THE ECONOMIC JOURNAL OF NEPAL, VOL. 44, No. 3 & 4, July-Dec. 2021, (Issue No. 156) © CEDECON-TU
DOI: https://doi.org/10.3126/ejon.v44i3-4.55075

A Proposal for Capitalization of Remittances in Nepal

Bishnu Prasad Gautam[1]

Abstract

Inflow of personal remittances has exceeded 20 percent of the gross domestic product (GDP) of Nepal for several years. Compared to foreign direct investment (FDI) or foreign aid (grants & loans), the money injected to the economy of Nepal through remittances is markedly larger. Huge investment in the real estate sector and large sums of money applied for share subscription indicate the need and opportunities of channelizing remittances in the infrastructure development and productive sector. However, most studies on remittances are focused on the ex-post analysis of the economy and few studies focus on the planning and policy issues aimed to utilize remittances. This paper reviews literature on utilizing remittance money and analyzes the prospects of capitalizing remittances in Nepal. A conceptual model is proposed on utilizing remittance money for infrastructure development. The proposed model of a remittance investment trust aims to synergize the three best attributes of the three domains of stakeholders, namely, abundant remittance money of the people, excellent management skills of the private sector, and the superior public trust to the government. Remittance money can serve as a great investment vehicle for executing properly investigated and attractive infrastructure projects. As estimated for Lumbini province, the remittance investment trust may contribute to fulfill 20% of the deficit of investment towards achieving the sustainable development goals. While the model is proposed for a province, it is expected to be replicable to the national and sub-national governments in Nepal.

Keywords: *Capitalization, Remittance, Infrastructure, Investment, Nepal.*

JEL Classification: *F41, F24, H54, E22*

Introduction

The world is heading towards achieving sustainable development goals (SDGs) by 2030 and development initiatives at the global, regional, national,

[1]**Dr. Gautam** is a Technical Director at Sarthak Concrete Pvt. Ltd. Bharatpur-29, Chitwan, Nepal; Ex-member: Province Planning Commission, Lumbini Province, Nepal. Email: bgautam@gmail.com; ORCID: https://orcid.org/0000-0001-6782-8927

provincial and local levels should focus on this global commitment. The goals collectively represent a plethora of development aspirations, and attainment of them could perhaps be regarded as the greatest shared challenge faced by the mankind during this decade. Country-specific focus on approaches and instruments can however be significantly different. Infrastructure development for SDGs will require investment equivalent to 4.5 to 8.2 percent of low and middle income countries' GDP during 2015-2030 (Rozenberg & Fay, 2019). South Asian countries will require even more investment in the range of 6.6 to 9.9 percent of their GDP (Rozenberg & Fay, 2019). The annual resource deficit in Nepal is estimated at U.S. $ 5.8 billion (NPC, 2017). This warrants for exploring all possible ways of channeling more funds towards the development of Nepal.

Foreign remittance in Nepal started increasing in 1990s and it skyrocketed since 2002. Nepal ranked as the 5th largest country in terms of the ratio of remittance to GDP in 2020 (World Bank, 2021). Remittance money is an increasingly large and reliable source and will be an important financial resource for Nepal over the medium term (World Bank, 2018). Remittances are far larger than the FDI and the overseas development assistance (ODA). For instance, the ratio of the sum of foreign loans and grants to GDP was 3.6 percent in 2019-20 and it hovered between 3.6 percent and 4.33 percent for the past five years (FCGA, 2021). However, remittances are not regarded as a mainstream entry in the national accounting system (FCGA, 2021). With contribution of slightly more than one-fourth of the GDP (i.e. 26.2%; MoF, 2021), agriculture is the largest sector to contribute to the GDP of Nepal. This size is approximately similar to that of the remittance inflow. While their sizes are comparable, their priorities in the plans, policies, and programmes are vastly incomparable.

Agriculture sector has received huge priority in the national, provincial, and local levels of governments in Nepal but remittances receive markedly smaller attention of the national government and almost no attention of the sub-national governments. This paper highlights the need of introducing systematic ways of capitalizing remittances in Nepal. By analyzing the trend of exchange rate, the money drawn to stock market, and the scenario of land price in Nepal, this paper demonstrates the availability of remittance money in Nepal waiting for opportunities of capital investment. Specific areas suitable for investing the capital formed through remittances are highlighted. A conceptual model of an investment vehicle is proposed for utilizing the remittance money for the development of capital intensive infrastructure.

Review of Literature

In Nepal, remittance receiving families primarily use remittances for consumption purposes (Dhakal & Maharjan, 2018; Sapkota, 2013). If managed with clear plans, remittances can act as catalysts for development. On the other hand, lack of planning on the use of remittances can have negative effects as

evidenced by a number of macro-indicators such as relative wages and prices, market segmentation, government spending, investment and money supply, factor productivity, competitiveness, inflation, and exchange rates (Dhakal & Maharjan, 2018; Sapkota, 2013). Seddon et al. (1998) highlighted the lack of adequate priority to remittances in the national policies of Nepal even when remittance was just burgeoning. Hagen-Zanker (2014) identified potential products and policies to leverage productive use of remittances in Nepal. The study stressed on the development of policies to maximize the benefits of remittances in achieving economic development.

Dhakal & Maharjan (2018) recommended that government should devise schemes and policies to channelize remittance into productive projects. Many other studies have also recommended to utilize remittance for the economic development of Nepal (Budhathoki, 2017; Gaudel, 2007; Kapri & Ghimire, 2020; Sah, 2019; Sapkota, 2013). Pant (2011) stressed on harnessing remittances for the productive use in Nepal. The study focused on encouraging remittance inflow, channelizing them through formal channels, and using them for productive uses. However, capitalization of remittances is not adequately reflected in documents of policies, plans, and programmes.

In the global arena, studies have revealed mixed outcomes of remittances about their impact on the economic growth and development. Agunias (2006) conducted a literature review on the trends, impacts and policy options on remittances and development. The review suggested that policy initiatives are essential to maximize the benefits of remittances. The analysis revealed that remittances had significant positive contribution to the economic growth of Pakistan (Qayyum et al., 2008; Shafqat et al., 2014).

