Constitution, Institutions and A Model for Economic Development in Nepal

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Abstract

Nepal made significant progress in removing monarchy and terrors of Maoists in the last decade. It however lacks a stable solution for speedier economic growth and development as the major political parties are still struggling to institutionalize the new political framework set up by the new constitution of Nepal that was promulgated by the Constitution Assembly of Nepal (CAN-II) for the federal democratic republic of Nepal on 20 September 2015. Nepalese economy crippled by the terrible earthquake of April 2015 got further paralyzed by the undeclared blockade from India that was afraid of separatist movements in southern Nepal. NC led government managed to conduct free and fair elections of central, provincial and local governments by the end of 2017 in which the NCP, a new allaince of communist CPN-UML and CPN-Maoist parties was able to secure the absolute majority based on radical manifesto promises relegating the NC to a weak opposition. The NCP government has however failed totally to implement its promises in practice bringing inclusive programmes suitable to multi-ethnic, multi-climatic and multi-cultural and multi-linguistic economy and society. Corruption has spread further from the top to the bottom. Quality of institutions, leadership and the governance has further deteriorated. Faster growth and economic growth and development is not possible unless the new system sticks to a dynamic model for a decentralized economy updating beliefs that can improve the wellbeing of people and transform Nepal into a modern, vibrant, and market oriented dynamic economy. Nepal should avoid economically and topographically unrealistic trans-

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Himalayan trade-efforts with China and should improve mutual and natural understanding and cooperation with India to sustain growth in the long run.

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1 Introduction

The Second Constituent Assembly of Nepal (CAN - II) promulgated a new constitution for the federal republic of Nepal on September 20, 2015. Six years had gone in negotiations without any agreements or consensus. A major earthquake on April 26, 2015 with loss of more than 8400 lives and massive collateral damages and outpouring of supports from India, China and other countries and non-resident Nepalis proved to be a turning point.

New constitution was voted for by 507 members of the CAN-II and voted against by 25 members and abstained by 66 members from the Tarai-Madesh region who were in agitation already protesting the early draft of it that was circulated for public reactions. This constitution proposes a multiparty federal decentralized parliamentary system with three levels of Governance in Nepal: a centre, seven provinces and local assemblies (460 villages, 276 municipalities, 11 sub-Metropolis, six Metropolitan cities and 77 districts). The lower house of parliament, the Pratinidhi Sabha is made of 275 members, of which 165 are directly elected from parliamentary constituencies on the FPTP basis and 110 members elected according to the proportional representation. The upper house is made of 59 members, eight from each of seven provinces, another three nominated by the president from specialists in various fields to represent the national interest, at least one to be a female. The Prime Minister is elected by the parliament on the basis of majority voting, the council of ministers is jointly responsible to the parliament, the PM selects members of his cabinet.

When a single party cannot claim a majority in the parliament a coalition of parties is formed for the majority of votes based on power sharing agreement between them. The President and the Vice President are elected by the parliament. Then this constitution has a provision of an independent judiciary in order to check and balance the exercise of power by the legislative and executive bodies. In addition there are twelve different national level commissions to provide special duties including the election commission for the election of central, provincial and local bodies, a commission for abuse of authorities in public offices, a commission for human rights, a commission to recruit officials for public services, and several other commissions

to look after the special interest of women, ethnic groups including Madesh, Dalits, Muslims and Tharu communities.

Constitution with 37 sections, 297 clauses and 7 schedules - all in 128 pages provides more than 30 fundamental rights for individuals aiming to protect their political , economic, social and cultural interests. Preamble states commitment to overall welfare based on social justice for all citizens. The broad directive principles of political, economic, cultural, dalits and marginal groups and females guide activities of the nation. Most important aspect of this constitution is that this is the first time when a modern constitution is written and promulgated by the delegates directly elected by people of Nepal. In this sense this should be considered as the end of feudalism and a beginning of the democratic socialism in Nepal. People were struggling for this moment continuously for seven decades since 1940.

The major political parties the Nepali Congress (NC), Communist Party of Nepal - United Marxist and Leninist (CPN-UML) and United Communist Party of Nepal-Moist (UCPN-M) were able to forge a consensus among the four major issues in July 2015. Lack of this had caused total failure of the CAN-I after four years' of its tenure on May 28, 2012[1]. Four issues that took so much attention were :

1. Restructuring of state: what should be the number of provinces and what should be their names in the federal democratic system of Nepal?

2. Form of the governance: should it be a presidential or parliamentary form of the polity?

3. Election system: should representatives of people be elected on the basis proportional representation system or on the basis of the first pass the post (FPTP) election system or a combination of both? What should be timings of elections?

4. Justice system: what should be its form and how to insure its independence?

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[1]When the members of the Maoists led coalition of opposition parties protested violently in the assemby on Jan 22, 2015, it was clear their intention was not for a solution of the current problem but to create chaos, tensions and disruptions. It seemed that they still had not transformed themselves the basic priciples of democracy but still cotinue to day-dreaming of a totalitarian system with their full control of all parts of the government.

The deadlock created by "the mutual distrusts, lack of sufficient home-works and over concentration on negative criticism to disrupt any good initiative" broke because of the urgent need for speedy economic recovery in the wake of outpouring of international assistance for the victims of the April 2015 earthquake. Thus a massive natural shock united most of the political forces towards a new constitution.

It must be noted that outright non-acceptance by the Madesh based parties raised fears of separatist movements which further led to a five month long undeclared embargo by India. This not only slowed down the process of demarcation of provinces, election of provincial assemblies and government, election of the national government in Nepal but shattered its confidence in setting up strategies for growth and development in Nepal with the multiparty structure with focus on broader objectives of national development, alleviation of poverty and speedier economic growth. Nepal should avoid economically and topographically unrealistic trans-Himalayan trade-efforts with China and should improve mutual and natural understanding and cooperation with India to sustain growth in the long run.

1.1 Realities

Nepal is a very heterogeneous country not only in terms of rugged topography and ethnographic landscape with Mountains, Hills, Valleys and Tarai regions but different ethnic group settlements concentrated in different parts of the country. The current structure of unified Nepal originated in "baise-chaubise rajya -(22 and 24 principalities)" before the unification of modern Nepal around 1769. Ethnic groups such as Limbuwan, Bhojpuri-Mithila, Sherpa, Newa, Awadh, Magarat, Khas Arya, Tharuhat, Dotel retain their identity and culture in specific regions. Had the new federal Nepal, been divided in provinces on the basis of ethnicity, it would have created new problems or even led to civil wars as different groups could enter into conflict in sharing natural resources including rivers, forests and mountains.

Nepal should learn something from the referendum for independence of Scotland in September 2014. The whole nation can disintegrate if provinces want political independence. It will certainly be difficult for Nepal to achieve faster growth rate in the rest of the 21st century with discontents among sub-national groups. Provinces

Provinces	Capital	Districts	Area (km²)	Population 2011	Density (people/km²)	Total LMP	People per LMP	People per CMP	Federal Seats
Province No. 1	Biratnagar	14	25,905	4,534,943	175	93	48,763	161,962	28
Province No. 2	Janakpur	8	9,661	5,404,145	559	107	50,506	168,880	32
Province No. 3	Hetauda	13	20,300	5,529,452	272	110	50,268	167,559	33
Gandaki	Pokhara	11	21,504	2,403,757	112	60	40,063	133,542	18
Province No. 5	Butwal	12	22,288	4,499,272	219	87	51,716	173,049	26
Karnali	Surkhet	10	27,984	1,570,418	41	40	39,260	130,868	12
Sudurpashchim	Godawari	9	19,539	2,552,517	130	53	48,161	159,532	16

in federal Nepal may not have decentralized political and economic power as intended but will create extra problems and tensions and misuse of scarce economic resources. While the decentralization aims to empower ordinary citizens in making decisions about their daily lives at local level, there is a danger that they may be drawn into unnecessary conflicts if such divisions are not according to economic realities. Decentralization has been successful in many advanced countries. The model of decentralization in the Western Europe, particularly of Switzerland, shows how the decisions taken by elected assemblies in provinces are far superior to those taken in the capital city. Decisions relating to the provision of basic public services including education, health and provision of water, electricity, gas, or developing literature, culture and traditions are more efficient at the local level within the broad parameters set by the central government. Local elected assemblies are closer to the people.

