traditional lecture method should be redesigned to integrate enough questions for students. Demonstration methods should be used by the students, problem solving methods should be individualized, students should have access to modern technology and research, project works, and self-initiated learning programs should be the core of the pedagogical process. It would mean that a teacher can be found everywhere in the universe. This would not, unlike

the traditional concept, require the presence of teachers at school, student-teacher ratio, equipped schooling facilities, management committees and supervision in each school.

Along with the changes in pedagogy, index evaluation systems will also evolve. Students will set the index for themselves which will consist of subject/level specific competencies, and individual as well as collective excellence. It will also demand individualized questions and local/national/global normative questions where some of the questions will be programmed and others will be evaluated by the experts. Take home exams, online exams, classroom exams, and choice exams will be applied simultaneously.

Responding the current concerns

Pearson Foundation, New York (2007) advocates for "rights to education". It says that no matter where we live and what we have, we deserve the right to education. This advocacy for right to education challenges the current school system where students are supposed to come to a specific school for a specified duration of time. It also calls for the change in isolated settlement systems, as it seeks to advocate for students' convenience and well-being, be it in terms of location or scheduling. This shows that Early Childhood Development (ECD)/school/college/university needs a three track system: traditional classrooms for the regular students; remedial classes for the irregular students; and, "home delivery" of teacher services to the students from isolated settlements. Given the technological advancements, it would include a shift to modern Skype and online-based education, a 24 hour massmedia based education service to those who have never been schooled. These provisions also address the concern of EFA (Education for All) Global Monitoring Report (2011) that advocates for the reach of education to all children along with paving the way for a lifelong education program.

The buzzword 'social inclusion' demands honouring the variety of people from different castes, ethnicities, religions, topographies, etc. (SIAG,

2008). This demands de-stereotyping of the jobs, reducing prejudices of the best and worst person/jobs, establishing creative co-existence as the aim of education, and developing policies and practices to enjoy diversity in school and elsewhere to include historically excluded groups. People are looking for jobs— also school/college/university graduates, including the dropouts, look for jobs. But the question is whether an education can guarantee a job? This question can be answered by following the World Bank's World Development Report on Jobs (2011). It indicates that educated people should lobby the authorities for infrastructure development, innovative policies, skill upgrading, entrepreneurship fostering, and global competition to create self-employable jobs. The reason is that farming provides non-wage income and the job market is increasing by 1.3 pct. while job seeking youths are increasing by 5-45 pct. depending on the countries where they are living (World Bank, 2012). In case of Nepal, 400,000 youth seek jobs every year (ILO report cited in Sharma & Acharya, 2012). In order to address such a problem, the USAID education strategy (2011-2015) recommends improved workforce skill and reading skill to ensure jobs for the educated people (UNCHR, 2012; UNESCO & UNEVOC, 2012). So does the PISA report (John, 2012).

Education for girls is going to be another major concern in the years to come. This concern can be addressed by following the UNGEI (United Nations Girls' Education Initiative) Framework (2012) that advocates for localization of girls' education agenda and for a guarantee for technical and financial support.

There are innovations everywhere. Yet, they are not systematically documented and shared either inside or outside the countries. For example, the size of school management systems are getting smaller across regions but Nepal continues to have larger and centrally managed systems like that of Tribhuvan University. The future generation will not want to deal with such centralized administration entities—they will not have time, resources, and the willingness to do so. This situation demands local government-run schools, industry-run colleges, and business-run Universities. It also demands the promotion of parenting education, parental education, and early childhood education for infants, toddlers, and pre-school children.

Teachers are social artists. These artists require regular sharing of their art; the pedagogical process they explore, the research they do, the experience they gain, the wisdom they show, and their creation no matter whether they come from the indigenous community, modern community, and/or hybridity (Bhabha, 1996) of the knowledge(s). They also need skills to establish school/college/university as a centre that caters to the need of the community: where pregnant women are taught about conditions related to pregnancy; where a father learns to enjoy life with his yet to be born child; where school/college/university students and their dropout counterparts manage reciprocal learning programs; where job seekers obtain job training; where people get entrepreneurial skills; where elderly people find time to reflect upon their life and prepare the new generation for inter-generational learning.

Technology is forcing teachers and parents to learn outside classrooms wherever they are, whatever they like, and whenever they like. This has been possible because of the virtual classroom. This means teachers of today need the skills to apply the technology of online classes within the country and abroad. They also need self-evaluation, peer evaluation, national evaluation, and global evaluation simultaneously to assess their cognitive, affective, and psycho-motor domains.

Communities are expecting many more things from school/college/university. The future communities will look for direct bearings from school/college/university. This will push the curriculum developers and teacher trainers to develop local curricula, build communities as labs for teaching and learning, and extend the services of the school/college/university for the development of the community as a whole.

The questions

There will be many questions to be answered while envisioning the education for future generations. They are: (a) Which institution or network of institutions will be there to ensure education, training, and learning for all members of each household?, (b) What mechanism will be used to collect and share the learning of stakeholders systematically?, (c)

How can we make curricular adjustments to accommodate the learning of the people in terms of what they get and what they want to offer the education system?, (d) How can we create a dependent co-arising (Buddha's understanding of misery and happiness together) type of institute where one or many institutions will guarantee that each student will get earning and learning skills together?, (e) Who will be there to develop a continuum to accommodate the power levels of people and empower the powerless simultaneously?, (e) How will the private, public, and religious institutions collaborate to obtain guaranteed quality education and life skills for all?, (f) Who will be instrumental in providing inter-university/school/college degrees to the students who opt for it by interest or by compulsion?, (g) How could teachers be trained to blend inter-generational international knowledge together?, (h) Who will develop terrains of self-learning and teacher training packages (for individuals/ groups/the masses) to make teachers and learners managers of human potential?, (i) What can be done to make religious and scientific knowledge complement to each other?, (j) Who will take lead in creating a Unicode of all the languages of the world so that the literatures of the globe be accessed?, (h) Who will work for imaginable education (Packard, 2009) for the community, nation, and the globe at all times i.e. systematic dreaming of education for generations to come?

Amidst these endless questions, the education sector holds a huge potential for reforms and if these questions are kept in mind while designing the larger framework of education much benefit can be reaped from the endeavor.

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Reference

Bhabha, H. K. (1994 a). Frontlines/Borderposts. In Bammer A. (Eds.) Displacements: Cultural Identities in Question (Pp. 269-72). Bloomington; Indianapolis: Indiana University Press.

Bhabha, H. K. (1994 b). The Location of Culture. London; New York: Routledge.

Bhabha, H. K. (1996). The Other Question: Difference, Discrimination, and the Discourse of Colonialism. In Baker H. et al (Eds.), Black British Cultural Studies: A Reader (Pp. 87-106). Chicago: University of Chicago Press.

Creswel, J. W. (nd). Research design: Qualitative, Quantitative, and mixed methods approaches. (Second ed.).

John, S. (2012). PISA Vasool this year?.

Packard, E. K. et.al. (2009). The evolving resource of imaginal education: realizing maximum potentials of individuals, organizations, programs, and communities. Education track, 2009.

Sharma, T. N. & Acharya, K. (2012). Review and overview of economic contribution of education in Nepal. Kathmandu: Federation of Nepalese Chambers of Commerce and Industries (FNCCI) & Samriddhi, the Prosperity Foundation.

Social inclusion action group (SIAG). (2008). Workplace diversity in international agencies in Nepal. Kathmandu: SIAG.

Women's Commission for Refugee Women and Children (2007). Your rights to education. A handbook for refugee and displaced communities. New York: Pearson Foundation.

World Bank (2012). World development report, 2011. Job on 2013. Outline.

United States Agency for International Development [USAID]. (2011). Education strategy, 2011-2015. Education opportunity through learning. Washington DC.

United Nations Educational, Scientific and Cultural Organization [UNESCO]. (2011). EFA: Global monitoring report, 2011. Bangkok.

United Nations High Commissioner for Refugees [UNCHR]. (2012). Education strategy 2012-2016. The UN refugee agency; UN High commission for refugee. Division of international protection.

United Nations Girls' Education Initiative [UNGEI]. (2012). Formative evaluation of United Nations girls' education initiative. Global report, 2012. New York.

United Nations Educational, Scientific and Cultural Organization [UNESCO] Bangkok and International Center for Technical and Vocational Education Training (UNEVOC). (2012). School to work transition information bases. Education review series 6. Asia Pacific.

Developing Hydropower: Overcoming the Hindrances

Introduction

Energy in its different forms is a part of every society. It is the necessary input for all production processes and it is demanded directly and indirectly by all sectors, from agriculture to industrial production and services. Like infrastructure a country cannot function without a constant supply of energy.

Electricity is a form of energy which is directly consumable, but it is itself produced by other energy sources. Coal has traditionally been the main source of production, but other kinds of energy sources are increasingly being used including renewable sources such as wind, solar power and hydropower.

This chapter argues for increased use of hydropower in Nepal in order to generate electricity. Yet, a number of obstacles exist before it is possible to tap into the huge potential Nepal possesses in this area. The article identifies these bottlenecks and suggests solutions for their removal.

Fossil fuels today, but not tomorrow

Many types of energy are used in Nepal. The major part of the total energy consumption, i.e. 75 pct., is fuel wood and also other types of fossil

fuel (Ministry of Finance [MoF], 2011), e.g. coal and petroleum are being used. The problem is that energy demand is growing, while the traditional energy sources, such as wood and coal, are being depleted. The supply is therefore limited and Nepal has no fossil fuel reserves.

Alternative energy, on the other hand, is little developed, despite the fact that especially the power potential from rivers for production of electricity, i.e. hydropower, is very large. The large potential is due to the fact that the country is endowed with huge water flows. It has been estimated that hydropower has the potential to meet the energy need in the future. Therefore, focus is put on this kind of renewable energy in this chapter.

Not much of the power from rivers used

There are already some hydropower projects in operation today. They were mainly started up in the 1990s by the government or by cooperation between private sector developers and development organizations. As of today, the total capacity of both these public and private installations combined is 652 MW of hydropower electricity (Nepal Electricity Authority [NEA], 2011), i.e. the maximal effect that the system can produce at a given time. However, this is only 1 pct. of the full potential that Nepal's rivers and water sources have to offer.

Power outages

Another important feature of the sector is that almost all installations are of the so-called run-of-river type, while only one possesses a water storage facility, i.e. a dam or reservoir close to the power generator. This means that when there is more water in the rivers, more electricity is produced, while low water flows limit the production. The sector is therefore very dependent on seasons.

The dependency on the abundance of water in the rivers leads to long periods without electricity—so-called load-shedding—during the dry

season. The demand clearly exceeds the supply in this period. More than half of the need for electricity cannot be provided by the sector during peak hours and power cuts are frequently experienced. It is expected that power cuts might go up to 21 hours per day in the near future because of this under-supply of electricity.

Few private developers within the sector

Before a developer can start producing electricity he has to negotiate a number of conditions with the Nepal Electricity Authority (NEA). NEA represents the government and is the single buyer of energy from all hydropower producers. This public enterprise then sells the electricity to the market consumers. The negotiation between a potential producer and NEA therefore includes provisions on the price that the producer will receive in return for his produced electricity. However, since he can only sell to NEA he will receive a fixed flat-rate price for the electricity (for smaller producers with facilities up to 25 MW the price will be NRs. 4.8 per unit during the wet season and NRs. 8.4 during the dry season).

This price rate is not often enough for economically viable production. So, this 'one-buyer' system discourages many developers to engage in the hydropower business. The number of finalized projects is also a witness to the problematic current situation: Only 23 private hydropower projects have been developed, out of the 81 firms who have expressed preliminary interest in investing.

Similarly, private producers only generate around 27 pct. of the current total hydropower capacity in place in Nepal. So most production comes from public producers or bilateral development projects. The figures show that private producers do not reach the full potential for hydropower production because of their small size and fixed prices for their electricity which do not take into account the high rate of inflation, and the variable production costs for the producers. This is the case despite the government's goal to engage the private sector in energy production.

Low expenditure on hydropower and outdated legal framework

The hydropower sector is also characterized by a low total public/private expenditure, namely, around 1.4 pct. annually of GDP over the period 2006-10 (MoF, 2011). As costs are high when establishing new facilities it will require much more expenditure to produce additional hydropower.

The hydropower industry has taken its current form within a legal framework that is old and insufficient. The 1992 Act was focused on constructing small hydropower plants, by involving the private sector via tax incentives, license guarantees and low import duties on inputs to the project. However, the Act did not provide similar incentives for developers of large hydropower projects.