Remittances were found to have significant positive contribution to the economic growth of Azerbaizan and Armenia (Azam & Khan, 2011). However, remittance money was reported as an insignificant source of capital for the economic growth of Bangladesh (Ahmed, 2010). Sutradhar (2020) studied the impact of remittances on the economic growth in Bangladesh, India, Pakistan, and Sri Lanka. Except India, the given three countries were reported to have negative impact of remittances on the economic growth. No systematic planning on capitalizing remittances is reported in these four countries. Based on a panel data analysis for 20 years, remittances were shown to have negative long run impact on the economic growth of BRICS countries (Pradhan, 2016).

Raza and Jawaid (2014) studied the economic data of 18 Asian countries, including Nepal, and concluded that remittances have significant positive relationship with the economic growth in the short term even though it appeared insignificant in the long run. The analysis was performed for the data from 2000 to 2010 when Nepal did not have any policies to utilize remittances in the productive sector (Sapkota, 2013). While a plethora of studies focus on the

impact of remittances on national economies, most of them suffer from a common limitation: the studies perform ex-post analysis of the national economies in which remittances entered without any concerted government efforts to channelize them. Hardly, any studies focus on planning initiatives (ex-ante analysis) to capitalize remittance for building national economy. Furthermore, findings of those studies could be interpreted as that despite a huge inflow of foreign money through remittances, many countries failed to utilize them for their economic growth.

Materials and Methods

This paper reviewed the literature about the remittance flow and its status in Nepal. Relevant global literature was also reviewed. Flow of personal remittances to Nepal was analyzed by collecting the historical data from the database of the World Bank. The historical exchange rate of Nepali currency with respect to the U.S. $ was analyzed. Large areas of utilization of remittance money in Nepal were identified. One such area involved the stock market, which has drawn significant attraction of the people's money in Nepal. This study collected the data of called and applied amounts from the initial public offerings of 23 companies from 2014 to 2021. Another area involved the real estate sector, particularly, land trading. No systematic data exists in Nepal about the land price.

Therefore, this study collected primary data on land trading by interviewing land sellers and land brokers and analyzed them. Yet another area of utilization of remittance money involved government initiatives. Two particular initiatives, namely, remit bond and citizen's hydroelectricity development programme, were reviewed and their degrees of success were evaluated. These primary and secondary data as well as background information were analyzed in relation to the policy and plan documents of Lumbini province in Nepal. Based on the author's experience of working as a member of the province planning commission, a conceptual model was proposed to capitalize the remittance money for investing in infrastructure development projects.

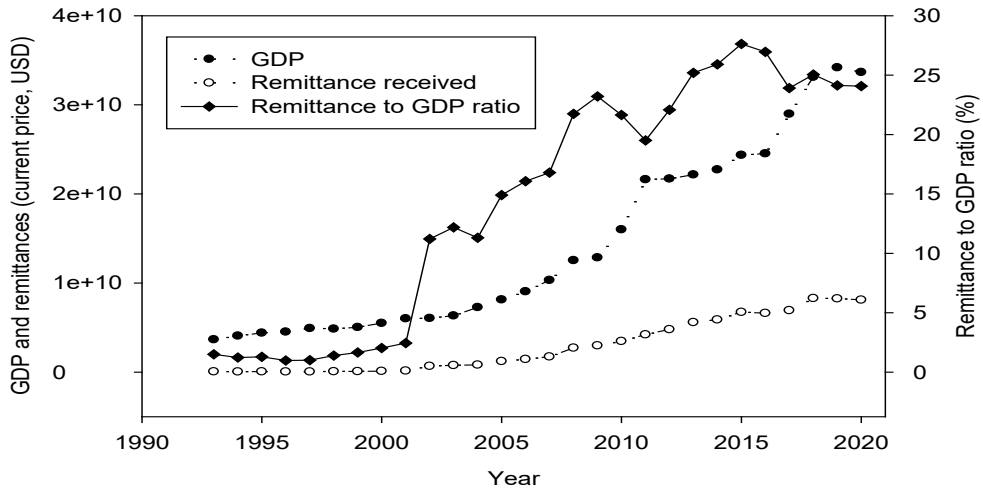
Data Analysis

Inflow of Personal Remittances in Nepal

Figure 1 shows the remittance inflow in Nepal during 1993 to 2020. GDP of the same duration is presented along with the ratio of remittance inflow to GDP. Except for the ratio marginally below 20 percent in 2011, remittance has been consistently above 20 percent after 2008. It reached a peak of 27.6 percent in 2015 and is approximately 24 percent in recent years. After 2018, the remittance money has been consistently above U.S. $ 8 billion. Nepal's budget for the fiscal year 2021/22 was NRs. 1647 billion (U.S. $ 13.9 billion) and remittance inflow of 2020 was 58 percent of this budget. This speaks of the massive dependency of Nepal's economy on remittances.

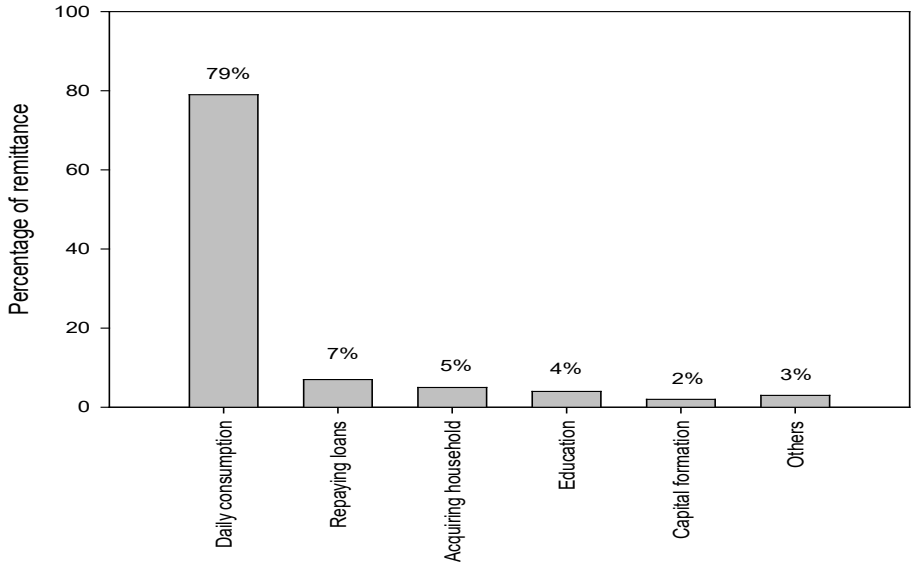
However, only a small fraction (2%) of remittances goes directly towards capital formation as depicted in Figure 2. Nepal needs to devise new ways of channelizing the remittance money for infrastructure development.

