

Labour Market Analysis for Human Resource Projection

Final report

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Executive Summary

Technical and Vocational Education and Training (TVET) contributes to developing competent human resources needed for the world of work. It is essential to know the existing human resource situation and understand changing dimensions of the market with specific skills to adopt the necessary adjustment for harmonizing supply (TVET institutions) and demand-side (business/industries). With this realized need, the Council for Technical Education and Vocational Training (CTEVT), in financial support of SAKSHYAMATA¹ project, partnered with the Central Department of Economics (CEDECON) and Faculty of Humanities and Social Sciences (FoHSS) Tribhuvan University, carried the *Labour Market Analysis for Human Resource Projection* to analyze the demand and availability of technical/skilful human resources by sector of the economy according to the growth rate of the sector in GDP and present a plausible projection of technical human resources (by skills level) for the years 2025 and 2030.

For this, the study employed both quantitative and qualitative approaches. The surveys were conducted with 376 business/industries and 96 TVET providers which was further complemented by 97 Interviews and FGDs with TVET stakeholders (Local Government representatives/officials, District/national level government officials, members of employers/employee associations, and TVET providers) from Agriculture and Forestry, Construction and Engineering, Tourism and Hospitality, and Health sectors in all seven provinces across three ecological regions (Mountain, Hill, and Tarai) that covered 21 districts of Nepal. Findings from both strands (survey and KIIs/FGDs) were integrated and complemented the finding of the study. The key findings are presented below.

1. **This study reveals that only half of the enterprises/industries are currently running in good condition.** The demand for human resources depends on the size and status of economic activities. Improvement or decline in the current situation may vary the projected demand for skilled human resources.
2. **The ratio between technical to non-technical workers in the surveyed enterprises/industries is found at 2:1.** For each non-technical, more than two technical human resources are employed. The Tourism and Hospitality sector was surveyed for employing the highest number of persons with a technical and vocational education background. However, the number of employees and ratio between technical and non-technical varied by the size of enterprises/industries and the sectors.
3. **The annual growth rate of human resources both technical and non-technical in surveyed enterprises/industries is found escalating.** The demand for technical human resources is increasing over the last seven years at a commendable rate in all sectors of work/employment.

¹ SAKSHYAMTA is part of the TVET Practical Partnership (TVET-PP) programme implemented through an agreement between the Government of Nepal and the European Union in December 2016. The project is implemented over four years 2017-2021 with aim of supporting to make responsive TVET policy to labour market needs and develop a Public-Private Partnership (PPP) mechanism in three key economic sectors; Construction, Agriculture, and Tourism and Hospitality (CAT) for creating opportunities for promoting a greener, climate-resilient, and low-emission economy. Similarly, the project supports to scale up the quality of TVET and helps to ensure that it is made available through outreach to the most disadvantaged groups improving the human resource management (HRM) system, increasing employer representation in the curricula development process, improving the quality assurance system, and coordinating and collaborating with TVET stakeholders across all tier of the governments.

4. **Among the currently working technical and vocational human resources surveyed in the study, the majority were Diploma/certificate degrees.** However, except for the health sector, employers of other sectors have a clear preference to choose technical and vocational human resources with a minimum level of basic education degree.
5. **This study showed hard process to fill in the vacant positions in enterprise/industry.** The enterprises/industries are operating with inadequate technical/vocational positions that may yield poor cost-efficiency in outputs. Some of the enterprises/industries also found fulfilling the demand of hiring employees from abroad. Among the others, the time-consuming employee hiring process, lack of searched skilled human resources in the relevant field, and benefits and salaries were noted as major hurdles for this.
6. **CTEVT is the largest supply-side for technical human resources.** In the surveyed enterprises/industries, 9 out of 10 employees with technical backgrounds were graduates of the CTEVT system.
7. **Pre-diploma courses are largely offered in the institutions of the CTEVT system.** Four-fifths of the institutions surveyed in this study offer pre-diploma courses. The employers had mixed demand, and this shows a need for demand assessment providing programme affiliation to the institutions.
8. **Employers see the importance of green TVET to mitigate climate change.** Over two-fifths of employers in this study shared the consequences of climate change. The construction/engineering sector reported a relatively lower level of effect of climate change on their working but also confessed their work disturbs natural settings. Environment Impact Assessment guideline is adopted, however, they argued human resources with green skills would be more practical.
9. **Competent instructors' management seems a herculean task to most of the institutions under the CTEVT system.** The study reveals, except Madhesh Pradesh, institutions in other provinces face an extent of the scarcity of instructors to run their regular classes. Among other types of schools, Technical Education in Community Schools reported unavailability of the instructors with required highest degree.
10. **A low enrollment rate was observed across all the studied sectors.** Half of the surveyed schools/training centres are running at less than their total enrollment capacity. The extent is highest in Karnali province and the agriculture sector. Among the other reasons, low application and failing in entrance exams were reported most. However, this is also clear that the currently offered courses are not enough to attract students/trainees towards the earning and learning motives.
11. **Technical education and vocational training centres need enough physical infrastructural and laboratory facilities for both theory and practical classes.** In the surveyed institutions, most of the technical schools and training centres are facing a scarcity of physical and laboratory facilities and infrastructure to meet even the minimum level of prescribed standards. This has a direct relation to quality education and students' learning achievement.

12. **Education- employment linkage to reduce skill mismatch situation.** Most schools/training centres, surveyed in this study, were running through the enrollment of students/trainees from outside of the same community/locality. This was the gap between demand and supply in the respective community. Effective coordination between local level specific chapters of FNCCI/CNI and CTEVT is needed to reduce the level of skill mismatch. Effective management of workplace opportunity, as expressed by participants, is one of the ways of strengthening this linkage.
13. **The study provides three scenarios on the supply side for forecasting the demand for labour in Agriculture and Forestry, Construction and Engineering, and Tourism and Hospitality.** A) status quo or existing condition in TVET; B) improving the quality of TVET, C) deterioration quality of TVET.
14. **The study estimated the employment need for Nepal and revealed that the construction sector demands the highest employment by 2030.** However, the assumption is that the demand for labour increases if there is an improvement in the supply of skilled human resources and it lowers with the deterioration of skill and quality of human resources in the market.
15. **Forecasting of the demand for labour covers four dimensions: projection based on overall economy, projection based on field survey data, projection based on macro-level data, projection based on demand by governments.** This study covers four sectors: Agriculture, construction, tourism and health. For FY 2030, if the economic activities follow the current path, the contribution of agriculture sector to GDP is reducing over the years, however, agriculture sector requires more than 6 lakh human resources. Similarly, construction sector needs more than six lakh human resources, tourism needs almost 2 lakh and health sector needs almost one lakh human resource.
16. If improved quality of TVET skilled human resource is available, employments of skilled labour produced by CTEVT will be increased over the years and reached up to 5534 in agriculture sector, 3773 in construction sector, 1224 in tourism sector and 7238 in health sector. While estimating the total demand for skilled labour, we need to capture employment and vacant position in establishments. Based on current trend of utilization CTEVT graduates, total demand for skilled labour in 2030 will be 11671 for agriculture, 7615 for construction, 2306 for tourism and 6681 for health. A total of 3016 CTEVT graduates will be employed.
17. At the national level, in 2025, we need 167440 skilled labour for agriculture, 24110 skilled labour for construction, 493912 for tourism and 145804 health. There is a huge gap between national requirements and employed of CTEVT graduates. It gives the pressure to CTEVT to improve the quality of TVET training.