Figure 1: Seven provinces and ethnicity in Nepal
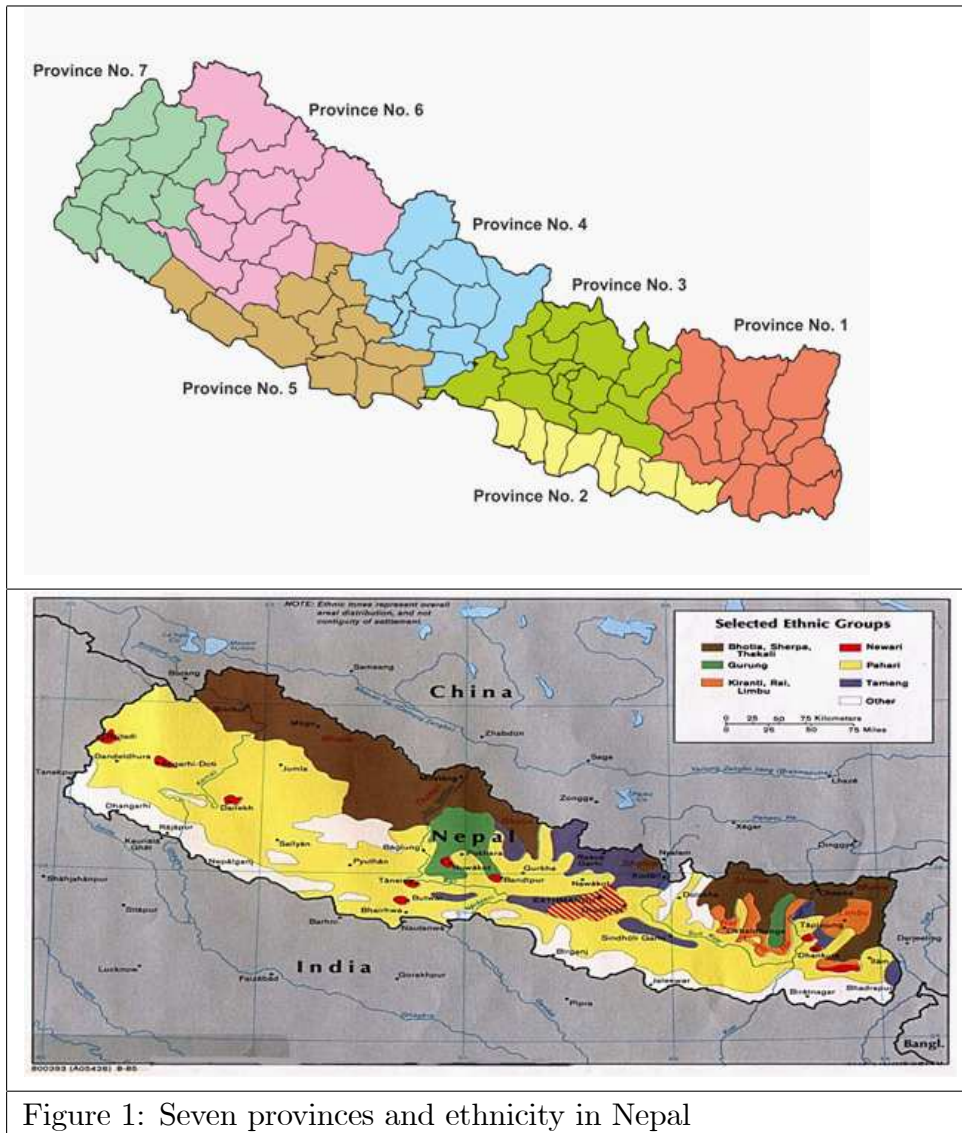
How many provinces should a federal Nepal had have? As shown in Figure 1 the new constitution has declared creation of seven provinces. Smaller states cannot attract larger investments required for speedier growth. Therefore it is better to be very cautious about the number of states. It is important to understand that the size of markets become important in reaping the scale and scope and realising profitability of investment projects. Administrative cost multiplies with the number of states. Number of states was one of the most contentious issues, still not settled

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issue, among the political parties. Maoists party opting for ten to eleven provinces and others for five to seven. They were able to compromise on Seven. The boundaries of provinces, metropolis, or town or village municipalities were determined by the Federal Commission eventually by June 2017 local elections. Names capital of provinces 1, 2, 3 and 5 are yet to be decided.

Compare the size of states in India and provinces in China. Total population of Nepal (now in about 30 million) is about 14.6 percent of the Uttar Pradesh (224.5 million), 29.1 percent of Bihar (104 million) and 32.2 percent of the West Bengal (91 million) in India. Similarly Guangdong (105.9 ml), Sandong (96.9 ml), Henan (94.1 ml) and Sinchuan (85 ml) provinces of China have population more than three times of entire Nepal. Size of population in Tibet of 3.1 ml is about 10 percent of Nepal. Dividing the markets for goods and services and factors of production in Nepal in less than four million people does not seem economically prudent.

Why should the form of governance matter so much? Nepal's neighbor India has a very successful parliamentary system and China is doing very well economically under the presidential system. The United States is a good example of presidential system and the UK is a very successful parliamentary democracy. The separation of power and functions among the legislative, executive and the judiciary is working well in all of these democratic countries no matter under the presidential or parliamentary system. Given the heterogeneity of population, it seems optimal to choose the parliamentary democracy system in Nepal to decentralise power more than in a presidential system. What matters for stability is clear jurisdictions among the wings of the government in the centre and in among the provinces, towns, villages and their wards. Individuals should know their roles, responsibilities and limitations clearly while being part of the nation. Above all honesty and integrity of the elected leaders is the most important determinant of the quality of these institutions without which it is impossible to fight against corruption that has been the major stumbling block in promoting growth in Nepal.

1.1.1 Structure of the Parliament

As has been seen in the last two elections for CAN-I and CAN-II, electoral system remains combinations of the first pass the post (FPTP) and the proportional election system. No vote is wasted in such mixed election system; it is immune for the paradox of median voters. The parliament now consists of the House of Representatives (lower house) and the National Assembly (upper house). Lower house is made of 275 members, of which 165 are directly elected from parliamentary constituencies on the FPTP basis and 110 members elected according to the proportional representation. This number is about 35 percent above the 205 member parliament elected on May 12, 1991. Then the upper house has 59 members, eight from each of seven provinces, another three nominated by the president from specialists in various fields to represent the national interest including at least one female nominee. This way each parliamentarian represents about 1.3 to 1.7 lakh people. This may be a very affordable parliament that can focus on promulgating rules and regulations required to run the country particularly for the speedier economic growth. It also provides sufficient numbers to the cabinet and committees in the parliament at the central level and for committees at the local bodies. In theory the parliament should elect the most capable person as the president on a non-partisan basis who is responsible for all people equally. He should have some emergency and contingency powers to defend the state. This sort of arrangement could work very well also in Nepal as it has worked so well in India.

1.1.2 Electoral system and Judiciary

There is little room for any controversy about the nature and functions of the election commission. Its main function is to arrange smooth and fair election and prepare list of voters and candidates. Its major duties include maintaining the accuracy of the voters' list and checking the credentials of candidates claiming to represent the people, count votes and declare winners and losers on the basis of votes they are able to secure in the election.

The major function of a judiciary, made of the one Supreme Court, Seven High Courts and 77 District Courts is to ensure the system of justice in the country. Judges

of the Supreme Court have plaid very important roles in defending democracy in Nepal. From time to time since 1990 independent judiciary has protected democracy in Nepal when the political agreements were collapsing bringing the whole country in the darkness. Government of bureaucrats was much more efficient than the elected ones in conducting free and fair general election for CAN-II on November 19, 2013. The parliament of Nepal was reinstated in 2006 by a decision of the Supreme Court; the government led by the Chief Justice of the Supreme Court conducted successful election for CAN-II when the CAN-I was dissolved without drafting a constitution. There should be no doubt that judiciary should be independent and run by the professionals so that it can break deadlocks when the parliament is hung and the political parties cannot reach any decisions.

1.1.3 National Consensus

Each of the above four issues did not become very complicated to reach into a national agreement when the political parties became keen in promoting the welfare and development of common people. Apparently different ideological positions of these political parties that were behind controversies and the power struggle were set aside. Trust among each other and true will and sense of urgency for the national development from political parties after the earthquake was phenomenal. Every person thinks that had the first priority been to form a consensus of all parties for the new constitution, Nepal could already have moved many miles in process of growth and development. Major political parties NC and UML with 64.1 percent votes in the in CAN-II made compromises with the Maoists that had only 14.3 votes to bypass each other. Being in colation with an arch-enemy proved very costly to the NC in the first general election under the new constitution in 2017.

Consensus on the major goals and objectives of development is the best solution as it can be expected to initiate an era of credible and cooperative relations among the major political forces and to bring the ultimate political stability required for the speedier growth process in Nepal. It is irony that the whole system has become very fragile, inefficient, corrupt and unreliable after NCP won the absolute majority in 2017 election. While the merger of Maoists with the UML was seen as a good

sign in the beginning but the new Oli government has failed to live up to the true spirit of democratic movement and performed far below the people's expectation. Frustration has widened and trust has been broken from the ability of government to steer the growth process. Private sector is clueless or whole nation is operated by coterie of dons and phychofants. Quality of leadership is very low and its ability to make decisions is very much reduced because of internal conflicts among the main personalities running the party. Lack of security and foot-dragging mentality is making the system more opaque devoid of transparency required for the successful functioning of the democracy. NC in the opposition is also very weak for similar reasons. Thus the dreams of Nepalese people are unfulfilled and great dissatisfaction is around every sector or sections of the economy or public life. Such situation most be corrected to bring Nepal into track of speedier growth and development. This can be possible by adopting a more scientific way of decision making based on objective analysis of facts and figures and with proper appreciation of alternative views before finding an optimal strategy, programme or projects required for balanced development of the country. Theory and empirical sides should be analysed clearly.