Figure 1: Remittance Inflow and GDP for Nepal (1993 – 2020)



Source: World Bank, 2021.

Figure 2: Use of Remittance on Various Sectors in Nepal



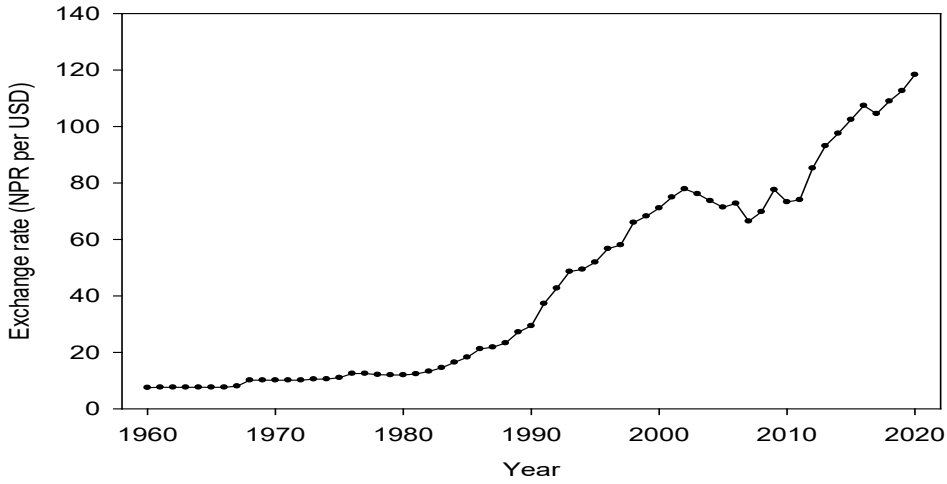
Source: CBS, 2012.

Exchange Rate Scenario

Figure 3 plots the exchange rate of the Nepali currency (NRs.) with the U.S. $. The rate is presented as the amount of NRs. that is equivalent to 1 U.S. $. In 60 years from 1960 to 2020, the exchange rate increased by 15.8 folds. The exchange rate increased to 118.3 in 2020 (this rate has been adopted for the currency conversion throughout this paper). The average growth is 6 percent per year from 1980 to 2020.

It is not known whether the exchange rate keeps increasing in the coming years. Assuming so, the increase indicates that any capital intensive project in Nepal invested completely through a foreign debt in U.S. $ will produce at least 6 percent lower internal rate of return to the nation when compared to a domestic debt. In other words, a project willing to pay an interest rate of 6 percent to a foreign debt should be able to provide 12 percent interest rate to a domestic debt. Therefore, Nepal should excessively prioritize to utilize the remittance money (already entered to Nepal) for the capital investment.

Figure 3: Historical Exchange Rate of the Nepali Currency with the U.S. $



Source: World Bank, 2021.

Money Drawn to Initial Public Offerings (IPO)

Capital market in Nepal is regulated by Securities Board of Nepal and the stocks are traded through Nepal Stock Exchange (NEPSE). Public interest towards share trading increased substantially in the last decade with the number of accounts opened for share transaction reaching 3.2 million (MoF, 2021). In almost all cases of IPO calls, there is an overwhelming application to subscribe

the shares. However, no systematic data is maintained by any national institutions in Nepal regarding this overwhelming subscription.

This study collected the information about share subscription in Nepal from 2014 to 2021. Appendix 1 shows the status of IPO of 23 companies in Nepal during last 7 years. The called amount and the applied amount are presented in the table along with the ratio of the applied to called amount. Only the companies having the unit share price of NRs. 100 and the called amount greater than NRs. 200 million have been included. As shown in the table, share is oversubscribed by as high as 40 times. The average ratio of the amount applied for subscribing IPO to the called amount is 7.6. For the 23 companies shown in Appendix 1, total called amount was NRs. 21.3 billion but the amount applied for subscription was NRs. 163.4 billion. Even though some money keeps circulating, this data illustrates that a large pool of public money is available in Nepal waiting for suitable investment vehicles. The large pool of public money is attributed to the large remittance inflow in the country.

Despite excessive delay in the construction of government-led hydropower projects by few to several years (e.g., Upper Tamakoshi, Middle Marsyangdi, Kulekhani III, and Chameliya), people have an encouraging attraction towards hydropower projects. Upper Tamakoshi Hydropower (Appendix 1) has an installed capacity of 456 MW and came in operation since 2021. This is the largest operational hydropower in Nepal and is promoted by the government of Nepal. This project was constructed by mobilizing domestic sources and set an example to boost the confidence on constructing mega projects through local resources. Towards that end, the Hydroelectricity Investment and Development Company (Appendix 1) was established in 2011 with the aim to invest in hydropower companies. When it called the IPO in 2015 to collect NRs. 2 billion through shares, the applied amount exceeded whopping NRs. 45 billion. The ratio of the applied to called amount indicates that Nepal does not have enough investment opportunities for the ordinary people and should develop many infrastructure projects to utilize the pool of public money.

Appendix 1 shows that the ratio of applied to called amount was the lowest during 2018-2019. In 2019, the ratio fell below 1 for two hydropower companies (See: No. 9 and 12 in Appendix 1) promoted by private sectors. However, during the same period, the ratio of applied to called amount was 5.2 for the three companies (See: No. 10 and 12 in Appendix 1) promoted by the government of Nepal under the 'Citizen's Hydroelectricity Programme' (MoEWRI, 2019). As a special feature of the program, only 10 percent of the applied amount was required to be deposited during application. While this feature might also have contributed to the relatively large applied to called amount ratio, the markedly different ratios for companies promoted by the government and the private sector

indicate that people have significantly larger trust to invest in projects promoted by the government when compared to those promoted by the private sector.

Land Price Appreciation

Domestic migration has imposed a lot of pressure to the lands of Kathmandu valley and Terai. When the average population growth rate for Nepal was 1.35 percent from 2001 to 2011 (CBS, 2012), the growth rate exceeded 4 percent for Kathmandu and major Terai cities including Bharatpur, Butwal, and Dhangadhi (Aksha et al., 2019). Land price in Nepal has skyrocketed in recent decades and it is widely discussed in national media e.g., Pangeni (2020). For the first time in Nepal, the central bank of Nepal started to publish the real estate price index in 2021 (NRB, 2021). The prices used to derive the index were based on banking data and land revenue data. The land price index for Nepal for FY 2019/20 was 15.62 percent based on the land revenue data and 27.68 percent based on the bank data (NRB, 2021). As the actual market prices are widely different from the official prices, the index could be different when that is based on actual prices.