A sector development policy plan of 2001 later made larger projects possible by allowing special forms of cooperation between public and private actors, and it provided guarantees against nationalization and exchange facilities to foreign companies in order for them to repatriate their investment. Yet, the policy plan needs an appropriate legal Act in order to be implemented, but the needed Act has not been decided upon by the parliament as of now. And, this cannot happen at the moment due to the recently dissolved parliament.

Constraints

A hydropower developer with a plan on constructing a hydropower plant will, from the beginning of his project face a variety of challenges in different areas. The following ones represent the most important.

Unstable policies and fixed prices

The hydropower sector has, for the last decade, suffered from an environment of unstable and short-lasting governments which have given

more priority to the defense area than to the energy area (Mahat, R. S., 2012). The lack of focus and the political fluctuations have led to priority changes within the sector. It has therefore been unattractive to invest in hydropower despite a large demand from consumers of electricity.

If a developer finally decides to go into the market and construct a hydropower plant he will be paid an artificially low, constant market price for his electricity. In real terms he would even have experienced a decrease in the price as inflation has been high over the years.

Too little resources to the sector

On a general level too little resources have been channeled into the hydropower sector. It has been estimated that NRs. 400 billion is needed to eliminate the production gap in hydropower, and even additional resources are needed if transmission and distribution lines are also to be set up. These lines are necessary for transporting the electricity to the consumers.

Calculations show that the before-mentioned low level of expenditure at around 1.4 pct. of GDP since 2006 has also been the case for almost the last two decades. Nearly every year the sector has been allocated resources below 2 pct. of GDP (MoF, 2011). This is obviously too little when a rule-of-thumb for Nepal indicates that 5 pct. of GDP needs to be allocated on the yearly budget in order to produce 200 MW of hydropower.

Limited possibilities for bank loans...

In addition to the regulatory and budgetary challenges the producer has to also fight against difficult financial conditions, because he needs to obtain a loan from a bank. Yet, the bank will only offer few and small loans with maturity of more than one year. This is because the private depositors of the bank only deposit their savings on a short-term basis, typically up to one year, not the 10-15 years that it takes to construct a hydropower system.

Furthermore, projects are often large-scale, while banks are small and depositors are few. Both factors make it difficult for the developer to obtain sufficient funding from the bank, and he is forced to look elsewhere.

...despite a cap on the costs

Furthermore, financing via banks is often an expensive option. To cope with this obstacle the central bank of Nepal—Nepal Rastra Bank—now provides a beneficial credit facility to banks, lending to hydropower developers. The banks borrow at an interest rate of 6.5 pct. and they are then obliged to re-lend the credit at a maximum of 10 pct. However, the facility is only provided for 6 months, so this measure has not solved the problem because of a mismatch between maturity and gestation periods.

Essential need of foreign capital for national hydropower development

These capital constraints together lead to a major issue for the prospects of Nepal's hydropower sector. Even though access to bank loans were to be improved significantly by both increased quantity and reduced costs there would still be a huge need for foreign capital to build up the sector. Foreign direct investment (FDI) is essential if the huge installations are to become a reality. Solving the capital constraints and in addition even the regulatory and budgetary challenges—does not eliminate the need for FDI.

Lack of government and multilateral donor backup

No financial guarantee for a given hydropower project is issued at the moment by the government in case of external disturbances such as land slides or earthquakes. The government could pay back loans to foreign investors of a hydropower company if the company were not able to repay the loans itself. But such a scheme is not in place and as a consequence FDI has not been attracted towards the sector.

Also, World Bank loans are not granted directly to private sector hydropower projects, but only indirectly via the government. This system increases the interest rate on the loans that developers are faced with and makes many projects economically infeasible.

No grid to plug into

Besides the numerous financial challenges the developer is confronted with, he also has to manage some technical constraints. The current lack of transmission lines is crucial to any new project, because without the lines the producer cannot deliver his electricity to the consumers.

For the country as a whole especially cross-border connections to India are missing. These are important during the dry season where electricity has to be imported from India. If Nepal manages to build up a large hydropower sector the opposite situation also will require cross-border lines. In the rainy season Nepal would be able to sell its excess electricity to India, but only when the lines exist. As of now a major constraint to the line construction is the cost-intensity in acquiring land and the existing impractical environmental guidelines regulating this area.

From a technical point of view it is also a problem that there is little use of storage facilities for electricity production. Pools and reservoirs to hold the water could be useful in the winter season where there is little hydropower production and therefore a large over-demand, whereas in the rainy season supply and demand are more balanced due to larger supply.

Inefficient administration of licenses

But also the system set up to administrate producers seems to be hampering the private initiative. The number of producers are limited by a license system and many licenses have been bought by individuals for speculation with a view to resell them to developers instead of establishing own projects. Real developers thus face much higher prices for buying licenses because of this speculation. Even though some licenses might be

cancelled in the near future it might also be the case that they are reissued and that the constraint therefore remains.

State-owned company distorts the competition

On the regulatory side it is an obstacle for the sector that the publicly owned company, NEA, is both a buyer and producer of electricity. Furthermore, the company also enjoys a monopoly over transmission and distribution of the electricity.

Similarly, the Ministry of Energy and other line ministries, such as Ministry of Environment, often have disputes when dealing with establishment of new hydropower facilities. Due to their diverging interests on the specific issues, disputes may arise and the process for developing a hydropower project is not treated in an integrated and coordinated way.

So what should be done?

The following recommendations should be taken up by the government as soon as possible, if Nepal should develop a thriving hydropower sector which has highly needed, positive effects on all other sectors of the economy:

Clear political focus and vision

Overall, more political priority should be given to the sector and long-term visions should be developed to avoid the experienced policy fluctuations and priority changes. A good starting point would be to put into force a specific Act that can enable the hydropower policy sketched out in 2001, since this plan addresses many of the issues of concern.

Less rigid flat-rate prices to producers

However, the policy plan alone does not solve all the problem. A system should be adopted so that electricity prices paid to the small-scale

producers are not fixed at specific flat-rates for the dry and wet season, as it is the case at present. Instead, prices should better reflect the individual costs to producers, e.g. by making prices depend on other relevant factors rather than just the season. Different prices would provide producers with an incentive to produce and could especially give an incentive to invest in storage facilities.

Increased expenditures allocated to the sector

Policy priority could also be obtained by increasing expenditure on hydropower projects to 5 pct. of GDP per year, which would be the appropriate level given the current need for electricity among consumers.

Improved financing facilities

On the financial side, a specified proportion of total deposits from citizens into Nepalese banks should be kept aside for loans to hydropower developers. The sector could be made into a priority investment sector for the government where private savings would be used to finance the sector projects and measures would be taken to address the problems with developers' access to finance. Along the same lines, the current refinancing facility where the central bank lends to banks who then in turn lend to developers—should be made more attractive. A suggestion would be to extend the current 6 month of credit to a period of at least 24 months.

The government should also provide loan guarantees to hydropower companies with viable projects, covering the full maturity period of developers' own loans from their creditors.

Attraction of FDI

As mentioned, even though the capital constraints of the potential developers were solved, there will not be sufficient domestic private capital and public investments in order to set constructions of the needed number of hydropower facilities into motion. Much priority must therefore be

given to attracting flows of FDI from abroad. A full FDI strategy should be developed which would include promotion campaigns and information from the government towards foreign capital markets, establishment of secure investor frameworks and legal environments etc.

Setup of transmission lines and storage facilities

As a response to the technical obstacles, more transmission lines should be laid out in relevant locations, especially between Nepal and India due to the future prospects for electricity trading. NEA, which currently owns the existing transmission lines should be allowed to charge reasonable charges from producers for transporting their output to consumer, which would give NEA incentives to set up new transmission lines.

However, as this measure might not result in sufficient new transmission lines, the private sector should also be allowed to invest in lines and charge users accordingly. To this end, the government will have to facilitate the problems of land acquisition that private sector companies are expected to face when setting up new transmission lines. Economic incentives should also be established for future developers in order to encourage them to construct storage-based projects, not just run-of-the river projects.

Specific focus on large hydropower projects

To particularly encourage large hydropower projects more free-market conditions must be secured. Competitive and transparent price bidding, i.e. where the producers offer their own price for their electricity to the market buyers, instead of selling it to NEA on a flat rate basis is needed. A showcase of one large and well-functioning hydropower project would furthermore demonstrate to potential developers that projects can be realized.

Reform of state-owned company and regulator

To solve the shortcomings of the state-owned company NEA, the

entity should be split up and its activities unbundled so that it is not both a producer (via its assets in the public hydropower installations) and buyer of electricity from the independent producers. Also, it should not have the monopoly of the distribution networks. If unbundled successfully, it will facilitate more private investments in sector. The company should at the same time be reorganized so that it can become a more economically viable producer and thereby an attractive investment goal for private sector investors, contrary to its poor return on investment performance of today.

Also, the Ministry of Energy should be organized in a more optimal manner, e.g. on the basis of geography so that connected rivers and basins are under the authority of the same department, securing that different issues concerning a given project are treated in an integrated way. Coordination between the line ministries will ensure that potential disputes between the ministries, such as the issue of deforestation, can be dismantled at an early stage.

More effective license system

The specific regulatory issue regarding the license system could be solved by revoked licenses in cases where the holder does not develop any project. It may also be necessary to grant licenses with different lengths of validity periods, because different projects have different license period needs to match the construction period. Factors such as installation type (run-of-river or storage type facility), production capacity and targeted consumer group (domestically oriented or export-oriented) should be taken into account.

Equal tax conditions

Also, the many tax exemptions of the hydropower sector should be eliminated to create equal opportunities among investors. Tax incentives for the sector in general should be established instead, and general tax exceptions should be granted to imports needed for the construction of hydropower projects (ILO, ADB & FNCCI, 2008).

Conclusion

A minimum level of political understanding is needed to harness the hydropower sector in Nepal. Otherwise, unstable plans and policies will discourage potential investors from investing in Nepal's hydropower. A good starting point would be to put into force a specific Act that can enable the hydropower policy promulgated in 2001 as this policy addresses many issues of concern. A few issues related to transmission and distribution which have not been covered by this policy can be solved by unbundling NEA into separate entities for handling generation, transmission and distribution. This mechanism will be helpful in introducing a wheeling charge system in transmission which gives an incentive to set up new transmission networks. It will further facilitate the domestic and foreign private sector to make investments in the power sector of Nepal.

In addition to this, introduction of an electricity pricing system according to the demand of the market will encourage potential investors in developing storage type projects which are highly essential for mitigating load shedding during the winter season. Similarly, division of departments at the Ministry of Energy on the basis of geography will be helpful in addressing different issues related to a given project in an integrated way. If these pressing problems of the power sector are ignored for a long time, all other sectors that can lead Nepal onto a path of economic progress will be hindered in growing. As a consequence, the Nepalese people will have to live in poverty for generations.

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This article is the summary of key findings and recommendations of the detailed report "Investment Prospects & Challenges for Hydropower Development in Nepal" prepared by Dr. Kamal R. Dhungel and Mr. Pramod Rijal for the Nepal Economic Growth Agenda (NEGA), Report 2012 published by Samriddhi, The Prosperity Foundation in partnership with Federation of Nepalese Chambers of Commerce & Industry (FNCCI).
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References

International Labor Organization (ILO), Asian Development Bank (ADB), and the Federation of Nepalese Chambers of Commerce and Industry (ILO, ADB, & FNCCI). (2008). Enterprise Survey. Kathmandu: ILO, ADB, and FNCCI.

Mahat, R. S. (2012, March 29). West Seti and Hydro Politics. Republica Daily. Retrieved from http://myrepublica.com/portal/index.php?action=news_details&news_id=33356&show_comments=tre

Ministry of Finance [MoF]. (2011). Economic Survey 2010/11. Kathmandu: Ministry of Finance.

Nepal Electricity Authority [NEA]. (2011). A Year in Review- Fiscal Year 2010/11. Kathmandu: Nepal Electricity Authority.

Fundamental Bottlenecks in Nepal's Hydropower Development

Dr. Bhola Nath Chalise

Amidst an end number of debates that have been taking place in regards to the hydropower sector in Nepal, “What hinders hydropower development in Nepal?”, is perhaps that one question which hangs silently and lacks definitive answers. From the dwindling FDIs at the international front to the political instability in the national arena, a lot has been brought to the discussion table but what is needed instead is that we focus our attention on the fundamentals, the basic integrities that have been holding development back. What ‘fundamentals’ imply are a bunch of problems that characterize the hydropower sector in the country and those which, by and large, have been hindering the needed growth and development.