Abbreviations and Acronyms

BS	: Bikram Sambat
CBS	: Central Bureau of Statistics
CNI	: Confederation of Nepalese Industries
CTEVT	: Council for Technical Education and Vocational Training
DAC	: Development Assistance Committee
ELMS	: Employer led Labor Market Secretariat
FCAN	: Federation of Contractor Association of Nepal
FGDs	: Focus Group Discussions
FNCCI	: Federation of Nepalese Chambers of Commerce and Industry
GDP	: Gross Domestic Product
GESI	: Gender and Social Inclusion
GoN	: Government of Nepal
HAN	: Hotel Association of Nepal
HRM	: Human Resource Management
ILO	: International Labour Organisation/Office
KIIS	: Key Informant Interviews
LDC	: Least Developed Countries
LMIS	: Labour Market Information System
MoEST	: Ministry of Education, Science and Technology
NLFS	: Nepal Labour Force Survey
NLSS	: Nepal Living Standard Survey
NPC	: National Planning Commission
NSTB	: National Skill Testing Board
NVQS	: Nepal Vocational Qualifications System
OECD	: Organisation for Economic Co-operation and Development
OJT	: On the job training
PPP	: Public Private Partnership
SEE	: Secondary Education Examination
TSLC	: Technical School Leaving Certificate
TVET	: Technical and Vocational Education and Training
TVET-PP	: Technical and Vocational Education and Training, Practical Partnership

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Chapter I

Introduction and the Context

Human resource projection (forecasting) is important to make human resource planning and decision making. Several approaches and methods are in place for forecasting, divided into three broader categories as a supply-based model, demand-based model, and need-based model. There are different rationale, strengths, and constraints for selecting different types of models with each model having its capacity and reliability of forecasting (Safarishahrbijari, 2018). Human resource forecasting/projections are essential for the adoption of new and changing dimensions of market demand of labour force with specific skills and to adopt the necessary adjustment in courses of under graduation level of the technical and vocational skills/pieces of training.

In Nepal, CTEVT is the apex body for the management of the production of human resources with technical and vocational skills in different sectors (agriculture, construction, tourism and hospitality, health, and other sectors). The studies (eg. CTEVT, 2016; Baral, Kemper, & Maldonado-Mariscal, 2019) have demonstrated a commendable demand of the graduates (Certificate/Diploma and TSLC/Pre-diploma) in council offered courses. However, the studies also revealed that human resources preparation without proper market scopes intensifies the skills gap. In this connection, it is imperative for CTEVT to conduct a study on labour market analysis (demand and supply nexus) to establish the relevance of its offered courses and bring about modification in the modality of operation as per the present and future market demand of its graduates.

1.1 Context of the Study

Nepal has a target to graduate from LDC by 2022 and enter a middle-income country by 2030. Achieving this target appears to be a herculean task given the country's current pace of economic development. Achieving the target requires a skillfully competent workforce but the country is facing its shortage to a large extent. Realizing this constraint, the 15th five-year development plan of the nation set the educational goal 'to develop creative, skilled, competitive, productive, and innovative human resources through quality education. To achieve the goal, it has importantly envisioned increasing TVET enrolment to 70% and increasing the number of people with occupational skills to 50% from the current 31% (NPC 2019).

The TVET is also considered of improving the capacity of the workforce who go for foreign labour migration and increase their income. Nevertheless, over half of the youth who go to Gulf countries and Malesia for employment migrate without receiving any relevant skills required for their employment abroad (MoLE, 2020). A robust TVET system can positively contribute to mitigating this grim situation closely tied with economic sectors and enhance the type of current and future labor market features and needs. Hence, policy for the promotion of TVET is supportive of socioeconomic development through improvement in working and employment status (Germond, 2019). For this, the concern of sustainable development with wise strategies for utilizing natural resources is at the forefront.

The TVET also develops a competency in youth utilizing natural resources in a sustainable way that promotes green economy. Nepal as an agrarian country with abundant natural resources will benefit from the skills training and education for sustainable resource management, particularly

for agriculture development. Thus, importance of TEVT, in this context, also is rational to upgrade the imminent farmers toward commercial farming.

1.2 CTEVT an Apex Body for TVET in Nepal

The CTEVT, constituted in 1989 (2045 BS) with the vision of skilling Nepal for people's prosperity and the mission of developing TVET system to prepare a competent workforce for national and international market needs, is a national autonomous apex body for the TVET in Nepal. The council which gets the mandate of planning, managing, and monitoring TVET in the country has an important contribution to producing technical and skillful human resources. For this, it expands the quality and relevant programmes for equitable access through effective and efficient TVET systems. Furthermore, the council is dedicated to establishing a National Vocational Qualification Framework (NVQF) to recognize prior learning and develop a permeable situation of learned skills. The council, through its constituent technical schools, an institution in partnership, and affiliated schools (both community schools and private institutions) run various courses on health, engineering, agriculture, hospitality, forestry, and other various sectors.

The CTEVT provides formal programmes on two levels viz. 1) *Certificate/Diploma level programs* (three years courses after SEE), and 2) *Pre-diploma (Former TSLC) programs* (18 months to two years course offered to SEE completed ones). Apart from these formal programmes, it runs short-term courses (nonformal) on skill development, tests the skills through National Skill Testing Board (NSTB), and provides the certification of skill levels of 1-4 for more than 295 occupational categories based on the National Occupational Skill Standards.

The Council is implementing technical and vocational education and training (TVET) programmes to produce basic and mid-level technical since its establishment, however, a market-based study on the demand side of the production of such technical human resources is largely lacking in Nepal. Aphorism is that there are very limited national-level labor market studies which explain TVET sector in developing human resources required by various economic sectors. The dilemma is that the TVET providers are preparing graduates without proper employment prospects and the employers facing a continued shortage of required skilled workforce. In this sense, it is imperative to properly understand the demand side requirement of the labour market before offering various training programmes.

1.3 The Essence and Need of HR Projection

Productivity of any goods and services of the annual labour of a nation originally determines the supplies of all necessities and conveniences of life which it annually consumed by its population. The proportion of productive human resource of a nation is regulated by two different circumstances 1) the skill, dexterity, and judgment -- which its labour generally applies; and 2) the proportion between the number of those who are employed in useful labour, and that of those who are not employed (Smith, 1976). Smith further sees the greatest improvement in the productive powers of labour and the greater part of the skill, dexterity as the effects of the division of labour. Division of labour comes from the sector-wise skilling and enhancing work specialization of the potential workforce as per the demand of productive enterprises. This need is satisfied by imparting a potential labour force with technical education and vocational training. It is necessary to understand the coherence between the supply and demand sides of the graduates of technical

education and vocational pieces of training. This includes the nature and competency of courses offered in TEVT schools and the type of technical and vocational human resources, the labour market is demanding. Therefore, it is necessary to have a systematic projection/forecasting of such human resources by sector of economy/employment taking account of both supply and demand sides. So that the supply sector could re-adjust their training programmes and curricula to address the demand side needs.