2   A Theory of Disagreements

The major concern of the majority in Nepal is economic development. Gaps in per capital GDP in PPP between Nepal, its neighbors China and India and advanced nations such as the UK and USA in figure 2 and Table 1 are huge. How long does it take to bridge these gaps depends on how fast Nepal grows compared to these countries. For instance, assuming the UK continues to growth 2.5 percent per year it will take 129 year to catch up to the income level of the UK if Nepal continues to growth 5 percent but only 26 years if it grows by 15 percent (Figure 3). High growth rate is possible in Nepal by educating the young population as Nepal has the greatest possibility of releasing population dividend as it has the highest share of 0-14 years to total population as shown in Figure 4. Further more millions of young people need to go abroad for education and employment. Remittances constitute about 29 percent of GDP a lot higher than any other countries as shown in Figure 7. Nepal's import to GDP ratio has risen steeply to above 35 percent now from

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year as a share of GDP (Figure 5), this has created large current account deficit and required continuos depreciation of Nepali Rupee against the US dollar and other international currencies (Figure 6). Private sector enterprises have not flourished and are unable to increase the rate of investment despite plenty of opportunities in basic industries such as hydro-energy, tourism, education, health and communication. Nepal is among the least developed countries in the world not because she does not have enough resources but because these are not utilized properly. In the last three hundred years till 1950, it was completely feudalistic state cut off from the world. Some incremental steps for modern growth started then but these were very minimal and beset by the political instability mainly due to conflicts between the interest of the rulers and common people. After the dissolution of parliament in 1960 due to conflict of interest between then king and popularly elected BP Koirala, about 30 years till 1990 were under the direct rule by the king and his deputies under the extractive and extortionary system. Reinstatement of parliamentary system in 1990 re-established the process of inclusive growth that was terminated in 1960 but it could not be stable and was disrupted by Maoist conflicts and wars along with the royal coup and take-over of people's power by the King in 2002. He dissolved the parliament in 2002 and imposed direct rule till he was forced to relinquish all his power by 21 day popular revolution in April 2006. This was possible because of the joint alliance of NC, CPN-UML and CPN-Maoist parties in that glorious April 2006 revolution.[2] Such agreement disappeared in the next eight years of intense negotiations for peace and constitution. Nepal has entered into the new phase of federal republic after the promulgation of this new constitution in September 2015.

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[2]The King relinquished all powers that he had snatched away from the people by reinstating the House of Representatives (HOR) on the eve of 20th day of protest on 25 April, 2006 organised under the joint initiatives of all political parties including the Maoists. This historic revolution in Nepal swept away the institution of monarchy for good. Then the CAN-I was elected with 601 members on May 28, 2008 and CAN-II on Nov 22, 2013.
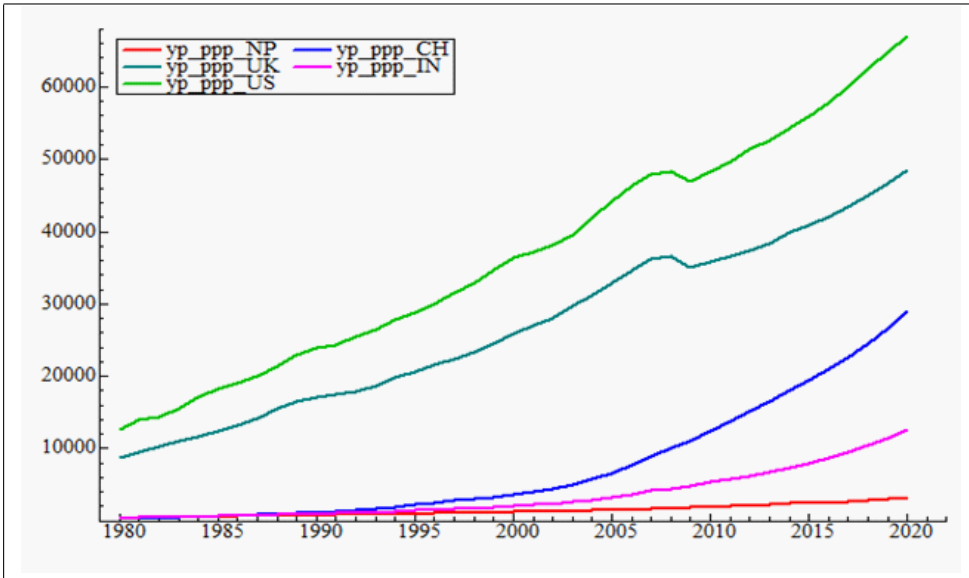
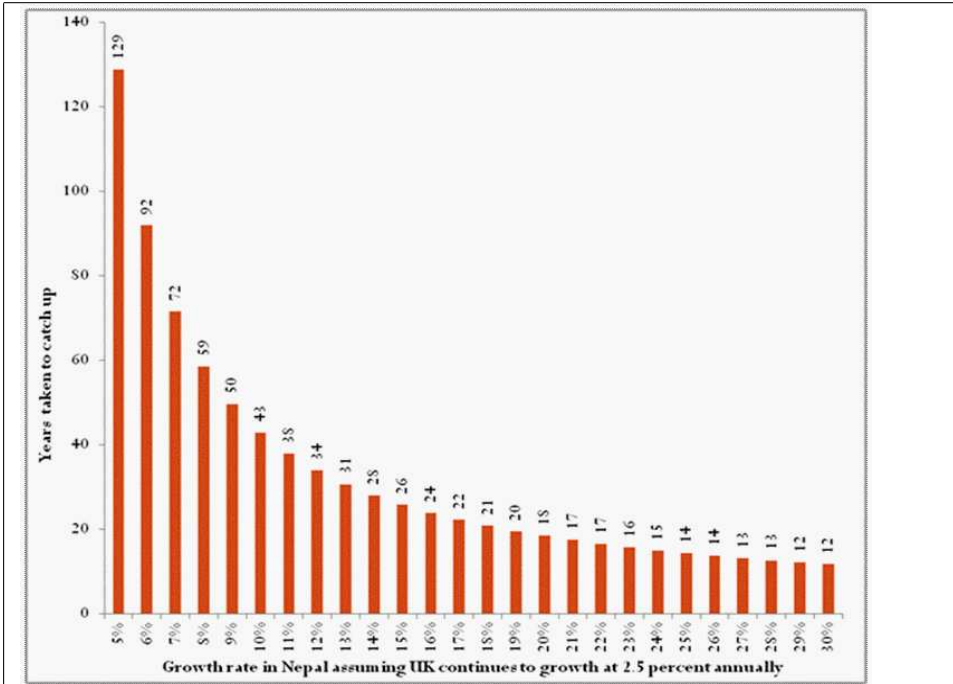Figure 2: Per Capital income in PPP (Data source: IMF WEO)

Figure 3: How many years will it take Nepal to catch up to the UK

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Table 1: Difference in per capita GDP in 2012 (in 2005 dollars) and corresponding percapita GDP in PPP dollars

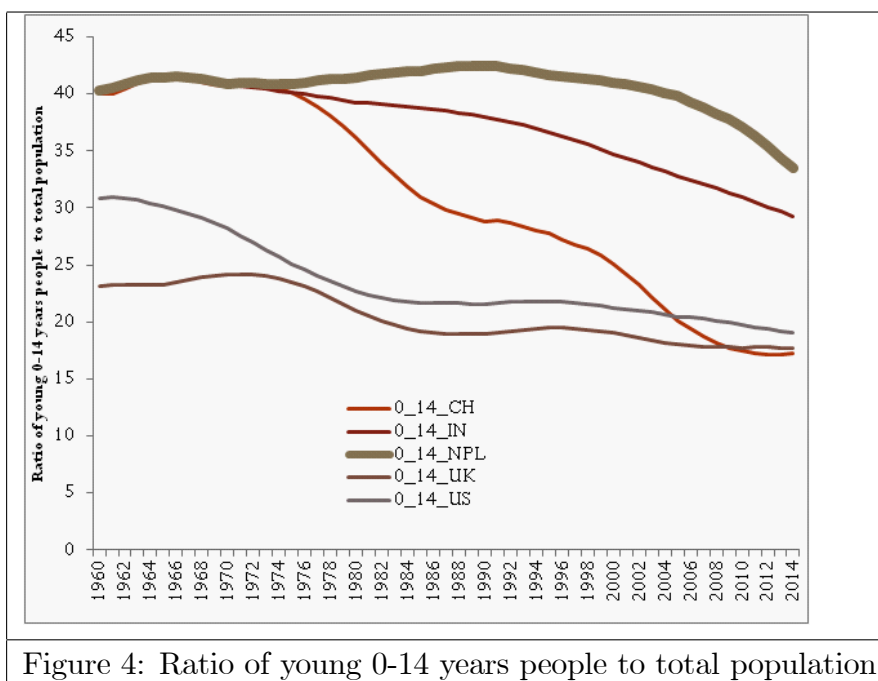|	Per capita GDP in 2012 US$	Per capita GDP in PPP $
EU	100 ($28748)	100 ($27818)
USA	157.7	163.0
UK	131.5	117.4
Australia	129.8	128.2
South Africa	20.9	35.4
Brazil	19.9	36.9
China	11.6	28.6
India	3.9	12.0
Nepal	1.4	4.6
Niger	1.0	2.4
Burundi	0.5	1.7