The forthcoming arguments do that needful and bring forth those fundamentals to the discussion table:

1. Lack of transparency

The hydropower sector in the country is characterized by lack of transparency in terms of issuing of licenses and conduction of Power Purchase Agreements (PPA). For a system that has, time and again, been deemed incapable of meeting the expected ends of electricity generation and distribution, lack of transparency in issues as such, if not anything else, is an added ailment.

Nepal's hydropower policy had been liberalized to some extent with the enactment of Hydropower Policy in 1992 in accordance to which it became mandatory to conduct needed surveys and get a generation license for development of hydropower. After that, Nepal went on to enact a Hydropower Policy in 2001. However, this Policy was not backed up by appropriate Act. This has not only created a vacuum in the needful area but has also left a leeway in terms of encouraging malpractices. And in a system with no mechanism to ensure transparency that would mean unchecked fund embezzlements and corruption. This also signals that Nepalese political leaders have either not really understood the true economic benefits of harnessing hydropower potential or have never put hydropower development as a priority for the country. Otherwise, the needed Act would have been formulated and implemented accordingly, soon after the formulation of Hydropower Policy 2001.

In case of the Power Purchase Agreement, the provision is such that any hydropower plant that generates electricity beyond 25 MW the PPA for that particular plant is based on negotiation (for plants that generate upto 25 MW of electricity there is a fixed rate—NRs. 8.40/unit in winter and NRs. 4.80/unit in summer). Such project to project negotiations have no fixed pre-determined mechanisms and thus foster malpractices that are not necessarily held accountable for. This premise is based on cost plus theory which does not promote competition and innovation as it is not driven by market forces. In addition to this, there are no clear-cut rules while awarding licenses, as the current trends indicate that licenses are given without following the process of project bidding. Even when the decisions are made in good faith; owing to the lack of transparency, they leave behind a lot of loopholes that raise people's suspicion.

2. Discretionary Power of Bureaucracy

Bureaucratic glitches are the other major challenges that we face. Given that NEA has a hold over majority of what happens in the sector in terms of generation, transmission and distribution of electricity, it has the

primary say and the guiding policy has been drafted in a way that it gives away discretionary powers to the bureaucracy. It is, as such, a major hassle for private parties or any other interested investor to meddle through the labyrinthine bureaucracy.

The domestic as well as the foreign private sectors are already involved in generation of electricity. They are equally capable of constructing transmission lines and distribution system according to their necessity. However, existent Policy and Act do not clearly mention the modes for regulating, if even a concerned party is willing to invest in construction of transmission lines. Because the Act does not mention the needed terms with clarity, it leaves a lot of space for the bureaucracy to practice its discretionary powers. The interpretation of unclear policy and law changes with the change in government or the replacement of the concerned Secretary. Such a volatile scenario is hardly encouraging for the investors willing to make long term investments.

In addition to this, while awarding survey and generation licenses, discretionary power of bureaucracy played a vital role as there were no clear-cut policies on this matter. Therefore, licenses were awarded on ad-hoc basis without having assessed technical and financial capabilities of licensees.

In case of hydropower sector the concerned authority has been failing to follow the market signals—it has not only hampered the coming in of new players but has virtually killed competition and hence innovation. In the Nordic countries such as Norway, Sweden, Denmark and Finland the price of electricity is determined by free interaction of supply and demand. Moreover, consumers have a choice to select suppliers in the Nordic market. This leads to lower electricity prices and creates energy security in the region. Nepal could benefit from a similar practice (Gonzalez, D., Kilinc, A. & Weidmann, N., 2011).

3. Lack of Institutional Capacity of Nepal Electricity Authority

Nepal Electricity Authority (NEA) comes across as a public enterprise that is neck-deep in trouble. Over the years, its financial gains have been falling down and its annual reports show losses. Its accumulated loss reached NRs. 27,534.01 million at the end of FY 2010/11 (NEA, 2011). Its finances are just one of the many problems that seem to be plaguing the system. Due to its low tariff rate, overstaffing, mismanagement of resources and expenditure on unproductive sectors NEA incurs further losses. Nepal Electricity Authority (NEA) has neither credibility, nor capacity to obtain private sector financing. So the government has reduced its share in NEA to reduce NEA's loss on the balance sheet. Besides this positive move, domestic as well as foreign investors are not interested in making investments in the NEA because of its poor institutional capacity.

Despite its weaknesses, it has got a monopoly over transmission and distribution system. It, however, cannot construct necessary transmission systems for evacuation of power due to credit crunch. There are about 4 different projects such as Maya Khola Hydroelectric Project (14.9 MW), Solu H.E.P (23.5 MW), TalloSolu H.E.P. (82 MW), and MewaKhola H.E.P. (50 MW) which have been awaiting the construction of transmission lines since 2009 but to no avail (Dhungel, K. R. & Rijal, P., 2012). NEA has not taken any decision for solving transmission related problems of these projects at the time of severe energy crisis. The construction of transmission lines is capital-intensive. According to Mr. Gagan Manandhar, Transmission Incharge, NEA, for the construction of transmission line of 1 km. of 133 kV, the cost amounts to about 11.5 million in Nepali currency. In this regard, for the construction of transmission line of 220 kV and 400 kV, the cost will definitely be higher. The government has allocated only minimal budget for construction and enhancement of transmission lines which suggests that the government has either failed to identify the problem of transmission lines or is simply not interested in this matter. The government is busy with the same rhetoric in terms of its commitments and has failed to bring about practical changes. It is also go to do with the management capacity of NEA

because it has got the monopoly power over construction of transmission system and has not been able to develop necessary networks for evacuation of power. The energy crisis will be more severe if cross-border and East-West transmission lines are not constructed within estimated timeframe of 2015 because Nepal will, by that time, need to import at least 1000 MW of energy from India to meet its energy demand. Here, the transmission lines will be very important for evacuation of power from India and for its distribution across the country.

On the other hand, NEA has been going through the most critical time in its history because of financial challenges owing to a lack of adjustment of retail tariff for a long time, selection and implementation of projects with low financial and system feasibility, and low productivity of human resource.

NEA suffered a system loss (combining both technical and non-technical) of 28.35 pct. in the fiscal year 2010/11 (NEA, 2011). Technical losses occur naturally and it is mainly caused by the use of low quality equipment in transmission and distribution lines, transformers, and measurement systems. An independent study shows that various senior level staffs of the NEA were involved in that embezzlement while purchasing low quality equipment. In developed countries like the UK, and the USA, the technical losses are very minimal of around 7 pct. because the utilities of these countries use latest devices and follow efficient mechanism. Non-technical losses are caused by actions external to the power system and consist primarily of electricity theft, non-payment by customers, and errors in accounting and record-keeping. In all the cases, some level of poor management of the NEA in execution of its operations is present. Elimination of such practice should be a matter of high priority for a poor country like Nepal because even if a small percentage of non-technical error is corrected, millions of rupees can be saved, which can be used for generation of electricity. It would be better to cite an example of Andhra Pradesh of India because Andhra Pradesh State Electricity Board (APSEB) has unbundled the units into generation, transmission, and distribution, while maintaining state ownership of all entities. One transmission and

four distribution companies were created. They managed to reduce transmission and distribution losses from about 38 pct. in 1999 to 26 pct. in 2003 and less than 20 pct. in 2008—in large part through theft control. In the same way, EU accession countries have successfully privatized their distribution companies and reduced system losses to around 10 pct. and earned a decent return on assets (World Bank, 2009).

4. Exporting Electricity to India is a Political Issue rather than an Economic one

Electricity demand in India increases by 8-9 pct. annually (Rijal, P., 2009). It is estimated that by the year 2013, almost 220,000 MW installed capacity of electrical energy will be required in India to cope with the rapidly growing economy. The present installed capacity of India is approximately 171,900 MW. There will be a great gap in demand and supply in near future. India has been importing electricity from Bhutan to meet its increasing demand. India sent a proposal to Nepal to follow similar model for harnessing hydropower potential. However, Nepalese politicians feared losing sovereignty. Nepal could not develop by taking financial and technical assistance of multilateral agencies. As a result, development of hydropower could not take place. However, some Indian private and public companies are interested to invest in hydropower projects of Nepal. Satlaj Jal Vidyut Nigam, GMR Energy Limited, IL & FS have taken licenses to develop mega-hydropower projects like Arun III and Upper Karnali.

What stalls this process, however, is lack of Power Trading Agreement between Nepal and India. In the absence of this agreement, there will be very high risk and investors are not willing to invest in mega-projects that will be able to export electricity to India. Moreover, there is exchange rate risk in Nepalese currency. So, large investments are hardly possible unless the state gives sovereign guarantee and conducts Project Development Agreement (PDA).

There is another school of thought which says that India is more interested in water resource of Nepal which can be used for irrigating millions of hectares of land in India. Electricity can be generated from coal,

thermal power, solar and nuclear energy. However, irrigation can be done only with water. Nepal also realizes the importance of water deposited in hydropower dams which can be utilized for growing crops. If there is a proper agreement in benefit sharing, both countries can be benefitted from harnessing these resources.

Conclusion

In a nutshell, it is true that both public and private sectors of Nepal have failed to meet energy demands of the market although Nepalese water resources have very high commercial value for electricity generation. Nepal is under a grip of a severe energy crisis and a lot remains to be done.

NEA, the representative body of the public sector was unable to meet its target because of massive political interference and lack of accountability from its staff. The domestic as well as foreign private sector could not come forward as expected due to policy level hurdles while going into operation. This has caused constraints not only in regards to the hydropower sector but also in overall development of a nation.

The percentage of Foreign Direct Investment (FDI) has reduced this year in comparison to the previous year according to the data given by Department of Industries. The situation will only keep on worsening if current power shortage is not solved with promulgation of proper policies supported by workable acts. Moreover, there should be an appropriate legal system capable of guaranteeing competent environment with a transparent system so that negotiation can be carried out in a proper manner. Otherwise, the negative perception in people towards the sector will never change. For instance, if price is escalated by only 1 pct. in a mega-project, the increase will amount to billions of rupees in Nepali currency per year meaning that during the entire project period of 35 years, it will amount to trillions of rupees. In an environment where rules and regulations are not transparent and fair, nothing much can be done. Therefore, it is the duty of the government to bring about effective policy, Acts and regulations which will help maintain transparency and sustainability in the field of hydropower development in Nepal.

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References

- Dhungel, K. R. & Rijal, P. (2012). Investment Prospects and Challenges of Hydropower Development in Nepal. Kathmandu: Federation of Nepalese Chambers of Commerce and Industry & Samriddhi, The Prosperity Foundation.
- Gonzalez, D., Kilinc, A., & Weidmann, N. (2011). Renewable Energy Development Hydropower in Norway. Georg Simon Ohm: Norway.
- National Institute for Consumer Research National. Report on the Norwegian Energy regime. Norway: National Institute for Consumer Research.
- Nepal Electricity Authority. (2011). Annual Report 2011. Kathmandu: Nepal Electricity Authority.
- Rijal, P. and Deoja, S. (2009). Hydropower Paper. Kathmandu: Nepal Development Watchdogs and Aegis.
- World Bank. (1998). Mitigating Risks in Power Reform-A New World Bank Lending Approach. New Delhi: World Bank Office.
- World Bank. (2009). Reducing Technical and Non-Technical Losses in the Power Sector. Washington: World Bank.
- World Bank. (1999). Transmission Investment in Competitive Power Systems. Washington: World Bank.

Transport Infrastructure Development: Working Through the Potholes

Introduction

The functioning of transport infrastructure is important to the Nepalese economy. It produces value in terms of transport services bought by both passengers and companies, and is also the underlying condition for a connected society: Businesses, small or large-scale, along with all other sectors rely on transportation for their inputs and outputs. However, many factors negatively influence the economic performance of the sector, and thereby also the national economy. This raises the interesting question of what should be done to alleviate the problems.

The following chapter seeks to illustrate the economic nature of transport infrastructure in Nepal and the existing bottlenecks. Though infrastructure covers an array of areas such as energy, water supply, internet etc., the focus here is solely on transport infrastructure. Furthermore, focus has mostly been given to road transport as this transport mode is the most prevailing in the country.

The infrastructure landscape in Nepal: Road transport dominating...

As a sector of its own, Nepal's transport sector is not as large as e.g. agriculture and industrial production. However, it is an important sector

as it supplies goods produced in (e.g. in agriculture) the rural areas to the cities where the consumers are located.