This study investigated the increase in the land price in the urban areas of Kathmandu and Tilottama based on actual prices. Appendix 2 shows a scenario of the hike in land price during the last 20 years. Thirty-two random data were collected based on personal interviews with land sellers and land brokers. Appendix 2 presents the data with the dates and prices of purchase and sales. Only the data with a minimum holding period of 6 months were included. The area of land plot is presented, and the price is presented for 100 m^2 of land area. The annual compound growth rate in the price of land varied from 4.2 percent to as high as 33.1 percent. The average annual compound growth rate was 14 percent for Tilottama and 21 percent for Kathmandu. The average annual compound growth rate for all data presented in Appendix 2 was 18.8 percent. The growth rate of land price (irrespective of the formal prices or actual prices) is significantly higher than the average inflation rate of 6.6 percent during the same time (2001-2020) (World Bank, 2021). It is also significantly higher than the typical interest rate of 8 to 12 percent on the fixed deposits during the same period.

It is believed that the pool of money causing the unreasonable hikes in land price and the handsome earnings of land brokers is largely contributed by the remittance money. Communications with remittance receiving families indicate that land is the primary alternative to invest the surplus money that remains after spending for household expenses. Figure 2 indicates that a major portion of the surplus after household expenses goes for acquiring household and this category perhaps includes acquiring land plots for household.

Policy and Planning Initiatives towards Utilizing Remittances in Nepal

Remittances have received some attention in the policy and planning initiatives in Nepal. Most of the initiatives focus on increasing the inflow of remittance and channelizing them through formal channels. Policies have encouraged the use of banking channels and also on the establishment of private remittance-transfer businesses (Pant, 2011). Other initiatives include financial literacy training, increased access to financial institutions, additional interest rate on remittance deposit, tax waiving, remittance bonds, and so on. Two particular policy and planning initiatives are discussed hereunder.

Remit Bond of the Central Bank of Nepal

Government of Nepal never had a policy to utilize remittances in productive sectors until 2009 /10 (Sapkota, 2013). The central bank of Nepal introduced the concept of foreign employment bond in 2010. NRs. 1 billion was floated in 2010 and only NRs. 4.5 million (0.45 %) was subscribed; NRs. 5 billion was floated in 2011 and only NRs. 3.8 million (0.38 %) was subscribed (Kharel, 2011; Sapkota, 2013). The subscription rate of less than 1 percent suggests that the policy failed. The bond had apparently attractive features such as workers could subscribe the bond in their family members' names; they could subscribe in the local currency of the country where they were working; the bond could be used as collateral to obtain loans; and the subscription amount was eligible for an income tax waiver. However, the interest rate was 9.75 percent in the 2010 issuance and 10.5 percent in the 2011 issuance (Kharel, 2011). An interest rate lower than the prevailing interest rate in the banks and financial institutions was certainly unable to motivate the remittance earners. This suggests that conventional approach of issuing the bond is inadequate and the government shall devise new channels that make the investors eligible for earning return as equity shareholders and not merely as lenders.

Citizen's Hydroelectricity Development Program

In 2019, government of Nepal introduced Citizen's Hydroelectricity Development Programme. The program plans to develop 3,640 MW of hydroelectricity through 21 projects (MoEWRI, 2019). Out of the share investment, 51 percent investment will be made by the government and 49 percent share will be collected from Nepali citizens within and outside the nation. The programme will ensure a nominal interest rate of 8 percent for the share investment during the construction of projects, and the investment is expected to generate an attractive return of 16-17 percent once the projects are developed.

The programme drew an overwhelming interest from the public as demonstrated by the applications in excess of U.S. $ 60 million within one week of application period for the first project under this programme (See: No. 10 in Appendix 1).

Even though no project has been completed under the Citizen's Hydroelectricity Development Programme, the initial symptoms indicate the possibility to devise a successful model for capitalizing the remittance money. While this programme is specifically focused on hydroelectricity development, similar models may be implemented to develop infrastructure projects in other sectors too.

Proposed Remittance Capitalization Framework

Development of a Conceptual Model

Personal remittances are private money and governments cannot directly acquire the remittance money. Traditionally, remittances tickle to the government basket through indirect means mostly through the taxes levied on imports and sales of products consumed by households earning remittances. A more direct approach of utilizing remittance money for infrastructure development will warrant for the development of a suitable model.

Even though Nepal has inadequate money to invest for infrastructure development, the deficit will only be felt if the government possesses the capacity to incur capital expenditure. The public investment on infrastructure is low but it is less so because of the lack of fund and more so because of the poor policy design and ineffective institutions (World Bank, 2018). The capital budget of the government of Nepal is underspent, with spending below 50 percent of the amount budgeted in some years. The average construction duration of ongoing projects listed in the annual development plan of Nepal is more than 11 years, and of 'National Pride' projects is even more at around 13 years (World Bank, 2018). Therefore, a new model for remittance capitalization shall focus on an institution (or framework) that has superior capacity to incur capital expenditure when compared to the mainstream government institutions.

Assumptions

a. Because of remittances, public have surplus money in a distributed form. If called for profitable investment, up to 10 percent of the remittance inflow (U.S. $ 0.8 billion) can be collected annually.

b. Remittance earners are not attracted by fixed deposits or bonds having fixed rates of return (See: Paragraph 2, p. 84). However, they are immensely attracted by investment opportunities in profitable infrastructure projects (See: Last paragraph, p. 82).

c. A number of financially attractive infrastructure projects exist in Nepal and they can be developed by investing the capital collected through remittances.

d. When a proper mechanism is established, people who are investing their money for profit will also be contributing to develop public infrastructure for their own use and services. People will have an opportunity to contribute to the national development while earning profit.

e. Despite many weaknesses and inefficiencies, government is the most trusted entity for people to authorize the investment of their money. Government-promoted companies are among the most trusted names for purchasing shares (See: Last paragraph, p. 82). Among the companies promoted by the private sector, companies with strict government regulations such as banks, and companies in the sectors promoted by the government such as hydropower are among the public choice.

f. A typical remittance earner is not competent to make investment decision or to be a successful entrepreneur. Even if so, the scale is feeble and the benefits otherwise achievable due to the economy of scale cannot be achieved.

g. Superior management is possible in companies that focus on company goals and that are free from political interventions. Such a company is neither compelled to appoint mediocre top management and employees nor constrained by often contrasting policies and priorities of the frequently changing governments.