Labour market and human resource projection/forecasting is a necessary element of an economy to minimize risks of labour underutilization and to augment labour productivity. It is especially important for a growth-oriented market system to '*limit exposure to surpluses or shortages in labor*'. Human resource projection is important to plan for the management of the growth of the workforce, and it is the process of predicting demand and supply to understand the types of skills needed and available to get the job. In this regard, leaders and actors in the economy generally use strategic human resource projection and planning to better understand workforce needs. The common approaches and processes of human resource projection include:

- Quantitative assessments, using mathematical calculations to examine the size of employees needed periodically.
- Qualitative assessments, based on judgment, determine culture fit and skill qualifications or desired personal and professional qualities.

The demand and supply assessment of human resources with skills and competencies is essential to growing the business plan of the CTEVT. It is an agency which determine the supply side of HR, and its supply needs to be harmonized with the demand side of the labour market viz. economy. Therefore, demand-side projection is imperative to CTEVT to determine skills requirements in labour market, evaluate demand, assess labor supply, understand workforce needs, and develop a strategy to meet its goals and growth objectives.

Before the year 1995/96, Nepal had sporadic practices of collecting labour and human resource statistics for the use of specific purposes. These include efforts of the National Planning Commission (NPC, 1977) and Multipurpose Household Budget Surveys² of Nepal Rastra Bank (since 1957 in Kathmandu Valley, and 1962 and 1963 respectively in Tarai and Hill regions of Nepal). The scope of these surveys was limited to presenting labour market indicators of employment/unemployment rates, sectors of employment, and composition of income by employment status. The country established systematic practices of collecting labor-force and employment statistics since the start of the first Nepal Living Standard Survey 1995/96 and the first Nepal Labour Force Survey 1998/99 under the aegis of the Central Bureau of Statistics (CBS). Since then, three rounds of nationwide surveys have been conducted following the internationally approved methodologies. The living standard surveys (1995/96, 2003/04, and 2010/11) contained multiple topics related to household welfare and collected extensive information on economic activities, employment, and labour-force participation status of the household population aged five years and above (CBS, 2011). Successful implementation of NLSS provided the country with opportunities for multidimensional analysis of the survey data. However, a systematic review of the labour market and human resource data of NLSS by the level of talent and technical and

² Issues of labour and employment are not covered explicitly, but implicit to estimate the source of household and individual income/earning to determine the level of consumer price index and poverty.

vocational skills of workers by sectors of the economy need still found scanty for establishing trends of past growth and future projection/forecast.

All three series of NLFS (1998/99, 2008/09, and 2017/18) have been conducted with strict application of the international concept and definitions used in labour force surveys of the International Labour Organization (ILO). The surveys were based on a large sample covering the whole country - spread over an entire year to capture seasonal variations in employment and labor-force participation. Assessment of the nature of data collected by the NLFS confirms the measurement of most of the ILOs 17 key indicators of Labour Market (ILO, 2016) such as labour force participation rate; employment-to-population ratio; status in employment; sector of employment; employment by occupation; time and hours of work; employment in informal sector; unemployment; children and work and youth unemployment; long-term and time-related unemployment/underemployment; persons not in labour force; wage, compensation cost and labour productivity and income distribution and working poverty. Findings of the surveys have been taken as instrumental indicators for the implementation, progress monitoring, and outcome evaluation of the relevant goals, targets, and indicators of MDGs and SDGs frameworks. However, data are not generated to establish coherence between the supply and demand mechanism of labour market based on competences and skills levels of human resources available to work.

From the foregone discussion, it has been clear that there is a gap in demand of TEVT HR in the employment market and supply of skilled HR. Further, studies have rarely made efforts to harmonies the differences, often isolated from TVET system and are largely characterized by a piecemeal approach. There have been very limited national-level labor market studies with objectives to support TVET sector development human resources required by various economic sectors. In the absence of such collaborative efforts, both the TVET and industry sectors are suffering as the former produces graduates without employment and the latter faces a continued shortage of skilled workforce. Therefore, this study may serve as the baseline for labor market which could help establish the Labor Market Information System (LMIS), particularly in TVET sector.

1.4 Objective and Scope of the Study

1.4.1 Overall Objective

The major objective of the study was to analyze the demand and availability of technical/skillful human resources by sector of the economy according to the growth rate of the sector in GDP and present a plausible projection of technical human resources (by skill level) for the years 2025 and 2030.

1.4.2 Scope and Specific Objectives of the Assignment

The scope of the assignment was to cover as much as the sectors and regions covered by ELMS³. However, the specifically covered three areas are agriculture (commercial farming and food production), construction, and tourism and hospitality.

³ ELMS: Employer-led Labor Market Secretariat is a skills development program, that addresses the problems faced by the industrial business sector in the country due to the lack of necessary data and information related to the labor market. The project works to develop a labor market data system. Through the project,

The indicative scope or specific objectives of this study were:

1. To examine the type of current employment including hard-to-fill in positions – skilled and levels⁴ of skills - are available in these economic sectors⁵
2. To project employment – skilled levels (basic and middle)– for the next 10 years, preferably divided annually between 2025 and 2030 in these economic sectors
3. To estimate employment elasticity with economic growth
4. To identify other economically significant sectors where skills deficiencies might constrain future employment and economic growth.
5. To identify areas of green TVET to promote a green economy.

1.5 Skill Level and Green TVET Link

The NSTB provides the skill testing and certification for elementary to level 4 through the National Occupational Skill Standards (NOSS). For this, skill levels are categorized into two groups namely basic level and middle level. The basic level corresponds to the skill levels of elementary to level 2. The graduates with a basic level of skills are expected to be familiar with the related occupation and perform the regular activities as directed by the supervisors. Similarly, the graduates with skill levels 3 and 4 (both formal and nonformal) are grouped as middle-level skills. The formal TVET programmes, pre-diploma and diploma provided by CTEVT are also correspond to skill-level of 3 and 4. The graduates with mid-level skills are expected to work independently and perform supervisory activities of basic-level employees.

A green economy is defined as "growth in employment and income is driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services" (UNEP, 2022)⁶. Green economy is seen as the way for sustainable economic development. For achieving a green economy, the skills required to promote green economic activities are key. In this context, TVET could be an important tool in promoting a green economy. For this study, green TVET is seen as the piece of training and skills which contribute to green economic development.

1.6 Limitations of the Study

The study is confined within its objectives and scope of work. It is unable to explore the extent of human resources with technical education and vocational training/skills working in self-employment and informal sectors.

Occupational Classification Standard and labor market information system will be developed. The project will be implemented in the fields of agriculture, construction, and tourism sector.