Nepal's transport sector consists of 3 subsectors: road transport, civil aviation and railway transport. Road transport is by far the largest subsector, accounting for around 90 pct. of the total transport of passengers and freight (Asian Development Bank [ADB], 2001).

In 2010, the road network itself consisted of around 10,000 km of road classified as so-called 'strategic road network' as well as 40,000 km of local road network (National Planning Commission [NPC], 2011). The strategic road network consists of all-weather roads, i.e. also usable during the rainy season. However, only 18,000 km of the local road network are actually not of an all-weather standard which makes much transport very difficult in some periods of the year (NPC, 2011).

...while aviation is starting to take off

Nepal has also witnessed a rapid increase in the subsector of aviation. Though air transportation only accounts for less than 10 pct. of the total transportation volume its growth has been remarkable. Between 2000 and 2009 the subsector witnessed annual growth rates of around 7 pct. and within the last years of this period transportation grew almost 17 pct. per year. (Civil Aviation Authority of Nepal [CAAN], 2010)

A sector addressed by individual policies and plans

The current state of the infrastructure of Nepal is the result of the government's development plans for the sector. Different policies and plans address the subsectors, such as plans for construction of new parts of the existing network, maintenance and broader strategies for long-run development.

An important plan is the Three Year Plan for the period 2010/11-2012/13. With respect to the road network its main goal is to connect four

district headquarters which are still not connected by road, and in general to expand the strategic road network as well as secure maintenance of the infrastructure. It sets out a number of specific projects to be completed.

With respect to aviation, the plan seeks to increase the capacity of seats of international flights to Nepal by close to 90 pct. in order to increase the tourist arrival, amongst other goals. The Three Year Plan builds upon previously formulated government policies, a master plan, an investment plan and a vision paper for the sector.

Holes in the landscape

In short, Nepal is a country where locations are connected by roads, but where their quality is often low. More specifically, a number of problems characterise the national infrastructure, both at the road level and at the administrative level. The problems have turned into heavy challenges over the years that have an effect not only on the transport sector itself, but also on the other sectors that are increasingly dependent on effective transportation.

Lacking asphalt and maintenance

First and foremost, the high proportion of roads that are not motorable throughout the year is a major obstacle to the transport sector and thereby to the Nepalese economy in general. The majority of roads are either gravel road or unpaved, and even on the Strategic Road Network (SRN), at the end of the Three Year Interim Plan (TYIP) (2007–2010), only 55 pct. of the SRN roads are paved with bitumen or gravel (NPC, 2011). It has made Nepal one of countries in the world with the highest proportion of the population with no access to motorable road.

In addition, the road network is often in a critical condition. For e.g. the 'Annual Pavement Surface Condition Survey' by the Department of Roads carried out in 2011 has concluded that 30 pct. of the urban roads need urgent repair. As a consequence, the efficiency of road transportation

services is very low. This is reflected in the fact that transportation costs are high in Nepal compared to other countries in the region. A study on Nepal's development constraints (ADB, DFID & ILO, 2009) found such additional costs to average 25-30 pct. Yet, these elevated costs also reflect other issues, such as the existence of transport syndicates and strikes. When roads are not maintained at all, these roads are actually lost as physical assets, something that will happen to many parts of the road network if the challenge of poor maintenance is not dealt with.

In addition to the physical wear-out of infrastructure the lacking maintenance also leads to accidents, and road fatalities are unfortunately an important component in the description of the road transport sector. In 2009/10 close to 12,000 accidents were reported. There has been an increase in this figure over the years. In 2006/07 around 4,500 accidents occurred, which equals a growth of more than 150 pct. (Sharma, 2011)

Under-financed projects

The Three Year Plan has set out concrete goals for how the development of the transport sector should be carried out. However, a comparison between the resources needed for the Three Year Plan and actual funds allocated via the annual government budget reveals that only 56 pct. of the needed resources have been secured.

This under-financing is also documented by estimates showing that there is an investment need into infrastructure of 2.5 pct. minimum of Nepal's GDP, if economic growth of 6 pct. p.a. should be maintained (ADB, DFID & ILO, 2009). Yet, only around 1 pct. of GDP is assigned to this sector (Pande, 2009).

Resources into the wrong holes

In addition, this inadequate sum of money has not been administrated very well by the road agencies in charge of managing the resources. Often, the funds are not being used on what has been planned in advance, but are

being diverted to non-planned activities by the end of the fiscal year. An example is that a local area suddenly is equipped with a new road that was not anticipated beforehand. A consequence of this is that many low-quality roads are constructed without being part of a longer-run policy vision and at the same time important existing roads are not maintained or developed as planned, or anticipated new roads do not materialize.

Where is the general master plan?

Exactly such a longer-run policy vision is non-existent at the moment. The “strategy” behind the construction of new infrastructure so far seems to have been a principle of connectivity, i.e. to connect as many isolate locations to the existing network as possible. However, as no master plan for investment in infrastructure has been developed, integration and coordination with other policy areas, such as industrial policy, has not been taken into account. The result has been that some of the new roads have been used so little that the investment has turned out not to be economically beneficial.

Dominance of transport syndicates

A well-functioning transport sector is also obstructed by syndicates, mainly by non-competitive practices and route monopolies. This has hit private as well as commercial vehicles, and the result has been rising commodity prices on consumer goods, falling quality of transport services, and an increase in the number of accidents due to over-utilisation of vehicles. Despite existing laws banning route monopoly the government has not taken steps to implement or enforce these directives, and the situation has thus been aggravated.

The unused potential of the private sector

Another challenge for infrastructure development is that the private sector is currently not part of the government efforts to improve the sector’s

performance. International experience with public-private partnerships (PPP) in the transport sector has shown positive results, such as better use of financial resources, more efficient management of the infrastructure, better risk sharing, etc.

Nepal has already enabled the use of PPP by a number legal instruments, but so far only few project proposals have been developed and not a single project has been directly initiated. This can be attributed to a lack of political will to solve a number of constraints to private sector engagement.

The government has established a project coordination committee to suggest new projects and coordinate their implementation. Yet, the committee is not capable of taking the necessary timely decisions on a day-to-day basis and there is very little capacity and expertise on the PPP area, within the transport sector as well as in other sectors.

The newly established Nepal Investment Board has been given a mandate to point out specific large-scale investment projects. However, the board does not currently address PPPs in its identification process which would otherwise roll out the engagement of the private sector in the infrastructure sector.

Challenges need the right solutions

It is clear that the roads of Nepal are paved with challenges and it will require a number of well-designed solutions to solve the problems.

More resources to be spent on well-planned and well-managed infrastructure

A logical first step to improve the poor functioning of the transportation sector is to allocate more resources to infrastructure. A minimum of 2.5 pct. of GDP must be ensured to be spent on the transport sector budget to generate over-all economic growth of 6 pct. p.a. in Nepal.

But it does matter where and how the financial resources are spent. It will be necessary to increase the economic viability of the road network. Roads that are underutilized today should be transformed into important traffic corridors and this step must already be taken in the planning phase of the specific infrastructure project.

In addition to a thorough planning phase, it is also important that infrastructure is treated as asset management where funding is set aside to repair the roads and strict monitoring of road condition and maintenance needs is taken up. Moreover, measures of guaranteed service to road users should be applied.

The problem with syndicates obstructing fair competition should be solved by government action, enforcing the already existing legal framework to avoid such syndicate practice.

Priority to alternative transport modes

Similarly important is a new approach to development of alternatives to the road transportation mode. Other modes such as air and waterway transportation modes could be established where such modes are not in competition with the road network, but can supplement the roads in an economically viable manner.

Engagement of the private sector by making PPP work in practice

Besides the government allocating additional funds to infrastructure development, it could partly be a solution to engage the private sector in contributing to the current financing gap. This requires, however, that guarantees are issued against policy instability, arbitrary action and decision-making by any government as well as against insecurity about company asset ownership.

Even though such factors are secured a project might not be economically viable since the final infrastructure users might not be able to

pay the required road tolls. Other countries have introduced the concept of Viability Gap Funding (VGF) whereby the government covers the funding of such gaps. The result is an acceptable road toll for the road user and an acceptable rate of return for the engaged private sector partner. The government should therefore apply the use of VGF where necessary, based on a clear VGF strategy.

At the same time, a project bank should be established and mandated to facilitate the private sector in designing and developing the projects. The project bank could also coordinate the actions taken by the individual ministries dealing with PPP. A government committee that can take short-term or day-to-day decisions on PPP activities would also allow PPPs to work in practice.

Conclusion

Transport infrastructure, especially road infrastructure, is an important part of the Nepalese economy, yet, the sector is far from being as effective as its potential would allow. Resources for construction and maintenance are too scarce and project allowances are often not spent on what they were targeted at. At the same time, transport syndicates are involved in anti-competitive behaviour and raise transportation costs by their practice, while the government has not secured the conditions for private partners to take part in the development of the infrastructure.

Much remains to be done in this sector, and it can be done as suggested above. If the mentioned solutions are taken up it would benefit both the sector itself and the economy as a whole, because all other sectors are highly dependent upon smooth transportation systems.

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This article is the summary of key findings and recommendations of the detailed report "Private Sector Participation in Transport Infrastructure Development in

Nepal” prepared by Mr. Kamal R. Pande and Ms. Sarita Sapkota for the Nepal Economic Growth Agenda (NEGA), Report 2012 published by Samriddhi, The Prosperity Foundation in partnership with Federation of Nepalese Chambers of Commerce & Industry (FNCCI).

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References

Asian Development Bank. (2001, November). Report And Recommendation Of The President To The Board Of Directors On A Proposed Loan To The Kingdom Of Nepal For The Road Network Development Project. Retrieved April 09, 2012 from http://www2.adb.org/Documents/RRPS/NEP/rrp_29472.pdf on

Asian Development Bank (ADB), Department for International Development (DFID), & International Labour Organization (ILO). (2009). Country Diagnostics Studies. Highlights. Nepal: Critical Development Constraints. Retrieved May 21, 2012 from http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-kathmandu/documents/publication/wcms_119189.pdf

Civil Aviation Authority of Nepal. (2010, December). Civil Aviation Report 2009-2010. Retrieved May 18, 2012 from http://www.caanepal.org.np/publication/CivilAviationLayoutReport_2010.pdf

National Planning Commission. (2011, June). Three year Plan (2011-13). Retrieved April 03, 2012 from http://www.npc.gov.np/new/uploadedFiles/allFiles/TYP_2012.pdf

Pande, K. R. (2009, March). Challenges and opportunities in up scaling Infrastructure in Nepal. Paper presented at the TCDPAP & FIDIC/ASPAC Conference in Kathmandu, Nepal. Retrieved May 18, 2012 from [http://scaef.org.np/conference/conference/pdf/Session-3/3._Role_of_Consulting_Industry_Kamal_pande_Final\[1\].pdf](http://scaef.org.np/conference/conference/pdf/Session-3/3._Role_of_Consulting_Industry_Kamal_pande_Final[1].pdf)

Sharma, K. K. (2011). Status Paper on Road Safety in Nepal. Presented on the Fourth meeting of the Working Group on the Asian Highway and Export Group Meeting on Progress on Road Safety Improvement in Asia and the Pacific Bangkok, Thailand, 27 to 29 September 2011. Retrieved November 09, 2012 from <http://www.unescap.org/ttdw/common/Meetings/TIS/EGM-Roadsafety-2011/Status/Countries/Nepal-2010-Status.pdf>

Transport Infrastructure Development for High Economic Growth of Nepal

Birendra B. Deoja

"All great ideas go through three stages: In the first stage they are ridiculed. In the second stage, they are strongly opposed. And in the third stage, they are considered to be self-evident."

- Nineteenth century German Philosopher Schopenhauer

Historical Background of Transportation Development in Nepal

The introduction of a modern transportation system in Nepal can be traced back to the 1920s. It started as an integrated transportation system, for example, the 47 km long Amlekhganj-Raxaul Railway started in 1927, 14 mile long Dhursing-Kisipidhi Ropeway started in 1927, 42 km long Bhimphedi-Amlekhganj Road started in 1929, and 51 km long Jayanagar-Janakpur-Bijalpura Railway started in 1935, etc. The vision for the transportation system at that time was probably limited to allowing access for imports of goods to Kathmandu from abroad and transportation of forest products such as timber to the British India.