Three Attributes of Remittance for a Capitalization Framework

Assuming that an institution will be established for capitalizing remittances, Appendix 1 shows a conceptual framework that builds on three attributes of remittance money, namely, availability of money, fund mobilizing capacity, and public trust for mobilizing the money. The three attributes are projected on the three domains as citizen, private sector and government. This is a qualitative illustration and is fundamentally based on the intuition of the author.

Table 1: Three Attributes of Remittance Money in Nepal

Attribute of Remittance Money	Domain		
	Citizen	Private Sector	Government
Fund availability	***	**	*
Fund mobilizing capacity	*	***	**
Public trust for fund mobilization	*	**	***

Source: Author's proposition.

The first attribute is the surplus fund that can be made available for investment in infrastructure. As indicated by the number of stars in Table 1, government has a deficit of money and citizens have a surplus of money. The second attribute is the managerial ability to effectively mobilize the investment fund towards

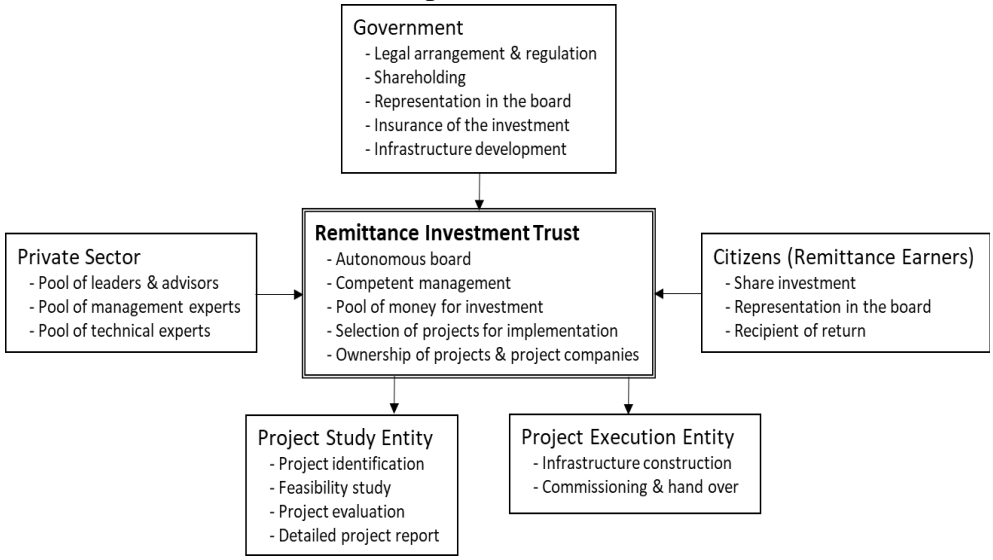
maximizing the rate of return. In this trait, the private sector appears to have the superior capability compared to individual citizens or the government institutions. The third attribute is about the public trust for fund mobilization. Government's initiatives appear to possess the most public trust. While the governments (national and sub-national) have crunch of money, a valuable asset that governments in Nepal are bestowed with is the trust of the public to invest their fund. Even though criticisms and debates are equally pertinent towards the government's investment, if a person is asked to choose to invest in a venture by another person or a private company or a government, the preference will be towards the government's initiative.

Model Analysis

A remittance investment trust will be established to capitalize the remittance by combining the best qualities of the three attributes among the three domains as outlined in Table 1. The schematic framework is shown in Figure 4. It could be established by the national or the sub-national governments. The trust will have an autonomous management body that can comfortably harness the excellent management skills of the private sector; can collect and invest huge amount of money from the citizens; and will utilize the repute of being backed by the government thus earning public trust. Autonomy should be a prerequisite to ensure an excellent management team with proper authority. Stringent qualification, world class experience, free competition, attractive remuneration and performance-based contract are the essential criteria that can attract competent personnel from the globe to take the top managerial positions of the investment trust.

The remittance investment trust will issue shares and collect remittance money for investment. Remittance earners will have adequate opportunity to invest their money. The trust will have two integral components, one for project identification and study and the other for project execution. The project identification and study entity will identify suitable infrastructure projects in line with the development plan of the government and perform the feasibility study. Only the projects having an attractive rate of return should be recommended to the investment trust. From among the recommended projects, the investment trust will promote suitable projects that can assure the confidence of the shareholders. The project execution entity will execute the project in a professionally competent manner by efficiently controlling time, cost and quality. State of the art project management and construction practices should be exercised. While the government achieves decent infrastructure development as per its development plan, the shareholders will achieve attractive return on their investment of the remittance money.

Figure 4: Schematic Framework of the Remittance Investment Trust to Capitalize Remittance



Source: Author's design

Model in the Plan and Programme of Lumbini Province

Strategy to Develop Capital Intensive Infrastructure in the Province

Compared to the scope of work and services, provincial governments receive limited budget from the federal government. For instance, seven provinces together received only 6.3 percent of the national budget of the government of Nepal in fiscal year 2021/22 (Poudel, 2021). Moreover, based on the exclusive and concurrent powers listed in the constitution, provincial governments have relatively narrow scope for collecting revenues. Therefore, provincial governments should explore non-conventional ways of arranging funds for capital-intensive projects.

After the establishment of the first provincial government in Lumbini province in 2018, the province planning commission (PPC) prepared the first periodic plan of the province which came into effect starting fiscal year 2019/20. As a member of the PPC then, the author proposed a concept of the province investment trust based on the framework presented in Figure 4. PPC adopted the concept and the periodic plan proposed to establish the province investment trust (PIT). Similarly, the plan proposed to establish a province infrastructure development authority (PIDA). Accordingly, PIDA was already established. It is already functional even though it is yet to execute projects having share of the citizens. The annual program of the Lumbini provincial government announced to conduct feasibility study for a provincial level institution that can mobilize capital investment for

large infrastructure (Yadav, 2021). Once such an institution, envisaged as the PIT, is established, PIDA is expected to focus on projects having share of citizens. Until the establishment of the PIT, PPC contributed to the role of the project study entity (Figure 4) by preparing a project bank as discussed in the following section. The author served as the team leader of the project bank.