4 According to NVQ/ NSTB'

5 Specifically, agriculture, construction and tourism, and hospitality

6 <https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy>

Chapter II

Research Methodology

2.1 Research Design

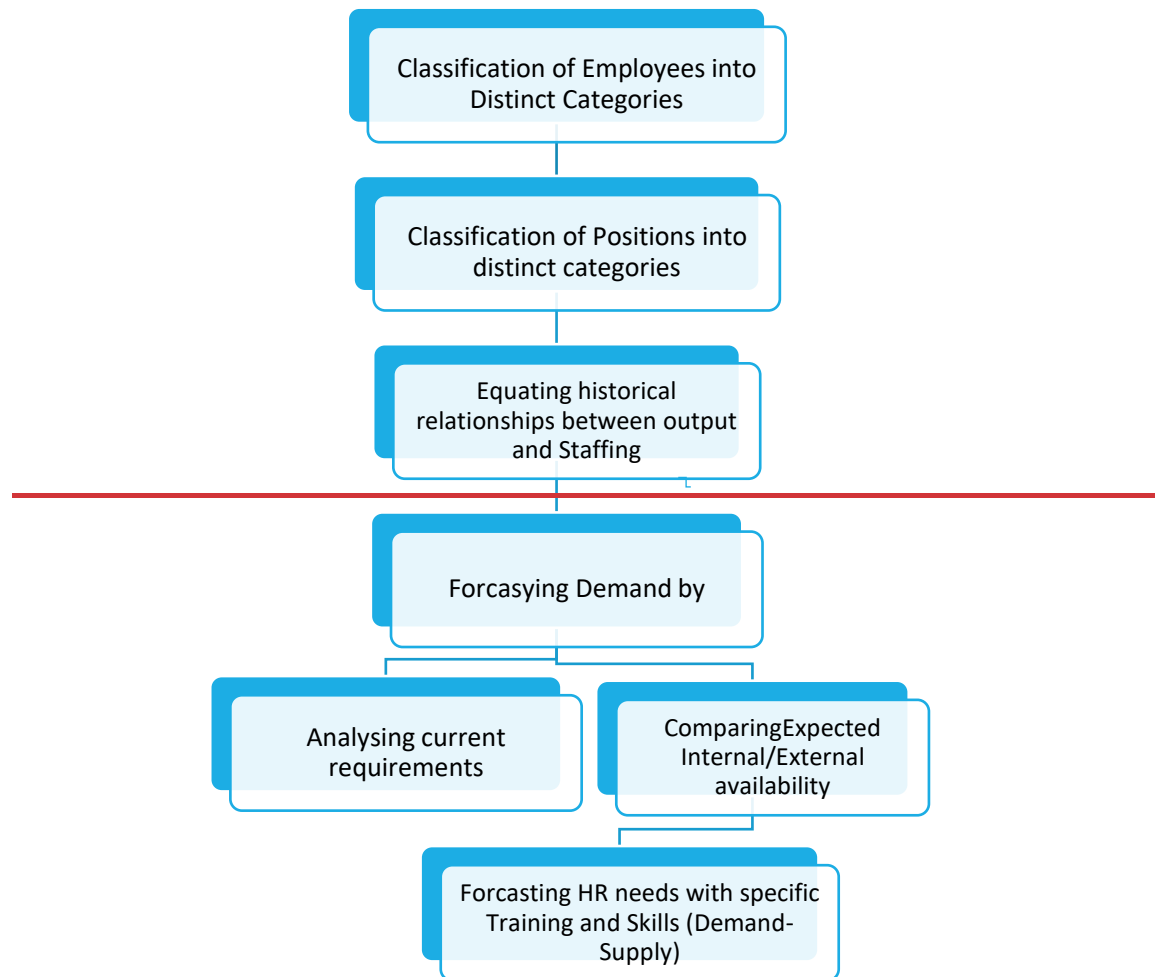
This study comprises both quantitative and qualitative approach. It has utilized both primary and secondary data. Primary data are collected from enterprise/industrial and technical school/institution surveys to understand:

- types of skillful human resources they are employing and producing
- the ratio between technical/vocational and non-technical human resources in employment
- the gap in demand and supply of the trained technical human resources and future need of human resources with technical and vocational training in the sector of employment/enterprises.

The field survey design followed the Concurrent Triangulation Design and collected primary data of both quantitative and qualitative nature at the same time. This design is found appropriately suit for this study to do the analysis of both quantitative and qualitative data at the same time and make a comparison of the results from qualitative data. Blending of the quantitative and qualitative data analysis results allowed to make decisions to establish plausible arguments and assumptions for the HR projections with technical education and vocational training/skills by sectors of the economy. Thought the analysis of quantitative and qualitative data is made independently of each other.

The study also collected and utilized secondary data from the review of national accounts statistics from CBS (National Labour-force survey – 2017/18), Ministry of Finance (MoF), and National Planning Commission, and other published and unpublished (gray) materials. Secondary data are used for the trend analysis of demand and supply of human resources by sectors of the economy. Approaches adopted to collect quantitative and qualitative data from both primary and secondary sources are as follows.

Figure 1: Conceptual framework and research steps for HR projection



Source: Rothwell, W. J., & Kazanas, H. C. (2003).

2.2 Data collection and management

2.2.1 Quantitative approach

Two separate survey design was made to collect quantitative data. The first one is labour demand survey and the second is labour supply survey. Labour demand survey is carried out through the compilation of employment inventory of technical and non-technical employees in representative

employment enterprises/industries or agencies using a structured inventory compilation online schedule. To determine the level and extent of the supply of labour-force with technical education and vocational training/skills, a nationally representative survey of education and training institutions (technical schools and vocational training centers) was carried out. The study used data of quantitative nature obtained through the following sources and procedures:

Analysis of datasets of National Labour Force Survey 2017/018, especially status of technical/vocational training of the labour force in general and persons with employment to determine the size of stock and flow of skilled labour force. Use of data collected as primary sources from 21 districts (3 each from seven provinces) considering geographical regions.

Table 1: Labour demand and supply survey of quantitative and qualitative approaches

Type of Survey	Data of Quantitative nature	Data of Qualitative nature (KIIs/FGDs)
Demand Survey	- Survey of Employer agencies i.e., Industries/ Enterprises or agencies = 376	- Local Government agencies = 23 - District level government offices = 51
Supply Survey	- Survey of Technical schools and vocational training centers = 96	- District level employers/employee associations =14 - National consultation meetings = 9

For this, a list of private sector enterprises and government/public agencies are prepared along with the training schools to be visited for the survey by districts of the survey. The survey design was finalized in close consultation with CTEVT’s study advisory and technical working committees.

2.2 Qualitative approach

Qualitative components comprise Key Informant Interviews (KII) with stakeholders (government sectors, employer's associations, private sectors, firms and enterprises, trade unions, and worker's associations). The list of key informants was finalized in consultation with CTEVT. Further consultation meetings were held with the officials of the National Planning Commission, and the Ministry of Health and Population, Ministry of Education, Science and Technology, and Ministry of Federal Affairs and General Administration. Private-sector employers included FNCCI, CNI, and product-based sectoral associations like FCAN, HAN, and associations of sectoral/subjective technicians such as NATA, NELTA, engineers’ associations, dairy development board, and dairy development corporation. Other institutions visited include CE construction, Tripureshwor and Surya Nepal (Jamal).