Planned development started with the advent of democracy in 1950. The first Five Year Plan was prepared for the period of 1956-1961. The Regional Transportation Organization (RTO) was formed in 1958 under a tripartite agreement between Nepal, India and the United States. A network

of routes was planned and tracks were cut in the routes in several regions of the country, but the RTO was dissolved in 1961 without much progress.

Road development in the Panchayat era from 1961-1990 was focused on connecting the east and the west of the country in the southern belt and in the mid-hills, the Chinese border in the north, and the district headquarters in all the 75 districts. Airports were planned for the remote areas of the country.

With the revival of democracy, road planning and development during 1990-2005 generally followed the approach of the previous plans, but the demand for accessibility grew much bigger and the rate of road construction increased considerably. As a result, the motorable road length increased from about 7,000 km in 1990 to about 44,000 km in 2010. Thus, the average rate of road construction jumped from 188 km per year in the period 1956-1990 to 1,850 km per year in the period 1990-2010. The rapid increase in the road network was associated with the poor quality and low standards which is clear from the fact that only 6,304 km road is paved and almost all local roads are of bare minimum motorable standards¹.

There is no doubt that the efforts of the past several decades have contributed to the overall development as is evident from the increase in the Human Development Index (HDI) from 0.242 in 1980 to 0.458 in 2011. Transportation systems have been instrumental in this improvement. Besides, mobility from east to west and north to south within the country has been a major factor for national consolidation. Despite this progress, Nepal was ranked 157th out of 187 HDI countries as of 2011². The regional average of South Asia was 0.548 in 2011³. The information technology revolution and visible effects of the rapid development of the giant neighbors, China and India, have dramatically raised people's expectations. Nepal has therefore much to do in order to alleviate poverty and march towards prosperity. The gap between expectations and delivery—and between the

1 Three Year Interim Plan 2007/08-2009/2010, Three Year Plan 2010/011-2012/13

2 Nepal Economic Growth Agenda (NEGA), Report 2012

3 Project Overview 2010 and 2011. Nepal Rastra Bank Enhancing Access to Financial Services (EAFS) Project

rich and the poor—is increasing. How effective the traditional approaches to infrastructure development in reducing such gaps are and what the way forward in terms of infrastructure, particularly in the transport sector, is, are questions that must be in the minds of many Nepalese. This paper tries to address these concerns, primarily based on personal experience and the opinion of the author.

Current Trends in Transport Infrastructure

Each subsector has experienced its own development trend:

For strategic roads, road planning in the 10th five year plan of 2002-2007 and the successive three year plans of 2007-2010 and 2010-2013 has mainly focused at connecting all district headquarters, completion of a mid-hill east-west highway, construction of north-south highways, construction of feeder roads, upgrade of existing roads, and periodic maintenance of existing roads. The three year interim plans have, as main priority, included the implementation of eight north-south routes aimed at facilitating the India-China trade transit. The Kathmandu-Terai Fast Track has been mentioned in both the three year plans. By the end of 2010, the total length of the strategic road network was 19,968 km.

For local roads, the development started with the Agricultural Perspective Plan 1997 (APP) and with the establishment of the Department of Local Infrastructures Development and Agriculture Roads (DOLIDAR) under the Ministry of Local Development. The total length of local roads by the end of 2010 was 24,000 km⁴. Road density in Nepal in terms of area and population is very low compared to most countries of South Asia. Therefore, the strategic roads and local roads network will keep increasing for quite some time and it is neither possible nor desirable to try to curb the local demands for accessibility. It may be noted that additional new road length is increasing in every plan period at a higher rate than the rate contained in the APP.

4 Three Year Plan 2010-2013

For civil aviation, air transportation has not been included in the general planning of the transportation sector. The area has been a part of the Ministry of Culture, Tourism, and Civil Aviation for a long time. The main objective of air transportation has been stated in the five year and three year plans as development of tourism and support to the economic development of the country. In the civil aviation sector, the growth trends for both the domestic as well as international aircraft and passenger movement have been encouraging⁵. By the end of 2011, the total international passenger movement at the Tribhuvan International Airport (TIA) in Kathmandu reached 2.7 million and domestic passenger movement reached 1.58 million. The Civil Aviation Authority has been operating with profit since the fiscal year 2003-2004, with a total revenue of NRs. 2.72 billion in the fiscal year 2010-11.

Sustainability of the Transportation System

For the strategic roads, the annual budgets for improvement, rehabilitations and periodic maintenance of Strategic Road Network is generally below the required levels. Even though Roads Board Nepal (RBN) has been established, the maintenance allocation to the Department of Roads and RBN is generally ad-hoc. A sustainable institutional arrangement and application of a systematic maintenance management system is yet to take place in Nepal. It is generally believed that road maintenance is not self-sustainable in Nepal. This is not true due to the fact that i) proper optimization of life cycle costs by balancing of design standards with the traffic levels will economically justify roads even for 20 vehicles per day traffic, and ii) calculation of total revenue from fuel tax, spare parts tax, vehicle tax, toll charge, and all other taxes relating to the vehicle and use of road will show that the total revenue from roads exceeds the total costs required for proper maintenance. For example, the total revenue from all taxes relating to the roads and vehicles in the year 2004-

5 Civil Aviation Report 2009, 2010, 2011: The trend of average annual movement of air traffic in the past 12 years has been 7.14 pct. for domestic passenger movement 12.87 pct. for international passenger movement, 7.68 pct. for domestic cargo movement, (-) 1.7 pct. for international cargo movement, 3.42 pct. for domestic aircraft movement and 15.1 pct. for international aircraft movement.

2005 was 6.3 billion rupees while the total maintenance budget allocated in the same year was 2.259 billion, and the total estimated requirement for maintenance, rehabilitation and upgrading, including upgrading of local roads, was about 6.9 billion rupees⁶.

For local roads, the DOLIDAR database has shown that the total rural road network for the fiscal year 2011-2012 consists of 50,943 km though the three year plan 2010-2013 aims at a total of 27,000km of local road. For local roads, the notion of maintenance is confusing because most of the budget requirements are for upgrading of the motorable tracks. Annual budget requirements for upgrading the motorable tracks to properly engineered roads in a conventional sense, is enormous and it cannot justify the levels of traffic and economic considerations. Nevertheless, more than 1,000 km of new dirt road is added to the local road network every year. Sustainability considerations therefore require that a concept of phased upgrading and low cost maintenance standards should be developed specifically for local roads based on traffic levels.

For air transportation, the Civil Aviation Authority (CAAN) of Nepal has proved that it is sustainable, provided that the government does not dictate CAAN to invest in the construction of low-traffic, remote area airports and regional and international hub airports. Construction of new international airports requires a huge level of investment and the gestation period is very long. Such ventures, if looked as a long term vision, must be limited to a minimum number rather than being based on political, emotional or religious considerations and these ventures must be undertaken by a separate organization under government interventions.

About 20 domestic airports are not in operation because of factors such as affordability among local people, lack of tourist traffic, unwillingness of the private sector to operate in the remote areas, and the lack of subsidy for remote area air transportation by the government. Such airports and minimum air service to these airports must be subsidized by

⁶ Institutional Development Study, Transport Connectivity Sector Project, August 2005 ADB T.A. 4347-NEP

the government because they are outside the cost recovery principles of CAAN and the private airlines.

The Vision Paper 2007 for Transport Infrastructures includes ambitious programs such as the east-west railway line in Terai and Raxaul-Kathmandu-Lhasa railway line, waterway to Kolkatta, ropeways to link some tourist destination in the mountains and in the Himalayas, alternative transport routes such as electric railway lines, fast track to connect Kathmandu with Terai, and a transit route between India and China by constructing a network of north-south roads. Out of these programs, the Kathmandu-Terai fast track is the only tangible high impact project warranting immediate attention.

Providing link roads of bare minimum standards in six out of eight proposed road connections to China could be feasible, but planning eight north-south transit corridors for the India-China trade is fantasizing because the terrain is formidable for the high standards required, the minimum traffic level required is uncertain, and the overall savings in the life cycle transportation cost is not well understood. Opening the Rasuwa-Syaprubesi link and improving the existing Kodari road are the most we can plan realistically.

Long distance ropeways and waterways are not feasible in the foreseeable future because of high initial costs and technical difficulties in operation. A waterway study carried out in 1998⁷ showed the need for much dredging and river training annually in the 400 km stretch from Tribeni to Patna of Gandak River in India.

The government's commitment to high impact infrastructures is clear from the emphasis laid on the fast track, second international airport, railways, and major hydropower projects in the National Planning documents, the Investment Board Act, and the Income Tax Act amended in 2010. Yet, the issues of design and cost estimation and procurement processes have created more uncertainties, controversies and delays.

⁷ Detailed Techno-economic feasibility Study of Inland waterway Transport System on River Narayani, Feb 1998 by NEPECON and RITES.

The Need for High Impact Transport Infrastructures

Past experience has shown that while the trend of road development shall generally follow the earlier plans and the ongoing three year plan, the focus on transport infrastructures that would really trigger high economic growth is not adequate in these plans. Obvious infrastructure such as the Kathmandu-Terai Fast Track and the New International Airport at Nijgadh are a must. The Kathmandu-Terai Fast Track saves 150 km of distance for every trip to Terai from Kathmandu. Fuel saving shall be about 0.5 million litres per day in the first year to about 1.5 million litres per day after 20 years. These two infrastructures are the only hope for opening up windows of opportunities for high economic growth in Nepal. Only then the government would be able to spend the surplus earnings on major infrastructures and economic activities in other parts of the country.

Combined the domestic and international tourist movement give an average of about one aircraft take-off in every 5 minutes which during the peak time would be about one take-off every 2 to 3 minutes. TIA is now saturated due to limited air space and a single runway, both of which are beyond mitigation other than going for a second international airport urgently. The fact that the international air cargo is declining suggests that the goods transport by air is getting expensive and Nepal's export-import is not dealing much with high value goods. Nijgadh International Airport is the only practical alternative for making tourism a hope for economic growth of Nepal through unlimited tourist potential and reliable and cost-effective transport of international air cargo. Several studies and a decision process lasting for over a decade have already been expanded in the planning of this international airport.

Impediments to High Impact Road Construction

Donor Factor

This represents one of the major impediments as donor agencies do not normally support high cost infrastructures outside the traditional 15-20 years' analysis framework. The consultants employed by the donors

find the feasibilities within the narrow scope of their terms of reference and resist any demand of the host country for visionary projects. It is easy to think of the East-West highway, the Arniko highway, the Dhangari-Dandeldhura road and the Kathmandu ring road. None of these projects would have come into existence if the expected internal rate of return was the overriding criterion at the time. Today, we cannot imagine what would have happened if these roads were not there. Moreover, project justifications based on economic feasibility studies at the time of appraisal are mostly ill-fitted when the feasibility analysis is rerun with the overrun cost and time after actual implementation.

Traffic factor

There exists a tendency to underestimate the existing traffic and the growth rate of traffic on trunk roads in Nepal. It may be noted that truck traffic occupies a major share of the traffic and each 12 ton truck is equivalent to at least three cars in terms of volume and about 250 cars in terms of pavement damaging power. The traffic volume on the Kathmandu-Mugling-Hetauda road has already crossed 10,000 Average Daily Traffic (ADT) with growth rates more than 10 pct. per year and is good enough to recover the costs and the interest on loans within 15 years. Traffic forecasts do not generally take into account the sudden high growth by the surge effects in some crucial projects.

Design factor

Clarity is essential in the designs, standards and conditions of the concession agreements before either party makes commitment in the concession agreement⁸. The government must be prepared to spend money on the concept designs of highly complicated elements of the road before negotiations are initiated. Various combinations of tunnel length, cutting height, wall height, and bridge height must be evaluated to develop an

8 For example, highway tunnels costs range from US\$ 50,000 to 300,000 per meter, long tunnels in grades may cause ventilation risks, high slope cutting may cause landslide risks and severe road blockages, long grades in excess of 3 pct. reduces the speed of loaded truck to 42 kph or less.

optimum design in the difficult mountain terrains. The most important factor is the vertical gradient which must not generally exceed 3 pct. in order to maintain a minimum speed of 50 kph for loaded trucks. The main objectives are i) to lower the cost of transportation of goods to and from India to a level that would be at par with the cost of transportation on the national highways in India, and ii) to link Kathmandu with the second international airport at Nijgadh via the shortest possible distance and the minimum amount of travel time. This will also contribute to the viability of the India-China trade transit corridor.