Project Bank

PPC initiated a system of a project bank in which a number of projects are identified based on the development needs of the province and are studied for their technical, financial and environmental viabilities. PPC conducted the pre-feasibility study of several projects including capital intensive infrastructure projects. Table 2 shows four projects and their financial prospects. These are among the priority projects of the province. The projects are multi-billion rupee projects and will require an overall investment exceeding NRs. 100 billion. Detailed studies shall be performed for the projects.

Table 2: Selected Projects of the Project Bank Studied by PPC

S. N.	Name of Projects	Investment Cost (NRs.in million)	Duration (years)	Rate of Return
1	Kapil paper factory (Gautam & Khaniya, 2020)	3,098	2	26.6 % (internal rate of return)
2	Siddhababa artificial plateau (Gautam et al., 2020)	83,243	10	18.5 % (gross return)
3	Multi-cultural airport city (Gautam et al., 2021a)	2,215	8	18.4 % (internal rate of return)
4	Rapti riverfront development (Gautam et al., 2021b)	15,503	7	16.7 % (internal rate of return)

Source: Author's compilation.

Fund Collection and Mobilization

A proposed course of action for the collection and mobilization of remittances for generating the investment fund is discussed here. Since remittances are private, fund collection should allow for voluntary contribution rather than imposing compulsory deposit or tax. This will help for the early adoption of the concept and also ensure investment trust to become consistently profitable. The trust may provide an opportunity to the interested citizens (additional to the remittance earners) to participate in the investment.

As an investor, the trust will operate as a company taking the risks of gains or losses. However, as a unique organization backed by the government, it will assure a minimum rate of return irrespective of the profit made by the investment

projects. While best possible efforts will be made to select attractive projects and to maximize their rate of return, infrastructure projects incur various risks and uncertainties. Therefore, the government will have to arrange for an insurance fund to safeguard the minimum rate of return to all depositors.

Discussions

The first periodic plan of Lumbini province assumes that approximately two-third of the capital investment (U.S. $ 12 billion in 5 years) required in the province will be met by private sector and only one-third will be met by the government. Moreover, government of Nepal has predicted that Nepal has a deficit of U.S. $ 5.8 billion annually towards meeting the SDGs. Considering this deficit on the basis of population, this is equivalent to a deficit of U.S. $ 870 million for Lumbini province. Capitalization of remittances through PIT will contribute towards lowering this deficit and thus help attain SDGs in the province. Based on the 5-year projection of U.S. $ 845 million investment through PIT, approximately 20 percent of the deficit may be addressed through this channel. The model proposed in this paper is a conceptual framework. The exact details should be discussed and decided further. While the investment trust was discussed in the context of Lumbini province, it could be applicable to the other six provincial governments as well as to the federal and local governments in Nepal.

The framework of capitalization of remittances is expected to bring four effects as given.

a) Government can channelize private money towards sustainable infrastructure development.

b) A culture will be established for investing remittance money in infrastructure development, and this will proliferate the capitalization of remittance even at the private level.

c) Financial crunch in investing for large infrastructure will be reduced, and government can mobilize more budget for SDGs related to social development.

d) Once projects are selected based on their return, a culture will be established to implement projects with good return.

National policies and priorities often outweigh the role of FDI when compared to remittance money. However, for Nepal mainstreaming the remittance money for national development may be advantageous to feeling helpless for having one of the lowest rates of FDI in the world (World Bank, 2018). As the report (World Bank, 2018) suggests for a growth model that can crowd in private investment and urges for an urgent need to change Nepal's development model, a remittance capitalization model could be apropos for Nepal. It should be

noted that remittance will have to overcome fewer barriers compared to FDI. If investment of FDI in infrastructure development will require overcoming n + m barriers, investment of remittances will require overcoming only n barriers, where $m \geq 1$ represents extra barriers such as entry barriers of money to Nepal, repatriation of return on investment, and sovereignty issues.

Concluding Remarks

This paper discussed the status of remittance inflow and its capitalization initiatives in Nepal. Nepal has been receiving remittances equivalent to at least 20 percent of its GDP for the past several years. While the country is receiving huge financial resource through personal remittances, the country is acutely lacking investment for infrastructure construction. This paper highlighted the need to capitalize remittances for developing sustainable infrastructure.

While further studies will be needed to establish direct connections with remittance money, stock market and real estate sectors were identified as two large areas drawing remittance money. Billions of rupees are attracted to the stock market with the ratio of the amount applied for subscribing IPO to the called amount being 7.6 in average. Also, this study showed that land price is getting appreciated at a whopping average rate of 21 percent in the urban areas of Kathmandu Valley.

Two government-initiated programmes of remittance capitalization adopted in Nepal were reviewed. The first approach of subscribing bonds of the Central Bank of Nepal at a fixed interest rate was not successful and the second approach of investing remittance money in hydropower projects appeared successful. Building on these experiences and also considering the historical trend of exchange rate, a conceptual framework of remittance capitalization was proposed. The framework was demonstrated by presenting a model of a provincial investment trust which aims to synergize the three best attributes of the three domains of stakeholders, namely, abundant remittance money of the people, excellent management skills of the private sector, and the superior public trust to the government in mobilizing the money.

Similar to the utilization of natural resources such as water, forests or mines as having positive and negative outcomes, it is natural for the use of remittance to have positive or negative consequences on the economy or the society. Moreover, consequences are not independent of the background situation and response. Instead of having an ex-post analysis of economy and deriving the effect of remittances, this study stressed on a planned approach to utilize remittance money by maximizing positive outcomes and minimizing negative consequences.

This study focused on acknowledging remittance money as a great source of investment vehicle for the infrastructure sector. On the social front, remittances

have been extremely effective for poverty elimination, and have substantially increased investments in health and education at the household level. Conversely, migration has been linked to many social implications and incidents in the remittance-receiving countries including Migrant Syndrome and Dutch Disease. Such socio-economic issues are beyond the scope of this study.

Limitations

Plan and policy decisions in Nepal are not necessarily based on rigorous academic research. They are mostly based on the intuition, experience and understanding of the leaders and policy makers. The proposed conceptual model aims to bridge this gap. Nevertheless, the model is not fully tested yet except for the initial success story of the citizen's hydroelectricity program. A specific study focused on remittance investment trust could evaluate the proposed model and refine it to best suit the needs.

Acknowledgements

The author expresses sincere gratitude to sixteen respondents who supplied the information about land plot transactions. The author acknowledges the experience of working at the Province Planning Commission, Lumbini Province and appreciates it for adopting the concept proposed by the author. The ideas expressed in this paper are those of the author and do not necessarily represent the viewpoints and policies of the Lumbini provincial government. Special thanks are du to the anonymous reviewer for the constructive feedback.