2.3 Survey Design and respondents

The survey employed both quantitative and qualitative approaches. The quantitative design is employed to solicit information to calculate employment elasticity for the projection of the future need of labour force by sector of employment/industry. To explore unquantifiable data, for example, future occupations and skills requirements, qualitative survey – focus group discussion (FGDs) and key informant interviews (KIIs) are conducted. The major categories of respondents

are i) industrial enterprises of various scales, ii) existing workers, and iii) technical schools/institutions. All these sectors and respondents were surveyed by taking samples from each category of the population.

2.4 Survey Locations and Size

Considering the potential contribution of this study to identify employment areas, it focused on locations with industrial corridors, industrial houses, economic activities, and the distribution of technical and vocational education training schools/institutions. The survey locations are selected to cover all seven provinces, three ecological regions, and urban/rural residences. Coverage of the districts in the survey for both employment agencies and technical schools and vocational training centers is presented in Table 2.

Table 1: Size of the survey of demand and supply sides by districts and provinces

Provinces	Districts	Survey of Employer Agencies	Survey of Technical and vocational schools
Province -1	Bhojpu	6	2
	Dhankuta	12	3
	Sunsari	16	5
	Mahottari	31	5
Madhesh Pradesh	Parsa	24	4
	Siraha	14	3
	Chitwan	28	6
Bagmati Pradesh	Kathmandu	23	11
	Kavre	10	5
	Kaski	25	10
Gandaki Pradesh	Mustang	7	2
	Nawalparasi_East	21	7
	Banke	23	4
Lumbini Pradesh	Palpa	18	2
	Rupandehi	19	6
	Jumla	12	3
Karnali Pradesh	Slyan	11	2
	Surkhet	20	3
	Dadeldhura	18	5
Sudurpaschim Pradesh	Doti	21	5
	Kailali	17	3
	Total	21 Districts	376

Source: Field Survey

2.5 Survey Tools

A structured questionnaire for the quantitative surveys, while key informant checklist, discussion guideline, and inventory compilation schedule are used to conduct qualitative surveys. Arrays and contents of survey instruments are as follows.

Table 2: Arrays and contents of survey instruments

Level of Survey Instrument	Indicators covered
a. Inventory compilation format/checklist of enterprises or association of trades (Demand survey)	Name and type of enterprises; specialized products/services; total human resources employed and HR with TEVT skills; availability of HR with required skills; reason for unavailability; sources of skills and problems associated with technical HR
b. Inventory compilation format/ checklist of technical schools and vocational training centres (Supply survey)	Type of institution; year of establishment; subject/trade of courses; level of courses offered; enrollment capacity; enrollment growth; pass-out/ drop-out rate by year; market occupancy rate of course graduates by level; the possibility of expansion of the capacity.
c. KII checklist with school MGMT	Prospect of growth; relevancy of courses by level; need in review of courses; coherence between skill demand in the job market and skill offered by the courses
d. Inventory compilation format/checklist of government/public agencies (Both demand and supply survey)	Name and type of enterprises; specialized products/services; total human resources employed and HR with TEVT skills; availability of HR with required skills; reason for unavailability; sources of skills and problems associated with technical HR

2.6 Recruitment and Training of Field Human Resources

To accomplish the assignment, the survey hired, trained, and deployed a total of 28 field-level human resources. These include seven field supervisors and 21 field enumerators (one supervisor and three enumerators for every seven provinces). Enthusiastic students doing master's level thesis were given priority based on prior work experiences in similar assignments and motivation to quality work was kept in priority. Of the supervisors and enumerators, the female-male balance was maintained strictly. The hired field-level human resources imparted with rigorous training on approaches of survey, methodology and to make familiar on the survey instrument. After training the field-level human resources were deployed to the respective provinces (which also cover three ecological belts and urban/rural areas) over 18 days for the actual field operation.

2.7 Method of Human Resource Projection

Projection of technical human resources by sector of the economy in the country is not a straightforward task. It requires the development of plausible, reliable, and valid assumptions, normalization of extreme cases, and the like. It must have a plan of input and out method. We derive input information/data through the following process:

- Size of currently working human resources and their level of technical competency/skills. For this purpose, the secondary data sources (the administrative records of TVET graduates from CTEVT and other institutions) are used to compile the present stock of TVET graduates in Nepal. Similarly, the Nepal Labour Force Survey (2017/18) is used to make the estimation of the technical human resources in Nepal.
- Based on the present stock of technical human resources and projected future economic growth scenario, the demand side projection of technical and vocational human resources is made.
- Based on the present stock of technical human resources and the supply capacity of the institutions, the supply side projection of the technical and vocational human resources is estimated.
- From the demand and supply, the deficit/surplus of the required is estimated.
- Based on the gap analysis of the projected human resource, the future need of the workforce by the level of skills/training is projected.

To derive the output (projected size of population) the adopted methods include:

- Econometric analysis: econometric analysis is used to make the projection about the future growth in different sectors of the economy and the future direction of the economy. Based on this, employment elasticity in the different sectors of the economy is estimated.
- Quantitative analysis of input information applying 'ratio method' and to some extent combination of ratio and stock-and-flow HR projection model. Using the ratio method and stock-and-flow methods, the requirement of the human resources with technical education and vocational training of the specific skill is estimated.
- The reliability of the output is verified by comparing robustness in results from alternative methods.
- The output of projection is validated through qualitative judgments.

2.8 Data quality assurance plan

The study used standard and tested tools and techniques for data collection that minimize the possible error and inadequacy of data. The tools used for data collection are designed as per the objectives of the study. The enumerators and the qualitative information collectors (supervisors) trained well on the content, process, techniques, technology, and other protocols of the study that ensure to enhance of the quality of research as well as the quality of data. Before the data collection, pretesting of the study tools was done, and necessary modifications are made. Quantitative data is collected digitally (ODK). A digital system was designed so that necessary skips are ensured to eliminate possible human errors.

Core team members along with CTEVT's professionals/officials visited field to observe and monitor the data collection activities and provide immediate feedback for improvement. Supervision was also made by Sakchyamata project. The regular meetings were organized to explore any data collection challenges and sorted out immediately by the study team. All the data is stored in a password-protected computer where all the personal identifiers were deleted and made accessible only to the study team members. In addition, no personal identifiers have been disclosed anywhere in the study.

Chapter III

Employment, Demand for, and Supply of labour

3.1 Introduction

For this study, it is imperative to make a comparison between the market needs of technical and vocational human resources as per the Employers Led labour Market Information System (ELMS) under FNCCI and the types of courses being offered under the aegis of the CTEVT by trades of occupation/industry. ELMS project is a skills development program to address the problems faced by the industrial business sector in the country due to the lack of necessary data and information related to the labor market. The project is currently providing the pieces of training with skill contents of levels 2 and 3. The data and information received from this project are considered as valuable for skills identification, determining the demand for different skills in the industry, and are expected to help in forecasting the human resource in the future.