Cost Factor

The cost factor also represents an impediment. At present, the Kathmandu-Nijgadh-Pathlaiya Terai Madhes expressway (KNPTME) is estimated to cost around 70 billion rupees and the Kathmandu-Kulekhani-Hetauda fast track (KKHTR) is expected to cost around 22 billion rupees. These figures cannot be relied upon because the costs of a tunnel alone for a four lane road will be at least in the range of about 100,000 dollars per meter which implies that the cost of 1.4 km tunnel is US\$ 140 million and the cost of 3 km tunnel is US\$ 300 million. Anomalies in standards, designs, costs, and procurement processes and documents must be cleared by development of concept designs and draft concession agreements through a continuous team work of a high-level body of professionals of proven experience and standing.

Competing Fast Tracks Factor

Another factor is related to competing fast tracks. Delay in the progress of the Kathmandu-Terai fast track has now resulted in a situation that needs to implement two fast tracks: the Kathmandu-Nijgadh-Pathlaiya expressway and the Kathmandu-Kulekahni-Hetauda tunnel fast track. Increasing investment demands, decreasing revenue streams, and creating unhealthy competition and mutually killing effects are the risks, if both projects are to come into existence simultaneously. Having two fast tracks will increase the concession period and the amount of government grant as

equity support. Yet, on a positive note, the higher the numbers of efficient roads, the higher the robustness of economic growth. Sharing the cost for common sections of the road, sharing the risk of road closure by allowing traffic on alternative routes, and reducing the standards on one of these roads are possible measures for a win-win situation for the simultaneous implementation of the two mentioned roads.

A budget/funding factor

It also acts like an impediment. The total cost of construction for Kathmandu-Nijgadh-Pathlaiya Terai Madhes expressway and the Kathmandu-Kulekhani-Hetauda fast track would be about US\$ 1.5 billion. Assuming 30 pct. equity support from the government and 6 years of construction, the annual funds required would be about US\$ 75 million from the government and US\$ 175 from the private sector. The annual budget figure would be about US\$ 150 million from the government and US\$ 350 million from the private sector, if Nijgadh International Airport is also included. A government grant is necessary, not only to fill up the viability gaps, but also to increase the confidence of private investors in the government commitment.

Export Import Bank (EXIM Bank) loans and Engineering, Procurement and Construction (EPC) Contracting are an alternative, but these arrangements are vulnerable to high initial costs due to the lack of adequate competition in the procurement process and the passing on of design and cost risks to the EPC contractor. Besides, the risks to efficient operations and revenue collection are high in both the cases, specifically to the government agency undertaking the project or to other private agencies being contracted separately.

Stake factor

The stake factor is also central. The hope of the government that the private sector shall assume all the risks and come up with a long-term commitment of investing several hundred million dollars on the basis of

a license that does not involve any stake of the licensee is expecting too much. Past experience in Nepal has shown that, in many instances, the licensee either disappears from the scene after some time or after obtaining excessive reimbursements of his unsuccessful studies, or he sells the license at a windfall profit or tries to pass much of the risk to the government through an unbalanced concession agreement. Therefore, the government must require adequate bid security⁹ and performance security for bidding and signing the contract. The negotiation of the concession agreement¹⁰ of both the competing roads should be done simultaneously so that they are truly complementary to each other.

Capacity factor

In the unstable political environment of Nepal, the CEOs are at extreme pressure from the political top and the unionized bottom. In addition, there is a social pressure, typical for South Asia, from friends and relatives. Experience in Nepal has shown that no matter how much training is given, how many staff are added or how many international consultants are provided, the output remains marginal and ethical behavior keeps eroding. Proactive, honest and daring CEOs, performance-based incentives, unconstrained logistic supports, freedom from undue intervention, built-in flexibilities, and high organizational morale are a must to enhance the capacity meaningfully. The functioning of the oversight and anti-corruption agencies is eroding the decision environment. Too frequent interventions on petty matters or complaints should be avoided. Their approach should be more preventive than curative.

9 Guidelines for PPP, Model RFP, Planning Commission of India : The Bid Security shall be an amount equivalent to 1 pct. of the Estimated Project Cost. However, the Authority may, in its discretion, prescribe a higher Bid Security not exceeding 2 pct. of the Estimated Project Cost. In case of a project having an Estimated Project Cost of Rs. 2,000 crore or above, the Authority may, in its discretion, reduce the Bid Security, but not less than 0.5 pct. of the Estimated Project Cost in any case.

10 Model Concession Agreement of the Planning Commission of India, 2011 requires 5 pct. which may be returned after 1 year of the signing of concession agreement and the date of financial closure or earlier if more than 20 pct. of the project cost is expended.

Legal factor

Legal factor also constitutes an impediment. Public Private Partnerships (PPPs) started with the enactment of the Electricity Act in 1992 for survey, production, transmission and distribution of electricity by private parties on the basis of their proposals. An Act on PPP and Build-Operate-Transfer (BOT) was enforced in 2006 with the intention of an umbrella Act. This was followed by the Rules for Private Finance in Build and Operate of Infrastructures in 2007. Unfortunately, the rules have not captured the spirit of the Act. Evaluation criteria are made unduly rigid, bid security has been confused with performance security, and the room for direct invitation for bid or request for proposal on projects already containing the feasibility study or detail design have been misinterpreted.

Lack of commitment to institutional objectives and long-term business plans

The Civil Aviation Authority of Nepal (CAAN) was created to run the regulatory aspects and airport operational aspects under commercial principles. The new international airport, the regional international airports, and many of the remote area airports cannot fall under CAAN's cost recovery principles because subsidy is not their organizational theme and the revenue stream cannot meet the cost stream. The visionary projects must be taken up by the government under separate organizations. CAAN or any other organization will crumble if the government keeps on giving instructions to invest or absorb costs of activities that are outside the sustainability principles and predetermined long term business plans. CAAN is in a process of reorganizing separate regulatory and operational functions. Ideally this is justified, but realistically the flexibility of resource sharing and knowledge and skill updating in a composite organization, particularly in the budget constrained environment, would be more fruitful for both the functions. Singapore Civil Aviation Authority has functioned very well under the composite system. Civil Aviation Safety Authority, once it is separated from the airport operations, cannot have sufficient resource of its own to update the knowledge, and motivate the safety officials

adequately. The job scope, job depth, and job enrichment of the safety organization shall be negatively affected by the separation.

Public Private Partnership (PPP) for Infrastructure Development

There is a need for strictly following an umbrella Act on PPP. PPP or BOT practice started in Nepal with the Electricity Act 1992, but the transparent and competitive bidding process has not yet started to invite PPP or BOT proposals on hydropower projects. As a result there is a great mismatch between the numbers of licenses issued and the amount of actual power produced. The rate of hydropower production has therefore been very low due to license holding and investor hunting practices¹¹. “*Jhola ma Khola* (river in bag)” is a popular saying for the license holding culture in the hydropower sector in Nepal.

There has been no progress on PPP-based road projects. Despite the Private Financing in Build and Operation of Infrastructures 2063 (2006) Act and the emphasis on PPP in the National Transport Policy 2058 and BOT Policy 2057, there has not yet been a single project in the transport sector built or being built under PPP or BOT.

Direct negotiation in PPP is believed to be essential for fast tracking, but the vested interest of license selling companies have introduced many uncertainties, delays and additional costs for the real investors. Despite the umbrella Act, the PPP for hydropower is still guided by the 1992 Electricity Act which does not require competition. The Investment Board Act 2010 is another regulation providing for unsolicited proposals from investors for large infrastructures or service industries. There are provisions in the BOT Act and in the Investment Board Act for direct negotiation for projects costing more than NRs. 2 billion. Such provisions are against the

11 In the last 20 years, the hydropower production by Independent Power Producers (IPP) under PPP/BOT process has been 26.7 percent of the total hydropower production of 652 megawatt. The planned IPP production is only 11.6 percent of the total hydropower production planned of 1510 mW (NEA Review Report 2010/11).

spirit of transparency and competition and they make a fair procurement very difficult. The net outcome of non-competitive practices is a loss of credibility and eventually more delay.

Also, there is a lack of model concession agreements. Standard bidding documents including model concession agreements for various sectors and sizes of work need to be developed before any bidding documents can be prepared for invitation of bids for PPP projects. The concession agreements must clearly provide for sharing of political, semi-political and non-political risks between the public and the private parties. Land acquisition must be the government responsibility except for minor cases. Financial risks can be passed on to the private sector only if land acquisition and other political risks are fully taken by the government.

Conclusion

High impact projects have been conceptualized for many years, but the degree of commitment, persistence, and the boldness in their urgent implementation on the part of the engineers, sector leaders, and the politicians have generally been low. Visionary projects such as Kathmandu-Terai expressway and Kathmandu-Hetauda fast track, and Nijgadh International Airport are high economic impact projects and must be treated with utmost national priority for their completion within the next 5 to 10 years under PPP programs with 30 to 40 pct. equity support through government grants. The government must take the responsibility for land acquisition and Environmental Impact Assessments (EIAs) of all PPP projects. Sharing of political risks, non-political risks, and semi-political risks between the private sector and the government/public sector must be made in a judicious way.

Overspreading of resources on several wish-lists and high cost infrastructure projects, such as more than one north-south trade transit route, large waterways, long ropeways, and several railways, must be avoided.

Institutionally, the transportation agencies are open-ended in scope, tied down in resources, and dictated in petty matters by the government ministries. Roads and airports operation and maintenance agencies cannot provide a high level of service under such constraints. Mixing of new programs for subsidy infrastructure with the operation and maintenance programs for existing infrastructure has distorted the principles and practices of charge mechanism, cost recovery and sustainability. Such infrastructures are best handled under commercial principles. Major infrastructure requiring government loans, guarantees, and subsidies are best handled by separate entities created specifically for them. Capacity building and institutional strengthening are a function of the clarity of the business plan and decision environment and must go together with the implementation rather than making it a precondition.

The net outcome of non-competitive practices in any procurement, including PPP projects, is a loss of credibility of the procuring agency that eventually results in a delayed and distorted project. All PPPs/BOTs must be guided by one umbrella Act and standard bidding documents including model concession agreements. Procurement processes for large public infrastructures must not go outside the competitive and transparent processes. Unsolicited proposals must generally be avoided.

Private Finance in the Build and Operation of Infrastructures 2063 (2006) Act and the Rules 2064 must be reviewed and amended, in order i) to make them flexible for direct invitation of financial bids, ii) to make provisions of flexibility for job-specific evaluation criteria, iii) to require adequate bid security and performance security, iv) to make the risk sharing judicious, and iv) to remove the anomalies in direct award provisions and transparency and competition principles.

All PPP/BOT projects must be processed through a dedicated High-Level Committee of Experts and Professionals (HLCEP) in the field of infrastructure design, procurement, project/construction management, dispute settlement, contract drafting, and PPP practices on a continuing

Critical Constraints to Economic Growth of Nepal
analysis & recommendations on 5 sectors

basis. The HLCEP must be given a list of projects and targets for their procurement.

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Realizing the Potential of Tourism: Beyond the Bottlenecks

Introduction

Nepal has for over 5 decades received an increasing crowd of tourists, inspired by both the nature and the culture that the country has to offer. The sector is relatively small compared to other sectors as a contributor to the total production, but it is economically important because it has a very large growth potential. This is not least due to the fact that the number of tourists from neighbouring countries such as China and India are expected to explode in the years to come.

The Nepalese tourism sector has come a long way to cater to the inflow of tourists, but a further look at the industry reveals that there are serious bottlenecks to its development.

This article delves into Nepal's tourism—its economic status and future potential as well as the major obstacles that influence the stay of tourists from their arrival till departure.

Small industry, but bright future

As a contributor to Nepal's total GDP the tourism sector accounted for 3.2 pct. in 2010 (World Economic Forum, 2011). Though this might not seem to be much compared to sectors such as agriculture, the sector is

important due to the positive prospects for future tourism sector growth, as the number of global tourists is on the rise.

Also, it is striking that each visitor spends US\$ 65.5 per day in Nepal, while at the same time the GDP per capita is around US\$ 2 per day (National Planning Commission, 2010).

That the sector is destined to gain importance for Nepal in the future is also emphasized by the fact that the Chinese market for outbound tourism is rising and that Indian tourists traditionally have visited Nepal and are expected to do so even more, as a result of the fast-growing Indian economy. Furthermore, there is a great potential for tourists from these markets as Nepal at the moment only accounts for a small fraction of the countries' outbound tourists, namely, approximately 1 pct. of China's and 6 pct. of India's outbound tourists.

The sector is therefore characterized as already being economically important and by having a great potential for further growth.