Figure 4: Ratio of young 0-14 years people to total population
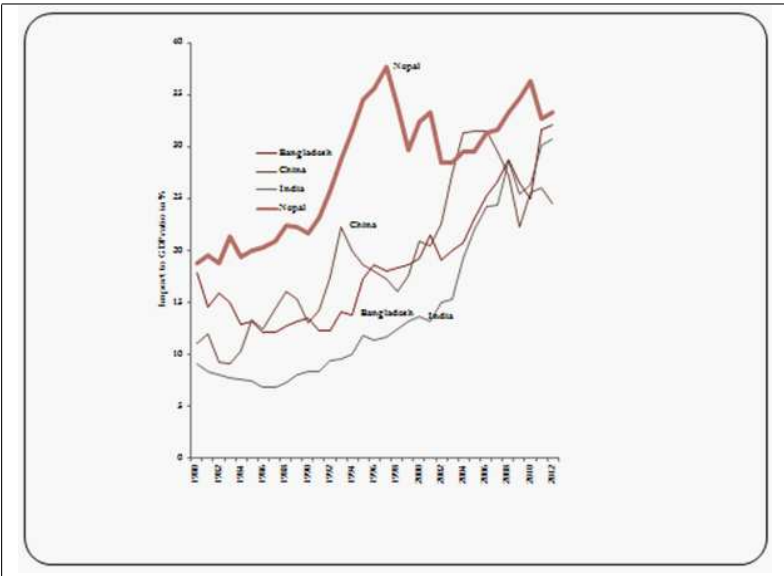
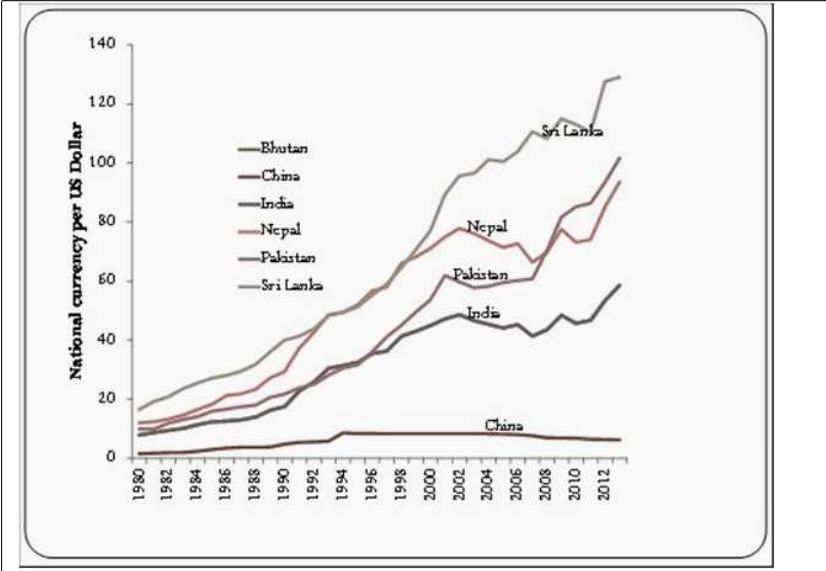Figure 5: Import to GDP ration in percent

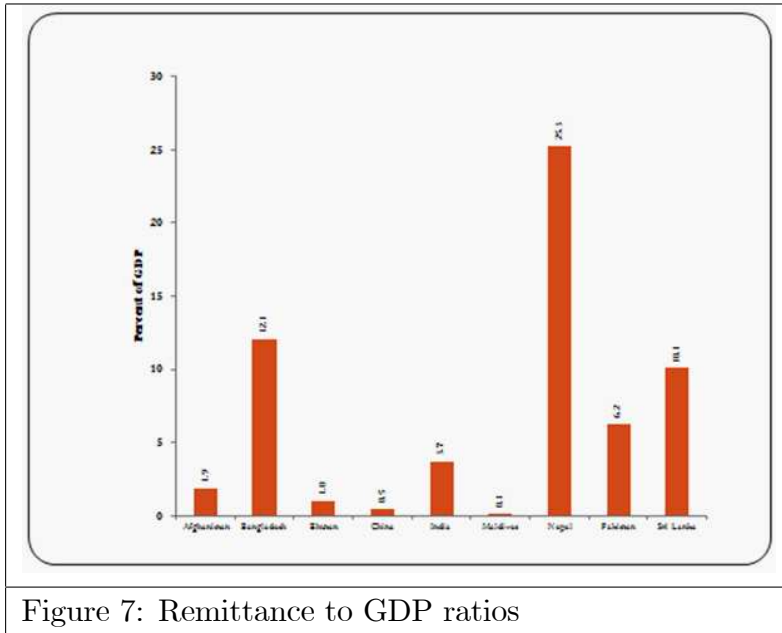Figure 6: Exchange rates: national curreny per US dollar

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Figure 7: Remittance to GDP ratios

2.1 End of the Game of Emperor's New Clothes

Politicians are playing a sort of emperor's new cloth game with the people in Nepal; first while writing and promulgating the constitution and now by pretending to implement it[3]. First reason for a stalemate is the lack of trust and credibility among members of the political parties. It is true that Nepal is a multi-ethnic, multi-lingual country with spread in Mountains, Hill and Tarai, surrounded by India in the East,

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[3]As constitution sets the rules of formation of all political and economic institutions it is obvious that no long term decisions can be taken until the constitution is implemented. The 12 point agreement for the complete restoration of democracy in Nepal signed in November 2005 by three major parties have not yet been fulfilled. Political parties were united to eliminate monarchy but they have not agreed to share the political power. Why has this power game been proven so tense and fruitless so far? Expectations of the people have been forgotten and this long phase of transition has been very painful. What was the cause of this? While KP Bhattarai, the PM of the interim government after the restoration of multi-party democracy with a constitutional monarchy on 16 April, 1990 was able to forge a consensus for a new constitution within a year terminating the partyless Panchayat system that resulted from the royal coup of the parliamentary system initiated in 1960, why did it take so long for political parties to come into such an agreement? Was it because Maoists did not exist at that time? How much this is due to changes in the fundamentals and how much of it is due to inefficiency of the politicians? Most think igo-centric self-interest orientated politicians were the major cause of such inefficiency. They lack enough lessons on honesty and integrity.

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South and West and bordering to the Tibetan autonomous regions of China in the North. Historically it is said that Nepal is a country of 4 classes and 36 ethnic groups. This creates heterogeneity among population; for instance languages and cultural system are different among Rai, Limbu Sherpa, Bahun, Chhetri, Newar, Yadav, Tharu, Khas, Magar, Gurung and other ethnic groups. Then villages and valleys vary by geographic locations. Mountains, Hills and Tarai have different natural set-ups and different requirements. Then each of the political parties have created a clientele in each of these groups. No single solution applies to all these elements when the political and economic interests are different. Given this situation the constitution has set up a broad framework which is flexible enough to accommodate the need of each of these groups. Wasting time on the basis of pure ideological and unrealistic paradigms does not lead to any amicable and effective solution. Unfortunately that is what happens in practice. Why have not Buddha's teaching of peaceful coexistence been applied at the national level? A solution in such circumstances should build on good things from each party or groups. Some compromise is essential on the basis of coexistence and development of all within the given constraints. A commitment to create good institutions based on logics and rationality and more scientific methods of decision making for the growth and development of the whole nation only can bring one to such outcome.

2.2 Beliefs: What do they care about?

There are N parties in the country indexed by $i = 1, ..., N$. Each party wants to represent a given constituency appealing voters to its own manifesto promises such as double digit growth, free up to secondary education, student loans for higher education, safe drinking water, health services, ecological and environment protection, investment, capital accumulation, job creation, development of cultural and social harmony, development of tourism, creation of basic infrastructure for growth including uninterrupted electricity, opportunities for credit, productivity and marketing. Each party i is interested in its own pay-off x_i (e.g the number of ministries it should have under its command) which it computes using a payoff function U_i that depend on strategies available to players and its information set about the reactions of other

players:

$$x_i = U_i \left(S_1, S_2, ..., S_n; a_0, a_1, a_2, ..., a_n \right) \tag{1}$$

where $S_1, S_2, ..., S_n$ denote the strategies available to players, a_0 is common knowledge, and $a_1, a_2, ..., a_n$ denote the unknown characteristic of player i. Each player knows which strategy is better for it given the strategy space of other players but they have less information about the reactions of other players, a_j. They make some subjective estimates about other's actions while calculating its payoff x_i. This value gives their reservation or threat point in the bargaining. The agreement takes place when actual bargaining and negotiation ends up giving z_i and when this value is greater than or equal to what the party i had expected, $z_i \geqq x_i$. Negotiation breaks down whenever $z_i \leqslant x_i$.