Table 3: Courses offered by ELMS project and CTEVT

Trades of occupation	Skills pieces of training Under ELMS project*	CTEVT offered TEVT courses**
1. Agriculture & Forestry	<ol style="list-style-type: none"> 1. Herbal Farm Technicians 2. Fruits and vegetable processor 3. Agriculture farm technician 4. Nursery and landscape technician, gardener 5. Dairy Plant Operator (processor) 6. Natural fiber and lump crafter 7. Organic certification local inspector 8. Fishery technician 9. Tea processor 10. Livestock farm technician <p><i>(The skill contents of these courses are of levels 2 and 3)</i></p>	<ol style="list-style-type: none"> 1. Agriculture, plant science 2. Agriculture, animal science 3. Food and dairy technology 4. Livestock production 5. Forestry <p><i>(Within CTEVT several short-term courses are being offered in Agriculture and Forestry. The skill contents of the courses offered by CTEVT range from Elementary to level 4)</i></p>
2. Construction/ Engineering	<ol style="list-style-type: none"> 1. Construction lab technician 2. Site supervisor 3. Electrician 4. Batching plant operator 5. Excavator operator 6. Welder 7. Scaffolder 8. Carpentry and interior decorator 9. Aluminum fabricator 10. Plumber 	<ol style="list-style-type: none"> 1. Civil engineering 2. Electrical engineering 3. Computer engineering 4. Mechanical engineering 5. Refrigeration and air conditioning engineer 6. Automobile engineering 7. Electronics engineering 8. Survey engineering 9. Water supply and sanitary engineering 10. Geometrics engineering

	<i>(The skill contents of these courses are of levels 2 and 3)</i>	11. Architecture engineering 12. Electrical and electronics engineering 13. Information technology engineering 14. Hydropower engineering 15. Bio-medical equipment engineering <i>(Within CTEVT several short-term courses are being offered in Construction/Engineering. The skill contents of the courses offered by CTEVT range from Elementary to level 4)</i>
3. Tourism/ Hospitality	1. Hotel maintenance technicians 2. Innkeeper 3. Trekking guide 4. Tourist guide 5. Tourist vehicle driver 6. Nepalese cuisine cooks 7. Climbing guide/assistant guide 8. Rafting guide 9. Assistant airlines maintenance technicians 10. Spa and wellness masseuse <i>(The skill contents of these courses are of levels 2 and 3)</i>	1. Hotel management 2. Culinary arts/works 3. Social works 4. Social mobilization 5. Internship development 6. Computer application and secretarial management <i>(Within CTEVT several short-term courses are being offered in Tourism/hospitality. The skill contents of the courses offered by CTEVT range from Elementary to level 4)</i>

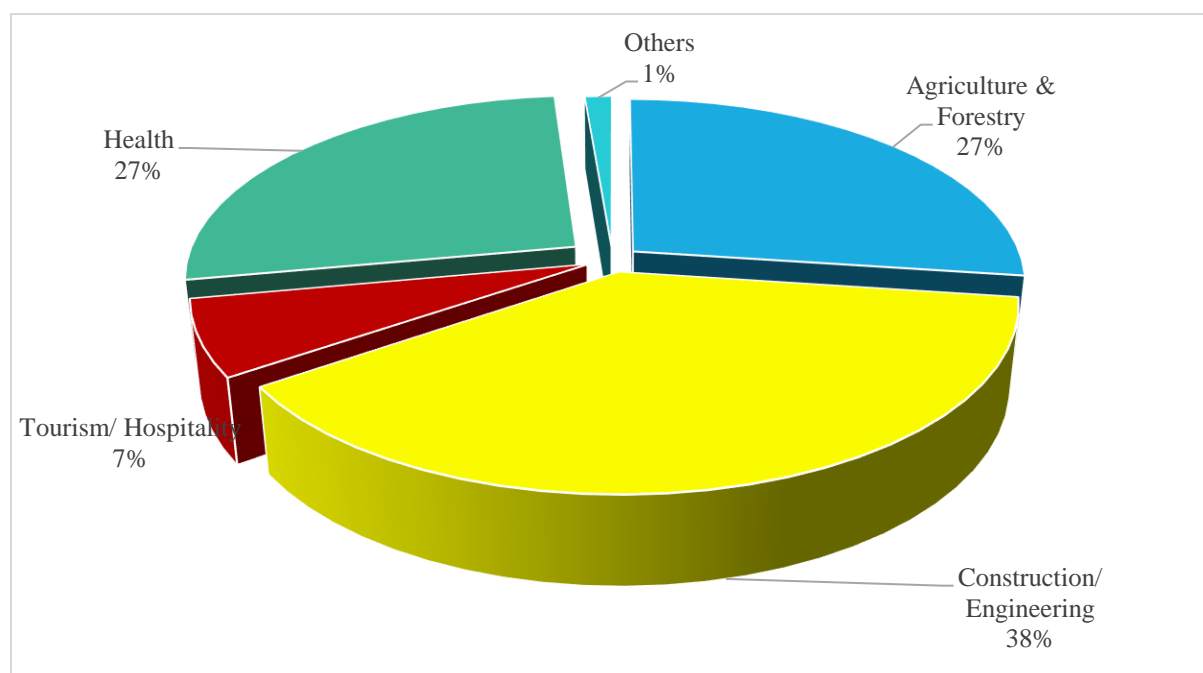
Source: * ELMS brochure; ** CTEVT managed database

It has been clear from the discussion made in chapter one and the methodology section that human resource projection involves making plausible (reliable and valid) assumptions based on the analysis of demand and supply aspects of labour markets. This analysis gives past trends of growth in both demand and supply of such human resources as per labour market's need. Owing to this fact, the study designed a demand-side survey of such human resources through the collection of employees profile of enterprises and an inventory of educational/technical institutions imparting technical education and vocational skills to these human resources.

3.2 The Surveyed Enterprises/Industries

The survey attempted to capture major enterprises/industries from agriculture and forestry, construction and engineering, tourism and hospitality, and health sectors plus. Background information collected included sector of industry/enterprises, provinces, type of local government the enterprise located, type of ownership, and size of enterprise/industry as defined by the industrial enterprise act 2076. Clear to see from the information presented in Figure 2. Results presented in the figure envisaged that the majority (38%) enterprises are from construction and engineering sectors, followed by 27 percent each of agriculture/forestry and health sectors. Tourism and hospitality sector comprises of 7 percent and others one percent.

Figure 1: Distribution of Surveyed Employer Industries/enterprises



The distribution of the surveyed enterprises/industries by provinces is highest in Madhesh Pradesh (18.4%) and lowest in Province-1 (9.0%). Over half (54%) of the enterprises/industries are comprised of Municipality areas and a mere four percent from Gaunpalikas. Nearly 46 percent of the enterprises/industries are of public/government ownership followed by 29 and 18 percent respectively that of private and private-private partnerships.

Nearly 47 percent of the surveyed industries/enterprises are from the public/government sector, therefore their size is not applicable to determine. About 19 percent of the surveyed industries/enterprises are categorized as small, followed by 12 percent micro industries and seven percent medium-sized industries. Another five percent are cottage industries, and four and a half percent are large industries/enterprises (Annex A, Table 1).