References

Agunias, D. R. (2006). *Remittance and development: Trends, impacts, and policy options.* Migration Policy Institute. http://onlinelibrary.wiley.com/doi/10.1002/9780470670590.wbeog494/full

Ahmed, M. S. (2010). Migrant workers remittance and economic growth: evidence from Bangladesh. *ASA University Review*, *4*(1), 14.

Aksha, S. K., Juran, L., Resler, L. M., & Zhang, Y. (2019). An analysis of social vulnerability to natural hazards in Nepal using a modified social vulnerability index. *International Journal of Disaster Risk Science*, *10*(1), 103–116. https://doi.org/10.1007/s13753-018-0192-7

Azam, M., & Khan, A. (2011). Workers' remittances and economic growth: Evidence from Azerbaijan and Armenia. *Global Journal of Human Social Science*, *11*(7), 41–46. https://doi.org/10.5430/ijfr.v12n2p233

Budhathoki, K. (2017). Remittance: role and challenges in Nepalese economy. *The Economic Journal of Nepal*, *40* (148), 78–84.

CBS (2012). *National Population and Housing Census - 2011*. Central Bureau of Statistics, Kathmandu, Nepal.

Dhakal, N. H., & Maharjan, A. (2018). *Approaches to the productive uses of remittances in Nepal*. http://lib.icimod.org/record/33734/files/icimod569_WP1-018.pdf

FCGA (2021). *Consolidated Financial Statement: Fiscal Year 2019/20*. Financial Controller General Office, Government of Nepal.

Gaudel, Y. S. (2007). Remittance income in Nepal: Need for economic development. *Journal of Nepalese Business Studies*, *3*(1), 9–17. https://doi.org/10.3126/jnbs.v3i1.491

Gautam, B. P., Chaudhary, D., & Chaulagain, K. (2021a). *Multi-cultural airport city project: Prefeasibility study,* Province Planning Commission, Lumbini Province, Nepal, (p. 33).

Gautam, B. P., Chaudhary, D., & Chaulagain, K. (2021b). *Rapti riverfront development project: Pre-feasibility report*, Province Planning Commission, Lumbini Province, Nepal, (p. 27).

Gautam, B. P., Ghimire, A., Mahat, R., Bhandari, R., & KC, A. (2020). *Siddhababa Artificial Plateau Project (Pre-feasibility Report)*, Province Planning Commission, Lumbini Province, Nepal, (p. 35).

Gautam, B. P., & Khaniya, S. (2020). *Kapil paper factory: Pre-feasibility report* Province Planning Commission, Lumbini Province, Nepal, (p. 26).

Hagen-Zanker, J. (2014, June). *Potential products and policies to leverage productive use of migration and remittances,* EPS-PEAKS. p. 22.

Kapri, K., & Ghimire, S. (2020). Migration, remittance, and agricultural productivity: Evidence from the Nepal Living Standard Survey. *World Development Perspectives*, *19*, 9. https://doi.org/10.1016/j.wdp.2020.100198

Kharel, P. (2011, December). *Remittances as development resource : The experience of Nepal*, 14–16. ESCAP and OHRILLS.

MoEWRI (2019). *Citizen's Hydroelectricity Program* (p. 8). Ministry of Energy, Water Resources and Irrigation, Nepal.

MoF (2021). *Economic Survey - 2020/21,* Ministry of Finance , Govt. of Nepal. 431.

NPC (2016). *Sustainable Development Goals: Status and Roadmap 2016-2030*. National Planning Commission, Government of Nepal.

NPC (2017). *Need assessment, cost estimate and financial strategy (in Nepali)*. National Planning Commission, Government of Nepal.

NPC (2020). *The Fifteenth Plan, Fiscal Year 2019/20-2023/24,*). National Planning Commission. Government of Nepal, 1–418

NRB (2021). *Real Estate Price Survey Report,* Nepal Rastra Bank *,* Kathmandu, Nepal, 42.

Pangeni, R. (2020). *Why Kathmandu's land prices continue to skyrocket*. https://cijnepal.org.np/

Pant, B. (2011). Harnessing remittances for productive use in Nepal. *NRB Economic Review*, 1–20.

Poudel, B. P. (2021). *Income-expenditure details of fiscal year - 2021/22,* Ministry of Finance, Government of Nepal, 54.

Pradhan, K. C. (2016). Does remittance drive economic growth in emerging economies: Evidence from FMOLS and Panel VECM. *Theoretical and Applied Economics*, *23* (4), 57–74.

Qayyum, A., Javid, M., & Arif, U. (2008). Impact of remittances on economic growth and poverty reduction amongst CIS countries. In *MPRA Paper* (No. 22941). https://doi.org/10.1080/14631377.2019.1678094

Raza, S. A., & Jawaid, S. T. (2014). Foreign capital inflows, economic growth, and stock market capitalization in Asian countries: An ARDL bound testing approach. *Quality and Quantity*, *48*(1), 375–385. https://doi.org/10.1007/s11135-012-9774-4

Rozenberg, J., & Fay, M. (Eds.) (2019). *Beyond the gap: How countries can afford the infrastructure they need while protecting the planet*. The World Bank.

Sah, B. N. (2019). Remittance and economic development of Nepal. *Patan Pragya*, *5*(1), 196–208. https://doi.org/10.3126/pragya.v5i1.30475

Sapkota, C. (2013). Remittances in Nepal: Boon or bane? *The Journal of Development Studies*, *49* (10), 1316–1331. https://doi.org/10.1080/00220388.2013.812196

Seddon, D., Gurung, G., & Adhikari, J. (1998). Foreign labour migration and the remittance economy of Nepal. *Himalaya, the Journal of the Association for Nepal and Himalayan Studies*, *18* (2), 2–10. http://digitalcommons.macalester.edu/himalaya/vol18/iss2/7

Shafqat, M., Ahmad, A., & Bano, S. (2014). Impact of worker remittances on economic growth of Pakistan: Analysis of Pakistan's economy. *Journal of Business Research - Turk*, *6*(2), 6–14. https://doi.org/10.20491/isader.2014215950

Sutradhar, S. R. (2020). The impact of remittances on economic growth in Bangladesh, India, Pakistan, and Sri Lanka. *International Journal of Economic Policy Studies*, *14*(1), 275–295. https://doi.org/10.1007/s42495-020-00034-1

World Bank (2021). *The World Bank Data*. World Bank Open Data. https://data.worldbank.org/

World Bank (2018, February). *Nepal Systematic Country Diagnostic (114659-NP)*. https://doi.org/10.1596/29421

Yadav, D. (2021). *Policy and program* (p. 48). Provincial Government, Lumbini Province, Nepal.