Parties need to learn from each other to create a more realistic beliefs (b_j) about other players replacing unknown characteristics $(a_0, a_1, a_2, ..., a_n)$ by more accurate representation parameters $(b_0, b_1, b_2, ..., b_n)$

$$x_i = L_i \left(S_1, S_2, ..., S_n; b_0, b_1, b_2, ..., b_n \right) \tag{2}$$

Beliefs on these parameters could be formed on the basis of history, principles and values of parties and key personalities of the party and studying their relations to other players. Convergence on beliefs among all parties occurs when they understand and trust each other. This gives credibility to the outcome of the game. Equilibrium in such case is more certain and efficient and generates greater payoff for parties and welfare of the country.

$$\max \sum_{t=0}^{\infty} \theta^t x_{i,t} = \sum_{t=0}^{\infty} \left\{ \theta^t L_i \left(S_{1,t}, S_{2,t}, ..., S_{n,t}; b_{0,t}, b_{1,t}, b_{2,t}, ..., b_{n,t} \right) \right\} \tag{3}$$

The evolution of the belief system should be consistent to a dynamic general equilibrium model that shows trade-offs between growth and redistribution in Nepal objectively based on its structure of consumption, production, trade and the public policy. This model need to be modified for the evolving economy within the federal

democratic system Nepal. No such effort has been carried out before.

3 Dynamic model

Let us consider a model of Nepal with urban and rural households located in various economic regions of this country. Each of them allocate their life time income to maximize utility by choosing an optimal path of consumption and saving. These households provide factor services to producers of goods and services, who sell products both in domestic and foreign markets. The capital stock, determined overtime by the volume of savings and investment, complements labor input. In central case, we assume that labor force grows exogenously. Output expands along with increase in labor and capital inputs, its level is consistent with the demand of consumers, investors, the government and foreign sectors.

3.1 Mechanism for Poverty Alleviation

- There are three players in the poverty game -poor, rich and government; each has three strategies available to it to play, s, l, and k , cooperation, indifference and non cooperation.

- The outcome of the game is the strategy contingent income for poor and rich, $y_t^p(s, l, k)$ and $y_t^R(s, l, k)$ with the probability of being in particular state like this is given by $\pi_t^p(s, l, k)$ and $\pi_t^R(s, l, k)$ respectively and tax and transfer profiles associated to them.

- The state-space of the game rises exponentially with the length of time period t.

- The objective of these rich and poor households is to maximize the expected utility that is assumed to be concave in income.

- The government can influence this outcome by choices of taxes and transfers that can be liberal, normal or conservative.

Proposition 1: The state contingent expected money metric utility of poor is less than that of rich, which can be expressed as:

$$\sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\sum_{t}^{T}\pi_t^p(s,l,k)\delta_t^p u\left(y_t^p(s,l,k)\right)$$

$$< \sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\sum_{t}^{T}\pi_t^R(s,l,k)\delta_t^R u\left(y_t^R(s,l,k)\right) \tag{4}$$

where $\pi_t^p(s,l,k)$ gives the probability of choosing one of strategies by poor given that the rich and the government has chosen l and k strategies. Utility is derived from income as given by $u\left(y_t^p(s,l,k)\right)$ and $\delta_t^p = \frac{1}{(1+r_t^p)}$ is the discount factors for poor and $\delta_t^R = \frac{1}{(1+r_t^R)}$ the discount factor for rich.

Proposition 2: Transfer raises money metric expected utility of poor and reduces the utility of rich.

$$\sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\sum_{t}^{T}\left[\pi_t^p(s,l,k)\delta_t^p u\left(y_t^p(s,l,k)\right) + \sum_{t}^{T}T_t^p(s,l,k)\right]$$

$$< \sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\left[\sum_{t}^{T}\pi_t^R(s,l,k)\delta_t^R u\left(y_t^R(s,l,k)\right) - \sum_{t}^{T}T_t^R(s,l,k)\right] \tag{5}$$

Proposition 3: Incentive compatibility requires that

$$\sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\sum_{t}^{T}\left[\pi_t^p(s,l,k)\delta_t^p u\left(y_t^p(s,l,k)\right) + \sum_{t}^{T}T_t^p(s,l,k)\right]$$

$$> \sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\sum_{t}^{T}\pi_t^p(s,l,k)\delta_t^p u\left(y_t^p(s,l,k)\right) \tag{6}$$

and

$$\sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\sum_{t}^{T}\pi_t^R(s,l,k)\delta_t^R u\left(y_t^R(s,l,k)\right)$$

$$> \sum_{s=1}^{s}\sum_{l=1}^{l}\sum_{k=1}^{k}\left[\sum_{t}^{T}\pi_t^R(s,l,k)\delta_t^R u\left(y_t^R(s,l,k)\right) + \sum_{t}^{T}T_t^R(s,l,k)\right] \tag{7}$$

Proposition 4: Growth requires that income of both poor and rich are rising over time:

$$T_t^p(s,l,k) < T_{t+1}^p(s,l,k) < T_{t+1}^p(s,l,k) < ..... < T_{t+T}^p(s,l,k) \tag{8}$$

$$Y_t^R(s,l,k) < Y_{t+1}^R(s,l,k) < Y_{t+1}^R(s,l,k) < ..... < Y_{t+T}^R(s,l,k) \tag{9}$$

Proposition 5: Termination of poverty requires that every poor individual (Y_t^p) has at least the level of income equal to the poverty line determined by the society. When the poverty line is defined by one half of the average income (Y_t^h) this can be stated as:

$$Y_t^p(s,l,k) \geqslant \frac{1}{2}\left(\frac{1}{N}\sum_{h=1}^{N}Y_t^h(s,l,k)\right) \tag{10}$$

Above five propositions comprehensively incorporate all possible scenarios in the poverty game mentioned above. Propositions 2-5 present optimistic scenarios for a chosen horizon T.

Mechanism for Poverty Alleviation: Tests

- Testing above propositions in a real world situation is very challenging exercise.

- It requires modelling of the entire state space of the economy.

- Moreover in real situation consumers and producers are heterogeneous regarding their preferences, endowments and technology and economy is more complicated than depicted in the model above.

- In essence it requires a general equilibrium set up of an economy where poor and rich households participate freely in economic activities taking their share of income received from supplying labour and capital inputs that are affected by tax and transfer system as illustrated in the next section.

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3.2 Consumers' Intertemporal Problem

In the model representative households located in urban and rural areas of the economy allocate lifetime income to maximize utility over an infinite horizon; i.e.

$$\max \sum_{t=0}^{\infty} \beta^t U(C_t^h) \tag{11}$$

where β is the the discount factor, and it depends on the rate of time preference; C_t^h is composite consumption; U is a time separable utility function. We choose a constant relative risk aversion (CRRA) CES utility function to represent U in (1).[4] $\sigma = 1$, $U(C_t) = \log C_t$.

$$U(C_t^h) = \frac{\left(C_t^h\right)^{1-\sigma} - 1}{1 - \sigma} \tag{12}$$

here $1/\sigma$ measures the elasticity of substitution between the present and future consumption. The smaller is σ the more slowly marginal utility falls as consumption rises, so households are more willing to allow changes in consumption over time. Thus smaller σ implies higher elasticity of substitution between current and future consumption or the higher degree of consumption smoothing and substitution over time.

Each type of households faces an inter-temporal budget constraint which implies that its the present value of consumption cannot exceed its present value of life time income (wealth).

$$\sum_{t=0}^{\infty} R_t^{-1} P_t C_t^h = W H^h \tag{13}$$

where, $R_t^{-1} = \prod_{s=0}^{t-1} \frac{1}{1+r_s}$ is a discount factor to convert future expenses in the present value terms; r_s represents the real interest on financial assets; P_t is vectors of relative prices, and C_t is composite consumption goods, which is composed of sectoral consumption goods,

$$C_t = \Pi i = 1 n C_{i,t}^{\alpha_i^h} \tag{14}$$

where α_i^h gives the share of spending on good i by household h. $W H_h$ is the life time wealth of household h and is defined as:

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[4]When

$$WH_h = \frac{J_0^h}{1 + r_0^c} + \frac{J_1^h}{(1 + r_0^c)(1 + r_1^c)} + .. + \frac{J_2^h}{\Pi_s^h (1 + r_0^c)} + ... = \sum_{t=0}^{\infty} R_t^{-1} J_t^h \qquad (15)$$

where J_t^h is disposable household income in period t. It includes labor and capital income plus transfers.