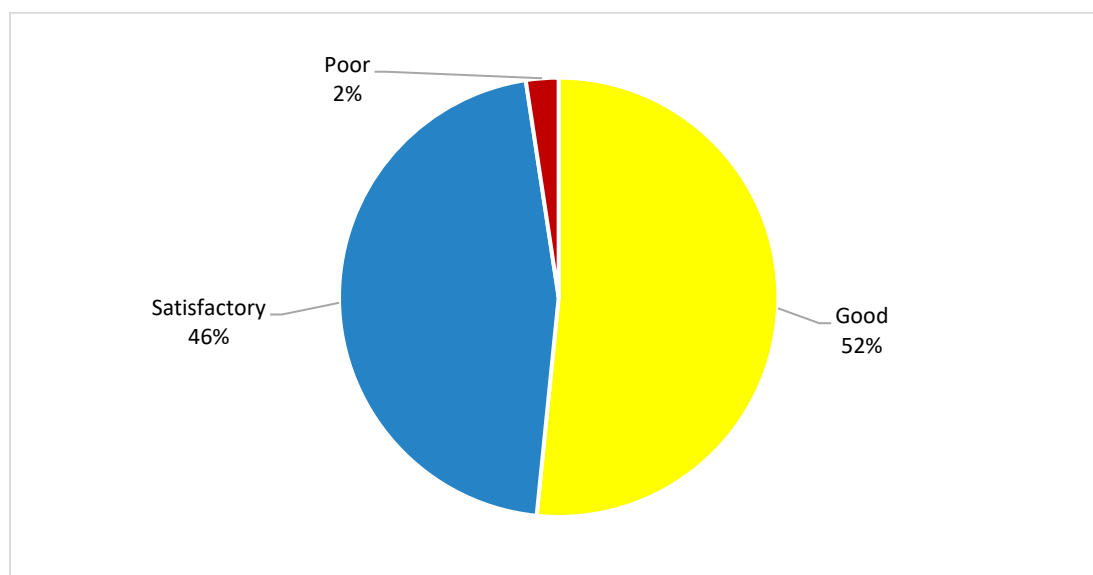
According to the industrial enterprises' classification act 2076, over 52 percent of the surveyed agencies are from service industries, about 11 percent each from manufacturing industries, construction industries, and agriculture and forest-based industries (Table 5).

Table 4: Category of Employer Enterprises/Industries according to delimitation Industrial Enterprises act 2076 of by Ownership Status

Category of Enterprises according to industrial enterprise act 2076	Private single	Public/ Government	Private Partnership	Cooperative	Public/ Private partnership	Other	Total (N)	Total (N)	Col (%)
Service Industries	22.8	43.7	18.8	4.1	6.1	4.6	100.0	197	52.4
Manufacturing industries	58.1	16.3	14.0	4.7	4.7	2.3	100.0	43	11.4
Construction Industry	22.0	46.3	26.8	4.9	0.0	0.0	100.0	41	10.9
Argo and forest-based industries	37.5	52.5	5.0	5.0	0.0	0.0	100.0	40	10.6
Information and communication Industry	0.0	50.0	11.1	0.0	38.9	0.0	100.0	18	4.8
Tourism Industries	52.9	0.0	47.1	0.0	0.0	0.0	100.0	17	4.5
Energy-based industries	0.0	83.3	0.0	8.3	8.3	0.0	100.0	12	3.2
Wholesaler/Retailers	62.5	12.5	12.5	0	12.5	0	100.0	8	2.1
Total	28.7	40.7	17.8	4.0	6.1	2.7	100.0	376	100.0

The reported current operation status of the surveyed enterprises/industries revealed that nearly 52 percent are running in good condition, 48 percent in satisfactory and poor level (Figure 3). Over three-fourths of the enterprises/industries from Karnali Pradesh are operating in just satisfactory condition, and the proportion of enterprises/industries to be in not the good condition is highest of all (about 7%) in Lumbini Pradesh. Likewise, over four-fifths of the industries/enterprises of the province, are running in good condition, followed by the industries of Gandaki and Madhesh Pradesh (Annex A, Table 2).

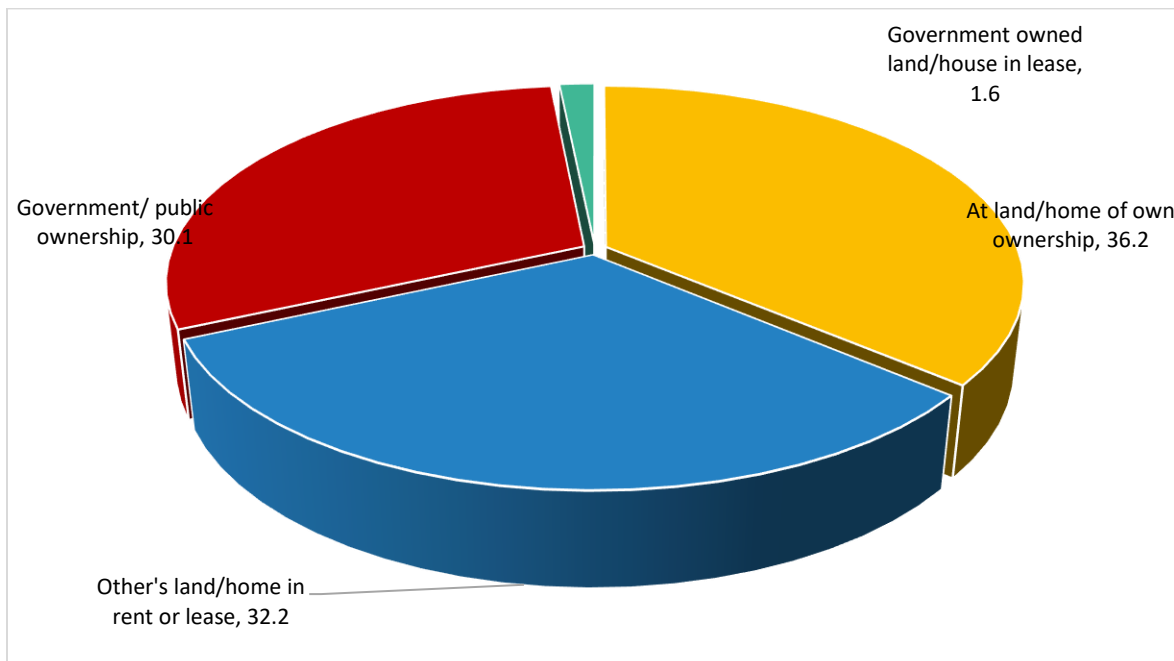
Figure 2: Current operation status of the enterprises/industries



Industries/enterprises of construction/engineering and agriculture/forestry sector are relatively running in a better position. However, industries/enterprises operated under the cooperative, private-private partnership, and private only ownership than other forms are running only at a satisfactory level.