Appendix 1: Status of IPO of Various Companies in Nepal

S. N.	Company	Date	Called Amount	Applied Amount	Applied to called ratio	Source
			Million NRs.			
1	Century bank	2014, Mar	920	22522	24.5	nagariknews.com
2	Api Power Limited	2015, Jun	285	9761	34.2	nepalenergyforum.com
3	Hydroelectricity Investment and Development Com. (HIDCL)	2015, Nov	2000	45260	22.6	hidcl.org.np
4	Arun Kabeli Hydropower Ltd.	2016 ,Oct	276	12000	43.5	sharesanchar.com
5	Synergy Power Dev. Ltd.	2016, Nov	210	6810	32.4	sharesanchar.com
6	Himalayan Power Partner Ltd.	2017, June	213	8596	40.4	nepalenergyforum.com
7	Upper Tamakoshi Hydropower	2018, Nov	1509	6462	4.3	kharibot.com

8	Universal Power Company Ltd	2018, Dec	886	925	1.0	sharesansar.com
9	Union Hydropower Ltd.	2019, Feb	353	341	0.97	
10	Trishuli 3B Hydroelectricity Company	2019, Mar	359	6447	18.0	
11	Sanjen Hydroelectricity Company	2019, May	498	1300	2.6	
12	Rasuwagadhi Hydroelectricity Company	2019, May	934	1612	1.7	
13	Himal Dolakha Hydropower Ltd.	2019, Aug	765	309	0.4	
14	Nepal Reinsurance Company	2020, Apr	1513	5241	3.5	
15	Ajod Insurance Ltd.	2020, Jul	273	1722	6.3	
16	Reliance Life Insurance	2020, Aug	567	2293	4.0	
17	General Insurance Company	2020, Oct	273	2141	7.8	
18	Prabhu Life Insurance	2020, Dec	540	2782	5.2	
19	Nepal Infrastructure Bank	2021, Feb	7584	16721	2.2	
20	Greenlife Hydropower Company	2021, Feb	325	2263	7.0	
21	CEDB Hydropower Developer Company	2021, Mar	234	2465	10.5	
22	Singati Hydro Energy Ltd.	2021, Apr	270	2277	8.4	
23	Union Life Insurance	2021, Jul	580	3202	5.5	
	Total		**21367**	**163452**	**7.6**	

Source: Author's collection of primary data from the news media

Appendix 2: Land Price Hike in Tilottama and Kathmandu in Last 20 Years

SN	Location	Land Area (m^2)	Date		Holding (year)	Price per 100 m^2 (NPR)		Yearly Increment (%)
			Purchase	Sale		Purchase	Sale	
1	Tilottama	2709	2011-Apr	2020-Jul	9.2	48,734	443,036	27.1
2	Tilottama	148	2016-Aug	2020-May	3.7	999,151	1,485,225	11.2
3	Tilottama	114	2011-Nov	2015-Dec	4.1	1,190,180	1,837,778	11.3
4	Tilottama	508	2013-Jun	2016-Jul	3.1	590,714	669,476	4.2
5	Tilottama	140	2016-Oct	2017-Aug	0.9	1,074,026	1,188,589	12.5
6	Tilottama	466	2016-Dec	2017-Jun	0.5	859,221	934,403	18.2
7	Tilottama	212	2017-Feb	2018-Jan	0.9	1,772,143	1,843,029	4.2
8	Tilottama	174	2016-Jun	2018-Feb	1.7	2,432,014	2,685,589	6.2
9	Tilottama	677	2008-May	2021-Sep	13.3	206,750	3,544,286	23.8
10	Tilottama	127	2015-Jun	2019-Sep	4.3	1,181,429	2,756,667	21.8
11	Kathmandu	191	2008-Nov	2017-Jun	8.6	995,905	4,402,948	18.9
12	Kathmandu	159	2018-Jan	2021-Jun	3.4	9,120,393	18,869,779	24.1
13	Kathmandu	170	2015-May	2021-Jul	6.2	3,769,244	9,423,111	16.1
14	Kathmandu	127	2008-Jul	2021-Aug	13.1	1,257,985	10,378,378	17.4
15	Kathmandu	191	2017-Jun	2021-Aug	4.2	4,402,948	8,648,649	17.6
16	Kathmandu	286	2013-Jun	2021-Feb	7.7	2,830,467	7,687,688	13.8
17	Kathmandu	254	2014-Apr	2021-Aug	7.4	1,918,428	9,434,889	24.0
18	Kathmandu	286	2019-Jan	2021-Aug	2.6	3,931,204	7,862,408	30.4
19	Kathmandu	146	2007-Jul	2021-Sep	14.1	1,195,086	14,152,334	19.1
20	Kathmandu	119	2020-Feb	2021-Jan	0.9	1,446,683	1,803,112	27.3
21	Kathmandu	235	2017-Aug	2021-Sep	4.0	553,991	1,235,826	22.1
22	Kathmandu	159	2018-Oct	2021-Aug	2.9	1,446,683	2,830,467	26.0
23	Kathmandu	127	2020-Mar	2021-Jul	1.3	2,673,219	3,931,204	33.1
24	Kathmandu	159	2004-Apr	2021-Jul	17.3	943,489	11,007,371	15.3
25	Kathmandu	159	2020-May	2021-Aug	1.2	5,660,934	6,289,926	9.0
26	Kathmandu	127	2001-Apr	2021-May	20.1	1,257,985	10,063,882	10.9
27	Kathmandu	254	2011-Dec	2021-May	9.3	1,415,233	11,793,612	25.5
28	Kathmandu	445	2016-Nov	2021-Jul	4.6	3,144,963	8,648,649	24.4
29	Kathmandu	254	2018-Jun	2021-Sep	3.2	5,031,941	8,648,649	18.3
30	Kathmandu	318	2015-Jun	2021-Aug	6.3	1,100,737	5,031,941	27.5
31	Kathmandu	159	2014-Apr	2021-Jul	7.3	6,604,423	21,700,246	17.8
32	Kathmandu	191	2016-Jun	2021-May	5.0	1,729,730	4,717,445	22.4

Source: Author's collection of the primary data from 16 responders