We combine equation (1) to (4) to form Lagrangian of consumers' the intertemporal allocation problem in (5).

$$\Im^h = \sum_{t=0}^{\infty} (\frac{1}{1 + \rho})^t (\frac{C_t^{h1-\sigma} - 1}{1 - \sigma}) + \lambda.[\sum_{t=0}^{\infty} R_t^{-1} P_t C_t^h - WH_t^h] \qquad (16)$$

Here, λ is the shadow price of income in terms of present value of utility, and β in (1) is replaced by $\frac{1}{1+\rho}$, where ρ is the rate of time preference. We derive consumption function by taking first order condition on (5):

$$\frac{C_{t+1}}{C_t} = \left(\left(\frac{1 + r_t}{1 + \rho} \right) \frac{P_t}{P_{t+1}} \right)^{\frac{1}{\sigma}} \qquad (17)$$

or using a steady state assumption on the growth rate

$$C_{t+1} = \left(\left(\frac{1 + r_t}{1 + \rho} \right) \frac{P_t}{P_{t+1}} \right)^{\frac{1}{\sigma}} C_0 (1 + g)^{t-1} \qquad (18)$$

Thus the consumption level at time t, in the steady state, is a function of growth rate, the rate of interest and intertemporal prices of commodities. Consistency of the intertemporal budget constraint implies that:

$$\sum_t R_t^{-1} [C_0 + \Omega_1 C_0 + \Omega_2 C_0 + ...] = WH^h \qquad (19)$$

where

$$\Omega_t = [\beta^t R_t^{-1} \frac{P_t}{P_0}]^{\frac{1}{\sigma}} \qquad (20)$$

Economy wide savings is total of household savings, S_t^h, which in turn is the portion of income not consumed:

$$S_t = \sum_h S_t^h = \sum_h J_t^h - \sum_h C_t^h \qquad (21)$$

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The consumption saving decisions are two sides of the same coin. Once we know the level consumption we also know the level of savings. Saving like consumption is influenced by the rate of interest prevailing in the economy and the time preference of individuals. The efficiency in the financial system can contribute to rise in the level of saving, depending upon the value of σ, by influencing the decision between the current and future consumption and reducing the wedge between the cost of capital to investors and gains received by the savers.

Savings of households are intermediated through the financial institutions to investors, who use those savings to purchase investment goods from different sectors. Like consumers investors in each of n production sectors solve an intertemporal profit maximization problem. They combine goods produced in a set of n sectors to deliver an unit of investment in sector j. Therefore, the unit cost of investment in sector j is a weighted average of the prices of components of sector n goods used for investment purpose. One unit of investment at period t produces once unit of capital stock in period $t + 1$:

$$\prod_{j,t}^{I} = P_{j,t+1}^{k} - \sum_{i} P_{i,t} a_{i,j}^{I} \leq 0 \tag{22}$$

Here $\prod_{j,t}^{I}$ is profit from one unit of investment at period t, $P_{j,t+1}^{k}$ is the price of capital in period $t + 1$, and $a_{i,j}^{I}$ is the investment coefficient matrix. One unit of capital at the start of period 1 generates a rate of return ($r_{j,t}^{k}$) today and delivers $1 - \delta$ unit at the start of the subsequent period. The arbitrage condition in capital accumulation implies that:

$$\prod_{j,t}^{k} = (1 - \delta) P_{j,t+1}^{k} + r_{j,t}^{k} - P_{j,t}^{k} \leq 0 \tag{23}$$

Entering capital (K_0) stock is transferred into initial capital stock for the various sectors, $K_{i,0}$, according to a fixed coefficient transformation process. Once the initial capital is allocated among different sectors, $K_{i,t}$, the law of motion of capital in a sector is explained by the following equation.

$$K_{j,t+1} = I_{j,t} + (1 - \delta_K) K_{j,t} \tag{24}$$

where,

$$I_{j,t} = \sum_{j=1}^{J} a_{i,j}^{I} I_{j,t} \tag{25}$$

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Net investment demand, $I_{i,t}$, in each sector is the sum of investment by origin. The relationship given by $a^I_{i,j,t}$ is called capital coefficient matrix of the economy.

We assume that in the terminal period the investment in each sector grows at the rate of the population so that economy can continue along the steady state growth path even after the terminal period as given by the following equation.

$$I_{j,t} = (g + \delta_{K,j})K_{j,t} \tag{26}$$

g = growth rate of the economy, which equals the growth rate of the labor force in terms of efficiency units, and δ_K = rate of depreciation.

Holding aggregate stock of capital fixed to the savings of households in the beginning of each period, the objective of firms in jth sector of the economy is to maximize the present value of profit subject to the constraints of production technology. Zero profit for sector j written in dual form in terms of composite prices of commodities and inputs is the following form (See appendix for details):

$$\Pi^y_{j,t} = [(\theta^x_j PX^{1+\eta}_{j,t} + (1 - \theta^x_j)PD^{1+\eta}_{j,t})]^{\frac{1}{1+\eta}} - \theta^v_j PV^v_j - (1 - \theta^v_j)\sum_j a_{i,j}P_{i,t} \leq 0 \tag{27}$$

The exact meaning of the symbols of the above profit function are following:

$\Pi^y_{j,t}$ unit profit of activity in sector j

$PX_{j,t}$ price of exports

$PD_{j,t}$ price of domestic sales

PV^v_j price of value added per unit of output in activity j

$P_{i,t}$ price of final goods used as intermediate goods

θ^x_j share parameter for exports in total production

θ^v_j share of costs paid to labor and capital

$a_{i,j}$ input output coefficients.

This equation (27) is a unit profit function. The profit of operating these firms are given by the differences between the revenue from sales and the cost of supply. The unit revenue function is constant elasticity transformation (CET) composite of unit price of domestic sales and unit price of exports. The unit costs are divided between value-added, i.e. payments to labor and capital, and the unit intermediate input costs. In this model, the gross output in each sector is given by a nested production function between the value added and the intermediate inputs.

$$Y_{j,t} = \min(V_{j,t}, a_{i,j}Y_{j,t}) \tag{28}$$

Where $Y_{j,t}$ is the output of sector j in period t, $V_{j,t}$ is the value added part and

$a_{i,j}$ is the intermediate inputs per unit of gross output produced in sector j.

We use Shephard's lemma to derive the demand for labor and capital from (27). The demand for labor is:

$$L_{j,t} = Y_{j,t} \frac{\partial \prod_{j,t}^V}{\partial PV_{j,t}} \frac{\partial PV_{j,t}}{\partial PL_{j,t}} \tag{29}$$

where $L_{j,t}$ is a composite of rural (unskilled) and urban (skilled) labor. Equilibrium in the labor market requires that demand for labor be equal to supply of labor:

$$\sum_j L_{j,t} \frac{\partial \Pi^L}{\partial PL_t^{LC}} \le \overline{L}_t \tag{30}$$

$\overline{L}_t$ in the above equations is a composite of urban and rural labor. The ratio of urban to rural labor employed by firms mainly depends upon the ratio of urban to rural wage rates.

The demand for capital in sector j, again by Shephard's lemma is given by:

$$K_{j,t} = Y_{j,t} \frac{\partial \prod_{j,t}^V}{\partial PV_{j,t}} \frac{\partial PV_{j,t}}{\partial PK_{j,t}} \tag{31}$$

where $Y_{j,t}$ is activity level; $PK_{j,t}$ is price of capital $PV_{j,t}$ is price of value added. In equilibrium the demand for capital is equal to its supply:

$$\sum_j K_{j,t} = \overline{K}_t \tag{32}$$

$\overline{K}_t$ is the aggregate capital stock in the economy, which grows according to the low of motion of capital stock as given by equation 13. $\sum_j K_{j,t}$ is the total demand for capital by various sectors of the economy.

When an economy is repressed, the arbitrage condition implied by (9)

$$P_{j,t+1}^k = \sum_{j=1}^{J} P_{j,t} a_{i,j}^I \tag{33}$$

does not exactly hold. There is additional distortionary cost $\tau_{j,t}$ on top of the cost of materials required for per unit investment. The overall cost of investment is rather given by:

$$P_{j,t+1}^k = (1 + \tau_{j,t}) \sum_{j=1}^{J} P_{j,t} a_{i,j}^I \tag{34}$$

where $\tau_{j,t}$ = per unit wedge between the return to saving and the cost of investment. $P_{j,t+1}^k$ = present value price of sector j capital at the beginning of next period; P = present value price of sector i commodity at period t.

In repressionary situation certain portion of saving dissipates in the process of financial intermediation. Therefore the total investment in the economy less than the total savings i.e. the amount of savings net of intermediation costs. Moreover, additional resources may be available by liquidating the real unproductive assets (ΔRA) of the households and firms.

$$c(S_t - \Delta RA_t) = I_t \tag{35}$$

Here c is the proportion of saving available for investment purpose, or, $1 - c$ being the cost of financial intermediation. In this model cost of financial intermediation is represented by the distortionary cost of repression.