The expensive airport

The potential for the tourism industry is, however, threatened by a number of critical factors that do not work in favour of economic growth. One important obstacle is the performance of the Nepal Airline Corporation (NAC). As almost 90 pct. of all visitors pass through this port of entry it has huge implications on tourism if the operation of the airport is not at its best.

The operations of NAC have indeed proven inefficient and therefore constitute a bottleneck in the development of the sector. For example, many years of economic losses have led to very few direct connections to regions where the potential for tourists flying to Nepal is large. NAC has therefore not been able to establish direct flights from North-America, Europe and Australia, and this keeps the number of tourists to Nepal lower than it could have been.

As the only Nepalese international carrier it also is a problem that NAC does not generate profits which would benefit the Nepalese economy and stimulate further economic activity within and outside the tourism sector.

The operations of a state-owned national airline company also have effects on the performance of one of the most important hubs for the flow of tourists in and out of Nepal. The Tribhuvan International Airport (TIA) handles many in and outbound tourists daily, but due to the ground handling monopoly of NAC the airport applies high fees to the international airlines that want to operate.

The cost issue, together with other issues, has led to a situation whereby a number of important international airlines such as Lufthansa and Singapore Airlines have decided to terminate their flights to Nepal, leaving the country out in their international transport network. The number of tourists could therefore be significantly higher if these international airlines were operating in Nepal.

Nowhere else to land

Yet, the airport-related obstacles cannot just be blamed on the functioning of TIA as they are also existent due to the lack of airport alternatives. As of now, tourists are forced to land in TIA. Even though Pokhara is a popular visiting site tourists do not have the option to fly directly to this destination as the airport has not been developed to meet standards that apply to international airports. Similarly, there have been proposals on developing an airport in Neejgadh, but no concrete actions have been taken.

Lack of travel information

Problems follow the tourists as soon as they land in Nepal. It is often the case that they are not well informed about what the country has to offer its international visitors. It could be argued that they should be

informed about Nepal as a travel destination even before they enter the country. Especially, it is critical that Nepalese authorities have not been able to inform foreign governments about the actual political situation in the country and thereby the travel conditions for visitors. Travel advisories were issued during the Civil War of 1996-2006, but some of these are still used despite the changed situation of today. Foreign countries have, as a consequence, issued travel advice focusing mainly on the unstable political situation of the country after 2006 without promoting the assets making the country a travel destination, and that has restricted the number of tourists coming to Nepal.

Risk of limited mobility

After having arrived at their hotels tourists might find that labour unions have forced hotel owners to shut down facilities or that the same unions have called strikes at the hotels. Such strikes, in addition to the more general strikes taking place across entire cities and transportation corridors, do not provide tourists with a positive image of Nepal as a travel destination, nor do they attract potential investors.

Other problems for a thriving tourism industry

In addition, other problems pertaining to the tourist sector can be identified. The existing tourist spots have not been supplemented with new spots, and rural destinations containing a potential for receiving visitors have not been developed.

The government established a Tourism Board in 1998, but political intervention has interrupted its work and made it difficult to facilitate the cooperation between the public and the private sector as it was supposed to. Therefore, much bureaucracy still applies when private developers start up investment projects within the tourism sector.

Much work is also lacking in respect to analyzing and planning for the future economic development of the sector. It is not clear how much

growth in terms of revenue and employment could be generated if a given investment project was initiated. Whole new strategies for specific tourism areas, like quality-based tourism and eco-tourism, could be better planned for if prior analysis work based on a solid collection of data statistics could be carried out.

At present there is a lack of resources going into preserving cultural and historical tourist sites, as well as the promotion and campaigning of existing and new sites. Limited funding of such activities also puts a break on the performance of tourism in Nepal.

What can be done?

A make-over of the national airline company

As a consequence of the operational problems of NAC it is of great urgency that a restructuring of the company be carried out. The model to follow could, as a first priority, be the public-private partnership (PPP) model, but it will be necessary to look into other models such as a full privatization in case the PPP model does not to work properly. Also, incentives to international airlines to operate in Nepal must be improved. To this end, more open Air Service Agreements should be implemented.

Invite other actors than just the state to take part in the development

To cope with the related problem of TIA a number of actions could be taken. The government should liberalize the airport services and invite companies other than NAC to operate in order to increase competition. In addition, the airport capacity to receive passengers and the facilities for the visitors should be scaled up.

Also, other airports than TIA should have the capacity of serving international flights. Technical standards for these airports should altogether be improved in order to ensure the safety and comfort for travelers.

Tourists should not be the victims of conflict between unions/employers and of rigid regulations

Another important issue to be coped with is the frequent strikes and worker-related conflicts affecting tourists coming to Nepal. It is necessary that stakeholders involved in the conflicts find a solution with respect to the tourism industry, so that tourists enjoy safety and are provided with essential goods and the mobility to travel around. This should also include proper handling of conflicts arising within hotels and tourist-related businesses.

When guests are finally settled the conditions for filling out successful holiday programmes and securing comfortable stays should be improved. E.g. restrictions on opening hours for restaurants, bars and shops should be lifted in the tourist areas of the cities. Load shedding in these areas should be reduced, while enforcement of high food quality standards should be carried out.

Utilize the diversity of tourists

There might also be large economic gains in developing different types of tourism. Quality tourism could be established, catering to the more well-heeled travelers who are willing to pay for high-quality amenities and luxury facilities.

Religious tourism could cater to visitors seeking to learn about the important Buddhist and Hindu sites of Nepal. A more specialized idea could be to provide a unique experience for families expecting the arrival of a new-born family member. As the birth place of Buddha, the city of Lumbini in the Kapivastu region could be developed towards receiving this segment of travelers. An appropriate way of obtaining such development would be to initiate a public-private partnership dedicated to the task. In the context of developing specific regions to cater to different segments of tourists, authorities should implement the already existing Pashupati and Lumbini development master plans.

A special focus should be given to the enormous potential that the Chinese and Indian tourists hold. These markets are geographically close to Nepal and due to their very high number of citizens and an economic development allowing an increasing portion to travel, special strategies should be developed to attract these groups to Nepal. Elements in such strategies could be better flight connections, increased across-the-border promotion, language facilitation etc. Furthermore, establishing holiday packages combining recreational holidays with pilgrimage could prove to be a beneficial strategy. Another idea targeting Chinese tourists could be to introduce special leisure travels around the Chinese New Year, the Chinese Golden Week and similar festive seasons.

On the same note, efforts should go into harnessing the potential of domestic tourism. Development and promotion are essential to this end.

There is an important international outreach task to be handled as well. For example, the Nepal Tourism Board (NTB) should increasingly work on adapting tourism strategies that match the market demand and suggest new tourist products. The Board in cooperation with the Nepali Embassies in foreign countries should also rely more on promoting Nepal as a destination by communicating to the international public via traditional and electronic media, including a much sharper focus on the possibilities of internet.

Information and marketing can attract more visitors

It will also be central to work out more clear messages to the international tourist community that the security situation in Nepal has improved significantly since 2006 and that the previous conflict situation is over. These tasks, together with general promotion and marketing could be taken up by Tourism Desks in the individual countries contributing to the inflow of foreign tourists into Nepal. To this end, already acquired experience of other countries could be collected and re-used by Nepalese authorities.

Designing of policy must rely on sound statistical data

As pointed out earlier in this chapter there is not much statistical data available covering the tourism sector. To alleviate this problem a thorough data base needs to be constructed and maintained, clarifying the expenditure and travel patterns of visitors. This will allow solid impact analysis and comparative studies to be performed prior to implementing tourist policies, and it will therefore be a powerful tool for policymakers.

Street-level issues to be solved

Also the issues that are very visible to tourists should be given high priority. If load shedding, urban pollution, environmental degradation, hygiene issues in relation to food etc. are dealt with, it will have immediate and positive effects on the inflow of tourists to Nepal.

Conclusion

Nepal is characterized by a large potential for tourism industry, but concrete problems such as ineffective or lacking airports, little public information and marketing, and visitors becoming victims of conflicts between unions and employers constitute serious bottlenecks to the sector.

Much can be done to circumvent these obstacles. It will be important that airports are further developed and the national airline is restructured, to which end partnerships with private parties might be a very effective tool. Also, tourism policy should be further developed and diversified, with broader visions for how to cater to different segments of travelers and how to position Nepal in the increasingly significant regional tourism markets, before Nepal can benefit from the economic gains generated by tourism.

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This article is the summary of key findings and recommendations of the detailed report "Review and Overview of Economic Contribution of Tourism Sector in

Nepal” prepared by Dr. Dandapani Paudel and Mr. Surath Giri for the Nepal Economic Growth Agenda (NEGA), Report 2012 published by Samriddhi, The Prosperity Foundation in partnership with Federation of Nepalese Chambers of Commerce & Industry (FNCCI).

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References

National Planning Commission. (2010). Three Year Plan (2010/11 - 2012/13). Kathmandu: Government of Nepal.

World Economic Forum (WEC). 2011. The Travel & Tourism Competitiveness Report 2011. Geneva: SRO-Kundig.

Analyzing Issues and Challenges in Tourism Sector in Nepal

Sunil Sharma

International Tourism Trends

According to the United Nations World Tourism Organization (UNWTO, 2012) international tourism remains firmly on track to reach one billion tourists by the end of the year 2012 as a record 467 million tourists went traveling in the first half of 2012.

Despite concerns over the global economy, international tourism demand continues to show resilience. The number of international tourists worldwide grew by 5 pct. between January and June 2012 compared to the same period of 2011 (22 million more). Although a slight slowdown in growth can be expected for the rest of the year, international arrivals are forecast to exceed one billion by the end of 2012.

UNWTO believes that despite current economic uncertainty, tourism is one of the few economic sectors in the world growing strongly, driving economic progress in developing and developed countries alike and, most importantly, creating much needed jobs. However, for one billion tourists arrival, destinations need to ensure that the tourism sector is supported by adequate national policies supported by reducing existing barriers to the expansion of the sector, such as complicated visa procedures, increased direct taxation or limited connectivity.

Asia leads growth

Recent data suggest that the contemporary global growth in tourism is underpinned by tourism growth in emerging destinations, Asia in particular. According to the PATA Annual Tourism Monitor 2012 (PATA, 2012a), International visitor arrivals to the Asia Pacific region grew by just over 5 pct. in 2011, with Asia driving much of that expansion. By the end of the year Asia had captured close to 320 million of the total international arrivals to the region, increasing its relative share of foreign inbound traffic to almost 74 pct. of the total.

South Asia was the fastest growing subregion in 2011, in terms of percentage growth at least, driven by some extremely strong growth performances by Bhutan, Sri Lanka and Nepal. In terms of volume gain, India remains the giant of South Asia, capturing a relative share of foreign arrivals of just under 73 pct. during the year.

Current Tourism Scenario in Nepal

For Nepal, tourism is important from an economic point of view, for example by factors such as job creation, infrastructure development and foreign exchange.

Tourism has taken giant strides in recent years, with an average annual growth rate of over 7 pct. in the last five years. Nepal has recovered from its political unrest as reflected in growth in tourist arrivals. High growth is expected from all world regions in coming years with overall annual growth at 14 pct. till 2014, by air only (PATA, 2012b). According to PATA (2012b), of the larger markets the highest growth is forecast for China and India.

Tourism in Nepal is a priority sector and its contribution to Nepal's economy is huge, generating about US\$ 170 million annually and attracting over half a million foreign visitors (509,956 in 2009, 602,867 in 2010 and 736,215 in 2011). In 2011, the total earnings from Tourism stood at US \$368,773 (MoCTCA, 2011).

As part of its ongoing commitment towards tourism promotion, development and establishment of Nepal as a premier holiday destination, and high priority accorded to it, the government of Nepal inaugurated the “Visit Lumbini Year (VLY) 2012”, launched Tourism Vision 2020 and simultaneously announced completion of Nepal Tourism Year 2011 (NTY 2011) Campaign on January 14, 2012 at Central Canal in Lumbini.

After the successful completion of Nepal Tourism Year 2011, Nepal is celebrating yet another event, VLY 2012. The momentum generated by the NTY 2011 has to be capitalized on and henceforth much-needed fillip to the tourism sector was given by launching VLY 2012. The reason behind celebrating VLY 2012 is to unite the world to work towards creating a peaceful society through Buddha’s peace message; and to make the birthplace of Buddha a centre of global attraction. VLY 2012 is a major linkage between NTY 2011 and Tourism Vision 2020 as it serves to sustain the achievement of NTY 2011 and improve livelihoods of the people through tourism as envisioned in Vision 2020.