3.3   Calibration to a Steady State

In the steady state all sectors of the economy grow at the same rate, g. The bench mark rate of return is calibrated assuming the non-distorted economy being in the steady state in the base year. Calibration of dynamic component follows the relationship between the current and future prices of capital and investment goods. Specifically, investment produces one unit of capital stock in period 2 (P_2^k) from one unit of output in the period one, P_1^I. The present value of one unit of capital in period 2 is equal to $(1 - r)P_1^k$.

$$P_1^I = 1 = P_2^k = (1 + r) P_1^k \implies P_1^k = \frac{1}{1 - r} P_2^k \tag{36}$$

Here $1 - r$ is the discount rate between two periods, and is approximation to $\frac{1}{1+r}$

$$\frac{P_{t+1}^k}{P_t^k} = (1 - r) \tag{37}$$

One unit of capital at the beginning of period one earns a rate of return today, r_1^k and delivers $1 - \delta$ unit of capital for the start of the next period.

$$P_1^k = r_1^k + (1 - \delta)(1 - r) P_2^k \tag{38}$$

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This relationship applies to all other periods included in the model. Using base year prices equal to 1 to P_2^k and P_1^k by using relationship between P_2^k and P_1^k we get:

$$\frac{1}{1-r} = r_1^k + (1-\delta) \tag{39}$$

which gives the cost of capital to be equal to the rate interest plus the rate of depreciation:

$$r_1^k = \frac{r}{1-r} + \delta \tag{40}$$

.   The base-year social accounting matrix (SAM) contains information on capital income V_1 and it is related to rate of return and capital stock, $V_1 = r_1^k K_1$. Now substituting for r_1^k between the steady state interest rate r and the parameters of the model:

$$K_1 = \frac{V_1}{\frac{r}{1-r} + \delta} \tag{41}$$

Then substituting this value of K_1 in I_1 function the relationship between the investment and capital earning component of value added may be expressed as:

$$\frac{I_1}{V_1} = \frac{g+\delta}{\frac{r}{1-r} + \delta} \tag{42}$$

If the ratio of investment and capital earning ($\frac{I_1}{V_1} = 1$) is equal to one then $g = \frac{r}{1-r}$ or $r = \frac{g}{1+g}$. When $\frac{I_1}{V_1} \neq 1$, then the key parameter to calibrate is the rate of depreciation, which can be calculated using the relationship between the interest rate, growth rate, depreciation and earning of capital as following :

$$\delta_j = g\frac{V_j}{I_j - V_j} - \frac{r}{1-r}\frac{I_j}{I_j - V_j} \tag{43}$$

In a repressionary regime the cost of capital is distorted by a repressionary component of intermediation, τ_j. This can be expressed as:

$$r_1^k = \frac{\overline{r}_1^k}{1 - \tau_j} \tag{44}$$

here r_1^k is actual cost of capital, $\bar{r}_j^k$ is rate of interest in steady state, and τ_j is distortionary element in the financial market. The price of capital becomes

$$P_1^k = r_1^k \left(1 - \tau_j\right) + \left(1 - \delta\right)\left(1 - r\right) P_2^k \tag{45}$$

or the cost of capital

$$r_1^k = \frac{1}{1 - \tau_j} \left[\frac{r}{1 - r} + \delta\right] \tag{46}$$

Now adjusting (26) to take account of distortions in the capital market :

$$\frac{I_1}{V_1} = \frac{g + \delta}{\frac{r}{1-r} + \delta} \left(1 - \tau_j\right) \tag{47}$$

or

$$\tau_j = 1 - \frac{\bar{r}_j^k}{\delta + g} \frac{I_j}{V_j} \tag{48}$$

Thus the spread between the true cost of capital $\bar{r}_j^k$ and the actual cost of capital r_1^k depends upon the ratio of investment to capital and ratio of natural rate of interest to depreciation plus the growth rate of the economy.

3.4 Government Budget and BOP Closures

In the core part of the model the government's budget is balanced in every period, and, therefore government is not involved in intertemporal savings. This essentially implies all government expenditure is basically the government consumption.

The sources of revenue for the government are taxes on value added[5], tariffs on imports, sales taxes, income taxes and capital taxes. Lump sum income taxes are collected from total household income, and such income taxes are assumed to grow at the rate of population growth rate. In addition there are other sources of government revenue such as export taxes, taxes on tourism, revenue generated from import-licensing and refund of excise taxes from India.

Government transfers its revenues to households and firms in the form of con-

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[5]From the fiscal year 1996/97 the government is adopting a value-added tax (VAT) system to replace sales and excise taxes imposed on consumers and producers. Given the self-enforcing mechanism of VAT against other indirect taxes are believed to reduce leakage of tax-revenues, though its implementation seem challenging if one considers illiteracy of 67 percent of population in the country. In ideal conditions revenue generated from VAT and taxes on the final product would be the same.

sumption and production subsidies, and it also serves domestic and foreign debt. In the core part of the model we assume all sorts of government non-transfer spending to public consumption.

This is an open economy model. We follow standard Armington specification of international trade in this model. For each tradable sectors constant elasticity of transformation (CET) function defines relation between exports and domestic supply, and constant elasticity of substitution (CES) function explains relation between domestic supply and imports in forming a composite good that goes to the utility function of the households. We use two level nests in trade to take account of different natures of trade relations between India and rest of the world (ROW). More detailed discussion of trade specification is available elsewhere (see Bhattarai (1997, 2007, 2017) and also the appendix of this paper).

We consider two rules of BOP closure. In the first case no foreign borrowing is allowed; imports need to be paid by exports[6]·In the second case intertemporal borrowing and lending is permitted. It is presented in the form of CAPFLOW scenario in the next section.The elasticities of substitution between domestic and imported products in consumption and the elasticity of transformation between domestic sales and foreign sales are taken based on sensitivity analyses.

Finally, the market clearing condition for goods market is given by:

$$A_{j,t} = C_{j,t} + \sum_{j=1}^{12} a_{i,j} Y_{j,t} + G_{j,t} + \sum_{j=1}^{12} a_{i,j}^I I_{j,t} + DST_{j,t} + TD_{j,t} \qquad (49)$$

here $A_{j,t}$is total supply in the economy in a sector j should be equal to sum of various components of demand as given on the right hand side, i.e. the consumption of households: $C_{j,t} = \sum_h C_{j,h,t}$, intermediate demands: $\sum_{j=1}^{12} a_{i,j} Y_{j,t}$, , government demand: $G_{j,t}$, investment demand: $I_{j,t} = \sum_j a_{i,j} I_{j,,t}$, inventory demand: $DST_{j,t} = DSTR_{j,t} \cdot Y_{j,t}$, and demand by tourists: TD_t^s; for simplicity we assume that demand by tourists grows at the rate of growth of the economy.

3.5 Definition of a competitive equilibrium

A competitive equilibrium is a set of sequences of prices of composite commodities, $P_{i,t}$; prices of domestic goods sold in domestic markets, $PD_{i,t}$; prices of exported commodities, $PX_{i,t}$; prices of capital goods , $P_{j,t}^k$; prices of terminal capital ,

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[6]. In the model number of sectors trading with placecountry-regionIndia and rest of the world are seven and eight respectively.

$PTK_{j,t}$; wage rates for each categories of labor, $w_{h,t}$; prices of government services, PG_t; prices of provisions for tourism, PT_t; value of transfers to the households, PR_t; prices of consumption, PU_t; welfare index, PW_t; rental rate of capital for each sector, r_1^k: $R_+ \rightarrow R$, and sequences of gross output, $Y_{i,t}$; total supply of commodities, $A_{i,t}$; sectoral capital stock, $K_{i,t}$; sectoral investment, $I_{i,t}$; exports, $X_{i,t}$; government services, GOV_t; level of household utility from consumption, U_t; and total welfare, W such that given these prices and commodities

1. households solve intertemporal utility maximization problems subject to life time income constraints,

2. investors solve intertemporal profit maximization problem subject to arbitrage conditions in capital markets

3. producers solve their profit maximization problem subject to technology and resource constraints

4. markets for goods and services, labor , capital clear

5. government account constraints are satisfied,

6. balance of payments condition is fulfilled

7. financial markets are in equilibrium

In this equilibrium, consumers have perfect foresight, capital accumulation is consistent with households optimization, income and expenditure balance over the life period. An agent is doing the best he can in light of actions taken by others and actions taken together are technically feasible. This ensures the compatibility of plans of individuals or correspondence between consumers' preferences and firms' technology.

There are mainly two limitations of this model. First, analytical solution of this model is very complex and unrewarding. We rely on numerical methods that generate a set of relative prices consistent with the equilibrium. Absolute prices do not matter in general equilibrium models, it generates the same equilibrium even if all prices are multiplied by a constant. For analyses of model results we basically compare ratios of prices in terms of a numeraire in benchmark and counter-factual scenarios, not the absolute differences in prices.

Second, the model presented here does not contain any adjustment costs or penalties. The role of dynamics in such a model is not to show the pattern of adjustment, but to track the prices of commodities with a multiperiod character, e.g. the capital

stock. The model is suitable to study the impact of a certain policy that changes the steady state of the model and thus the growth and welfare of the households over a model horizon.

In spite of these limitations the model is capable of generating results that are interesting from a point of view of a policy maker. We use a welfare index as the criterion for making the best policy choice from the various options available to a policy maker.

3.6 Measure of Welfare

General equilibrium solutions are used to compute equivalent or compensating variations in consumer welfare from given changes in policy regimes. In this model the overall welfare is given by sum of utility over periods measured in terms of prices of composite consumption.

$$UW^h = \sum_t^\infty PU_t^h U_t^h \tag{50}$$

Here UW^h is a measure of welfare to household h for the period of model horizon, PU_t^h is the price of composite consumption in period t, and U_t^h is the utility to a household from consumption of goods and services in the economy.

We use welfare measures in order to quantify the impacts of various policy measures. A policy experiment that has greater value of UW^h is more desirable than the one with lower one.

4 Interactions of model with beliefs

The process of negotiations among various parties should be based objectively in an economic model as above as it is possible to compute the optimal level of saving, investment, capital formation and growth objectively in such a set up. There is little room for illusions, misunderstanding and distrust when the negotiations are based on such models:

$$\max \sum_{t=0}^\infty \theta^t x_{i,t} = \sum_{t=0}^\infty \left\{ \theta^t L_i \left(S_{1,t}, S_{2,t}, ..., S_{n,t}; b_{0,t}, b_{1,t}, b_{2,t}, ..., b_{n,t}; M_t \right) \right\} \tag{51}$$

5 Parliament and Government 2018

Constitution of the federal republic of Nepal 2015 has set two criteria for a national party. It should win at least one FPTP seat of 165 constituencies and it should get at

	NCP	NC	FSFN	RJPN	Others	Vacant	Total	FPTP	PR
House of Representatives	174	63	16	17	5	0	275	165	110
Upper House	42	13	2	2	0	0	59		
Province 1	66	21	3	0	3	0	93	56	37
Province 2	32	19	29	25	2	0	107	64	43
Province 3	81	21	0	0	8	0	110	66	44
Gandaki	39	15	0	0	6	0	60	36	24
Province 5	61	19	5	1	1	0	87	52	35
Karnali	32	6	0	0	1	1	40	24	16
Sudurpashchim	39	12	0	2	0	0	53	32	21
Total	566	189	55	47	26	1	884	495	330

	FPTP			Proportional			
	Votes	%	Seats	Votes	%	Seats	Total
CPN (Unified Marxist–Leninist)	3082277	30.68	80	3173494	33.25	41	121
Nepali Congress	3590793	35.75	23	3128389	32.78	40	63
CPN (Maoist Centre)	1510760	15.03	36	1303721	13.66	17	53
Rastriya Janata Party Nepal	458409	4.56	11	472254	4.95	6	17
Federal Socialist Forum, Nepal	527924	5.26	10	470201	4.93	6	16
Bibeksheel Sajha Party	96233	0.96	0	212366	2.22	0	0
Rastriya Prajatantra Party	118318	1.18	1	196782	2.06	0	1
Rastriya Prajatantra Party (Democratic)	123797	1.23	0	88377	0.93	0	0
Naya Shakti Party, Nepal	84037	0.84	1	81837	0.86	0	1
Rastriya Janamorcha			1	62133	0.65	0	1
Nepal Workers Peasants Party			1	56141	0.59	0	
Total			165	9544744	100	110	275

least 3 percent of the popular vote. Nearly 100 party contested the election but only five of them could meet these two criteria; CPN-UML, NC, CPN-Maoists, Rastriya Janata Party Nepal and Federal Socialist Forum Nepal.

Election was contested vigorously. It would have been a hung parliament if the UML and CPN-Maoists had not aligned. Communist alliance was formed and they were able to earn nearly 64 percent of votes in the parliament (44% of NCP and 19.% of the CPN-Maoist followed by 22.9% of the NC). Popular vote however had placed NC (32.8%) right behind the UML. More important thing was the unity between the UML and the Maoist that created a Nepal Communist Party (NCP). With mergers of communists in one party and the NC on the other was considered a welcome development for Nepal. NCP clearly had an absolute majority and axpectations of people for economic development and growth were quite high from this government.

The NCP with 174 out of 165 seats in the Upper house and party with majority in six out of seven provinces emerged as a dominant party in Nepal after the 2017 election. It had 566 out of 884 putting central and provicial constituencies. FSFN and RJPN hold just a simple majority in Province 2.

Why was the NCP so popular this time? Besides radical promises in the manifesto that included a double digit growth, rapid development of road and waterways and railways, free education up to the secondary level , free primary care, tourism to attract 2 million tourists, raising the life expectancy, urbanization and electricity,

most people believe that anti-India stance of the communists during 2015-16 undeclared embargo by India made them popular among people this time. NC was not as vocal as the UML to protest India at that time.

5.1   Constituent Assemblies 2013 and 2008 of Nepal

People are principals and MPs are their agents in the principal agent game. When the CAN-I, with Maoists as the major party as shown in Table 2, dissolved without promulgating a constitution of Nepal on May 28, 2012 people changed their beliefs about the true intention and commitment of the CPN (Maoists) towards development and their ability to promulgate a constitution of Nepal. They refined their beliefs about the Nepali Congress and CPN-UML and other Tarai based parties. This change is reflected in the structure of the CAN-II that was elected on November 19, 2013, as shown in Table 3. Still CAN-II also was as hung as CAN-I as before but the share of the Nepali Congress increased to 33.9 from 19.3 percent and that of CPN-UML increased to 30.4 from 18.0 percent. The share of CPN (M) reduced to 14 from 38.1 percent. The CPN (M) became weak and is no longer in a position of dreaming a totalitarian system in Nepal. After the constitution was promulgated on 20 September 2015, the CAN-II became a regular parliament of Nepal to operate till the general election was held under this new constitution. It is irony that the NC that struggled so much in promulgating the constitution was rooted out of the power by a coalition of communist parties, CPN-UML and CPN-Maoist in the 2017 election. NCP not only formed the cabinet, but also elected their member to the president and deputy presidents of Nepal as well as to speaker and deputy speakers of the parliament. The NC is reorganizing now to fight back the share of power that it lost still as the main political party in the country at least to as shown in Table 3.

Political events after the promulgation of the new constituion shows that political leaders of Nepal still seem to be confused in understanding the basic facts that the gains from the commitment and cooperation should be much larger than of noncooperation to form coalition or in realising that the benefits of dynamic optimisation are far greater than zero sum game being played at the moment. It is important to rethink about the true and realistic social welfare function such as $W(Y, S)$ where

Table 2: Members of First Constituent Assembly by Political Parties in Nepal

	Total	Maoist	NC	UML	MPRF	TMLP	Others
Total	601	229	116	108	53	21	74
FPTP	240	120	38	33	29	9	11
Proportional	335	100	73	70	22	11	59
Nomination	26	9	5	5	2	1	5
Percentage	100%	38.1%	19.3%	18.0%	8.8%	3.5%	12.3%
Source: Constituent Assembly of Nepal (CAN-I, 2008-2012).							

Table 3: Members of Second Constituent Assembly by Political Parties in Nepal

	Total	NC	UML	Maoist	MPRF	RPP	Others
Total	601	204	183	84	15	11	103
FPTP	240	105	91	26	4	0	14
Proportional	335	91	84	54	10	10	86
Nomination	26	8	8	4	(0)1	1	(0)3
Percentage	100%	33.9%	30.4%	14.0%	2.5%	1.8%	17.1%
Source: Constituent Assembly of Nepal (CAN-II, 2013-2017).							

Y denotes the level of aggregate economic activities and its growth rates and S the stability of the system. Resources wasted in the process of unsuccessful coalition formation deter the economy from achieving the more efficient and Pareto optimal solution. For instance, Nepal has not been able to utilise the resources pledged for the restoration and rehabilitation activities after the major earthquake. This was one of the reason why India reduced the aid to Nepal by 40 percent in it 2016 budget in March 2016. Reinvigorate the spirits of April 2006 Revolution. It is important to think why Nepal's per capita income is one third of India and about 12 percent of China though it had similar per capita income with them till 1980. Political instability in the last two decades has been very costly to Nepal. These could have been decades of spectacular growth but turned into the decades of disaster. There cannot be bigger irony than this in the context of Nepal and cooperative strategies of each political party is the only way to sort out this problem. Credibility, respect and commitment only can make this happen. There is more need for this now than before.

6   Conclusion

Nepal made significant progress in removing monarchy and terrors of Maoists in the last decade. It however lacks a stable solution of speedier economic growth and development as the major political parties are still struggling to institutionalize the new political framework set up by the new constitution of Nepal that was promulgated by the Constitution Assembly of Nepal (CAN-II) for the federal democratic republic of Nepal on 20 September 2015. Madesh based parties did not accept the new constitution, this caused an undeclared embargo by India. Nepalese economy crippled by the mighty earthquake of April 2015 got further paralyzed due to this blockage. This has slowed down the process of demarcation of provinces, election of provincial assemblies and government, election of the national government. Setting up strategy for growth and development in Nepal with the multiparty structure with focus on broader objectives of national development, alleviation of poverty and speedier economic growth and design of programmes suitable to multi-ethnic, multi-climatic and multi-cultural and multi-linguistic inclusive frameworks would be possible only when the new set up is complete. Nepal should stick to a dynamic model of growth and development for a decentralized economy to update on beliefs that can transform the nation improving wellbeing of all people in Nepal. After the constitution was promulgated on 20 September 2015, the CAN-II became a parliament of Nepal. It is irony that the NC that struggled so much in promulgating the constitution was rooted out of the power by NCP, a coalition of former CPN-UML and CPN-Maoist, which not only formed the cabinet, but also elected their member to the president and deputy presidents of Nepal as well as to speaker and deputy speakers in the parliament.

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