The campaign Nepal Tourism Year 2011 (NTY 2011) was a synthesis of past experiences of the government and future aspiration of the private sector. It also marks the beginning of a new mission in the new context and envisages a way to an overall development of the tourism industry of Nepal. With the successful completion of campaign, NTY 2011 has clearly given two messages to the world: (1) Nepal has embarked on the path to peace and prosperity after a decade long political uncertainty; and (2) tourism has been unanimously regarded as a vehicle of economic development. Tourism also proved to be a major binding factor among all major political parties who have agreed on the common agenda of development through tourism and hence made public commitment that there would not be any strike throughout the campaign year of 2011.

The event in Lumbini also marks the launching of Tourism Vision 2020. As the tourism sector in Nepal has emerged over the past fifty years as a key instrument for economic growth, development and job creation, Tourism Vision 2020 has set out its goal to increase annual international tourist arrivals to Nepal to two million by 2020 and augment economic

opportunities and increase employment in the tourism sector to one million. Tourism Vision 2020 serves as an easy-reference guide to all the major stakeholders of the tourism sector for tourism development.

There are scores of issues that remain to be tackled at earliest. These include increasing dependency of the economy on tourism, the limited capacity of the international airport, increased use and therefore pollution of resources, degradation of the natural environment, competition, increased congestion and strains on existing infrastructure.

There remain tremendous challenges in terms of creating and generating a conducive environment for tourism. This is echoed in the form of the Travel and Tourism Competitiveness Index (TTCI). On the World Economic Forum's Travel and Tourism Competitiveness Index, Nepal ranks only 112th of 139 countries in 2011 (WEC, 2011). The index measures the regulatory framework, the business environment and infrastructure, and human cultural and natural resources for tourism. These issues have been identified as levers for improving Travel and Tourism competitiveness.

The aim is that the government would make in-depth analysis of each pillar and sub-pillar of the Index, and businesses and governments can then address their particular challenges to the sector's growth. Hence, there is much demand from the tourism industry to recognize Tourism as a National Priority Industry that that would make tourism a viable industry and a sustainable alternative in this country. Scott & Lodge (1985) have stated that competitiveness is a multidimensional concept and defined it as the ability of one country to create, produce, distribute and/or service products in a global market and economy and be able to make a profit.

Nepal needs to sustain its tourist growth, tourists' daily expenditure and the average length of stay. Also, there is urgent need to deliver meaningful income and employment opportunities to the poor and marginalized people. The need for employment, income generation, and product development has been heavily emphasized both in the Tourism Policy 2007 and Tourism Vision 2020.

It is obvious that the policy and plan is addressed specifically in terms of achieving an overall growth and improvement of the tourism sector in Nepal, by stepping up marketing, infrastructure building and human resource development. Much attention has to be given to development of value added tourism products so that tourists are willing to pay more in exchange for the benefits they receive. It is well highlighted in the policy and vision that identifying new tourism destinations is central. At the same time product development should go in the direction of sustainable tourism and be supported by investment in tourism-related infrastructure which can enhance quality tourism services.

The aforementioned objectives, Afram & Del Pero (2012:46) rightly suggest, can be achieved through attracting investments, both private and foreign, into the sector, and enhancing the capacity of the sector by: i) proper tourism planning through public-private partnerships; ii) capacity building in tourism related public institutions to ensure competitive airline regulation, tourism marketing, licensing of tourism establishments, etc; and iii) support for micro and small enterprises.

Recognition of Tourism as a National Priority Industry

During the last decade, the growing public and private interest in tourism resulted in the demand for recognition of tourism as a National Priority Industry. A report on recognition of tourism as a national priority industry prepared by a high-level committee has been presented to the Hon'ble Prime Minister of Nepal. The report has given recommendation on investment and infrastructure in order to ensure competitiveness of Nepal as a premier holiday destination in the international market and also how to generate employment opportunities. The report recommends the government to encourage the growth of the industry through direct investment, tax rebate, leasing of land and by providing finance for private investment, etc. By recognizing the tourism sector is a national priority industry, the government will endorse the view of tourism as a viable development option and to reconsider the policy framework and

reformulate strategies which might enhance the economic benefits accruing from this sector. In a nutshell, the recognition will lead to an integrated tourism management and development plan, through sound and sensible policies, that ensure integration and cooperation of all direct and indirect stakeholders concerned. This will help to overcome major constraints in order to derive more tangible economic benefits from the tourism sector.

Need for Second Tourism Master Plan

The first and only Tourism Master Plan (1972-1988) was introduced in Nepal in 1972, carried out by technical assistance from the German government. In 1984, the Tourism Master Plan was reviewed by the European Commission. The Government of Nepal made an attempt for a second Tourism Master Plan, however, the draft report of the second Tourism Master Plan was not accepted.

In accordance to the Tourism Policy 2007, there is urgent need of a second Tourism Master Plan for sustainable tourism development and enhance quality and efficiency in the tourism sector.

Encourage Domestic Tourism

Despite global financial crisis, including a recession in the Eurozone, affecting tourism worldwide, domestic tourism has emerged as a powerful tool in cushioning the shockwaves triggered by ongoing economic woes around the world. India and China have shown how domestic tourism has boosted their economies. The importance of domestic tourism was recognized by public policymakers in the Tourism Policy 2007.

Although data on domestic tourism in Nepal is not available, a general observation can be made that domestic tourism is on the rise and has been effective in mitigating the economic downturn of recession and fall in tourist arrivals from major generating markets.

However, the Tourism Act 2035 (1978) is not supportive of domestic tourism. The Act clearly states that "Tourist" means a Non-Nepalese citizen

who enters into Nepal from abroad for the purpose of a visit. The Act defines "Nepalese Tourist" as Nepalese citizens who visit from one place to another place of Nepal. In line with this, a tourist vehicle fails to transport Nepalese tourists within Nepal, as Nepalese are not recognized as tourists.

The Ministry of Culture, Tourism and Civil Aviation has initiated Leave Travel Concession (LTC) for its employee, allowing them full paid holidays to travel within Nepal. Similarly, Nepal Tourism Board has also adopted a LTC provision for its staff. In order to encourage domestic tourism, the government should make similar provisions mandatory among all government institutions along with its line departments. Also, the Tourism Act and Transportation should be made compatible and updated. The idea of domestic tourism could be further boosted by providing Sunday as a holiday besides Saturday. There is enough evidence where other countries have shown that a two day weekend has boosted domestic tourism.

Product Diversification

Nepal's tourism is heavily concentrated on three major areas: Kathmandu, Chitwan and Pokhara.

In the entire length and breadth of the Nepalese Himalayas, the areas of Annapurna, Everest and Langtang experience the highest concentrations of trekkers and mountaineers, making Nepal a premier international mountaineering and trekking destination.

In order to lessen the overcapacity, mismanagement, and excessive pressures on resources, there is urgent need to develop and promote new destinations. This was clearly reflected in the objectives of the NTY 2011 campaign.

The NTY 2011 was launched to re-establish Nepal as a premier holiday destination on the international tourism map and clearly stated at least 40 pct. dispersal of tourists to new destinations in Nepal to spread the benefits of tourism to people across the country, indicating that the tourism

industry's exigency to organize a tourism promotion campaign would have a wider impact. In other words, the campaign envisioned regional development through tourism supported by a well-developed network of infrastructure.

Coincidentally, a new tourism product, the Great Himalaya Trail (GHT) was launched. According to the GHT official website, the GHT is one of the longest and highest walking trails in the world. Winding beneath the world's highest peaks and visiting some of the most remote communities on earth, it passes through lush green valleys, arid high plateaus and incredible landscapes. The GHT has 10 sections comprising a network of upper and lower routes, each offering something different, be it adventure and exploration, authentic cultural experiences, or simply spectacular Himalayan nature. In other word, the GHT is a network of existing treks and trails which together form one of the longest and highest walking trails in the world. The travel book publisher Lonely Planet has chosen the GHT as one of the world's best long walks for 2011. It states "the GHT spans the Nepalese Himalaya, passing rhododendron forests, high-altitude lakes, 8,000m peaks and the remote communities that call them home—providing vital income and support. Do the lot in 160 days, or choose one of ten tantalising sections."

Further on October 2nd, 2012 former Prime Minister and Chairman of UCPN(Maoist) Puspa Kamal Dahal 'Prachanda' launched a new tourist trekking trail, the Guerrilla Trek, giving visitors the chance to retrace the guerrillas' footsteps. The Guerrilla Trek, a two-to-four-week hike depending on the itinerary which stretches across central and western Nepal, is designed to draw in more foreigners as Nepal seeks to rebuild its economy plagued by decade-long insurgency. The Guerrilla Trek offers a remarkable journey through the heartland of post-conflict territory. The route passes through Myagdi, Rukum, and Rolpa, spectacular districts with low population density, and homeland to many revolutionaries. The trail has been divided into three sections. First section of the trek is 19-day walk which starts from Pokhara, meandering through Beni, Dhorpatan, Maikot, Taka, Thawang and ending at Sulichaur. The second section of the trek also

follows this route, but diverts from Dhorpatan and again meets the trail at Taka and follows the same route to Sulichaur, being a 14-day trek. The most arduous trek is the 27-day trek which starts from Pokhara and goes to Beni, Dhorpatan and comes back to Pokhara again in 15 days. It takes another route from Pokhara, meandering through Syarpu Lake, Khalanga and meets the regular trail at Taka and follows the same trail to Sulichaur. This trek goes over rugged mountains, rivers lined with lush wheat fields, caves and centuries-old villages.

The Tourism Vision 2020 (MoTCA, 2009) has set out strategies to focus on improving livelihoods and spreading benefits of tourism through developing products and improving infrastructure.

Overall, in order to remain as the premier holiday destination Nepal has to work on the physical development of new attractions, products and destinations (UNWTO, 2009). The Vision paper envisages developing a district in each ecological belt and development region as a tourism hub in the following manner:

SN	Development Region	Ecological Belt			
		Mountain	Hills	Terai	Total
1	Eastern	Solukhumbu	Illam	Sunsari	3
2	Central	Rasuwa	Kathmandu / Kavre / Sindhupalchowk	Chitawan	5
3	Western	Manang	Kaski	Kapilvastu / Rupandehi	4
4	Mid-Western	Mugu	Pyuthan	Bardia	3
5	Far-Western	Bajhang	Doti	Kanchanpur	3
	Total	5	7	6	18

(Source: MoTCA, 2009-11)

However, the practical application of this concept has been fraught with difficulties.

Conclusion

The tourism industry is a complex phenomenon in Nepal as it includes diverse stakeholders, ranging from the public sector to private agencies. Therefore, the sector requires strong cooperation and coordination through developing an integrated tourism management plan in coordination with other sectors, such as infrastructure, telecommunication, agriculture, environment, and education, that will eventually contribute to the overall national development objectives. Recognition of tourism as a priority industry will unleash forces that will help in obtaining a significant share of the wealth created by tourism. Thus, for effective destination management in a sustainable way it is important for all stakeholders to understand the interrelated tourism dimensions and activities within a destination. Challenges remain in addressing these interrelated tourism dimensions at a practical level for the effectiveness of policy implementation.

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References

- Afram, Gabi G and Del Pero, Angelica Salvi. 2012. Nepal's Investment Climate: Afram, G. G & Pero, A. S. D. (2012). Nepal's Investment Climate: Leveraging the Private Sector for Job Creation and Growth. Washington DC: World Bank.
- Ministry of Tourism and Civil Aviation. (2009). Tourism Vision 2020. Kathmandu: Nepal
- Ministry of Culture, Tourism and Civil Aviation [MoCTCA]. (2011). Nepal Tourism Statistics 2011. Kathmandu: Nepal
- Pacific Asia Travel Association (PATA). (2012a). Annual Tourism Monitor 2012 (Early Edition). Bangkok: Thailand.

PATA. (2012b). Asia Pacific Tourism Forecasts 2012 – 2014. Bangkok: Thailand.

Scott, B. R. & Lodge, G. C. (1985). US Competitiveness in the World economy. Boston, MA: Harvard Business School Press.

United Nations World Tourism Organization [UNWTO]. (2009). Nepal Tourism Sector: A Review of Development Priorities and Recommendations for Technical Assistance. Madrid: Spain.

United Nations World Tourism Organization [UNWTO]. (2012). World Tourism Barometer, September. Madrid: World Tourism Organisation.

World Economic Forum (WEC). 2011. The Travel & Tourism Competitiveness Report 2011. Geneva: SRO-Kundig.

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