Figure 4 shows the distribution of the employer industries/enterprises according to the ownership status of land in which the industry/enterprise is operated. Clear to see from the table is that more than one-third of the enterprises are operated in their land/home, and about one-third (32.2%) of the enterprises are operated in others'/rented land/house or on lease. Private ownership of the land in which the enterprise/industry is being operated is high for Tourism and hospitality (44%) followed by health and agriculture/forestry. The majority of the enterprises/industries located in rented or leased land are of Tourism and hospitality (48%) and Health (43%).

Figure 3: Ownership of the land in which the enterprise/industry is operated



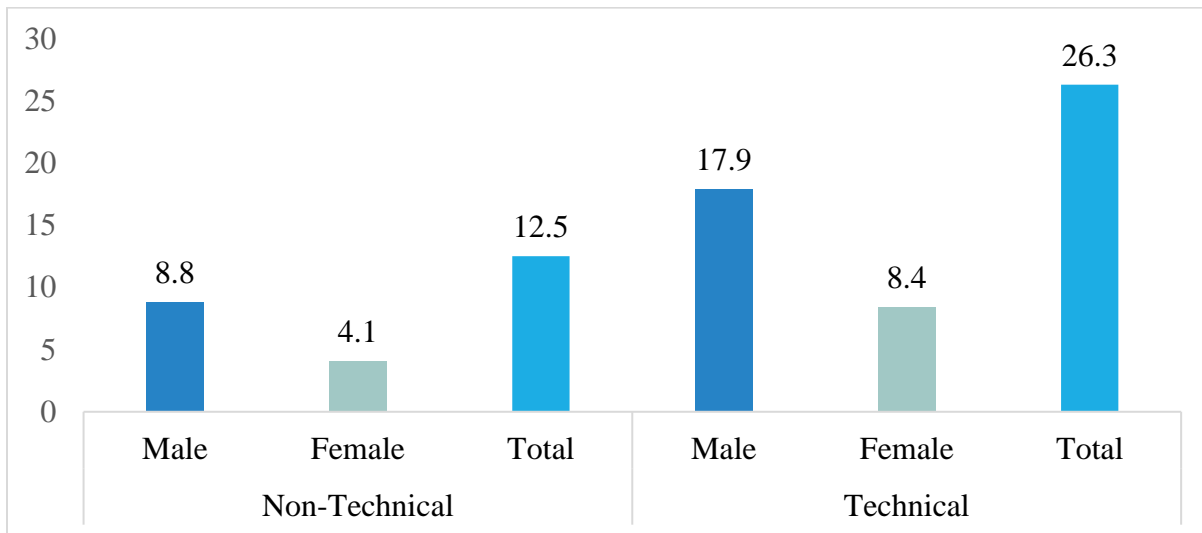
3.2 Current Employment

The demand side survey of human resources (labourers) with technical education and vocational training successfully collected inventories of 376 enterprises/agencies. Based on the compiled information, this section attempted to examine objective one of the studies viz. the type of current employment including hard-to-fill positions – skilled and levels of skills - available in the sectors of the economy.

3.2.1 Size of Employees and Growth in Labour Demand

Figure 4.4 shows the average number of technical and non-technical employees working in the surveyed industries/enterprises during the last seven years by trade. The data shows that one employment enterprise/industry or agency at present is employing on average 27 persons of human resources with technical education and vocational training (technical) and the size for non-technical human resources is about twelve and a half percent. In both technical and non-technical jobs, the size of the male is over double that of female workers. The ratio between technical to non-technical workers in the surveyed work/enterprises is found at 2:1. For each non-technical human resource, more than two technical skills are employed (Annex, A, Table 3).

Figure 4: Average number of Technical and non-technical employees in the surveyed enterprises/industries



An average number of technical and non-technical human resources employed per enterprise is the same or of some zig-zag pattern by fiscal years of observation. The highest number of technical workers are seen in Tourism and hospitality-related enterprises (three per non-technical workers) and an average number of workers of both natures are seen in other streams of enterprises/industries. Obvious to see is that large-scale enterprises/industry employs a higher number of technical workers (60 per enterprise/industry) followed by medium-scale (45 persons) and small (32 persons). The ratio between non-technical to technical human resources also varies by the size of the enterprise/industry and the number of employees (Annex A, Table 4).

Table 6 shows the total number of technical and non-technical employees working in the surveyed enterprises for the last seven years. The data shows that the number of employees has increased over seven years both among male and female employees. The annual growth rate in the demand of technical and vocational human resources has increased tremendously during the study period for the surveyed industries. For instance, in the fiscal year 2077/78, the growth rate of both technical and non-technical human resources was about 45%.

Table 5: Total number of technical and nontechnical employees working in the surveyed enterprises/industries by sex for the last seven years and percent change over the years

Fiscal Years of the last seven Years	Technical			% Change in Technical	Non-technical			% Change in non-Technical
	Male	Female	Total		Male	Female	Total	
Fy2072_73	1,368	616	1,984		619	289	908	
Fy2073_74	1,849	951	2,800	29.1	840	359	1,199	24.3
Fy2074_75	2,194	1,107	3,301	15.2	1,069	549	1,618	25.9
Fy2075_76	3,043	1,479	4,522	27.0	1,528	693	2,221	27.1
Fy2076_77	3,673	1,707	5,380	15.9	1,871	858	2,729	18.6
Fy2077_78	6,745	3,072	9,816	45.2	3,402	1,584	4,986	45.3
Total (workers until date)	18,872	8,931	27,804		9,329	4,332	13,661	

Growth in demand for human resources of both technical and non-technical streams according to the sector of enterprise/industries is seen in Table 7. The 10 percent change in demand for technical human resources in the agriculture and forestry sector during the first two fiscal years (between 2072/73 and 2073/74) reached 32 and 54 percent change respectively during the subsequent years (2074/75 and 2075/76) and 2076/77 and 2077/78 in the sector. Likewise, an increase in the demand for technical human resources reached 36 percent during the fiscal year 2077/78 increasing from 12 percent in the previous fiscal year.

Table 6: Increase in the demand for a total number of technical/vocational human resources during the last seven fiscal years by sector of work/employment

Fiscal Year	Technical						Non-Technical					
	A/F	C/E	T/H	Health	Others	Total	A/F	C/E	T/H	Health	Others	Total
Fy2072_73	463	902	172	387	61	1,984	220	419	18	182	30	869
Fy2073_74	515	1301	181	743	61	2,800	248	461	24	393	30	1,156
% Change	10.0	30.7	5.0	47.9	-	29.1	11.3	9.1	25.0	53.7	-	24.8
Fy2074_75	676	1563	207	795	61	3,301	347	729	32	425	30	1,563
% Change	23.8	16.8	12.6	6.5	-	15.2	28.5	36.8	25.0	7.5	-	26.0
Fy2075_76	989	1784	264	1421	63	4,522	445	866	146	651	30	2,138
% Change	31.7	12.4	21.8	44.1	3.8	27.0	22.0	15.8	78.1	34.7	-	26.9
Fy2076_77	1215	2175	315	1610	65	5,380	520	1183	164	732	30	2,629
% Change	18.6	18.0	16.2	11.7	2.2	15.9	14.4	26.8	11.0	11.1	-	18.7
Fy2077_78	2644	3391	916	2464	402	9,816	1337	1977	331	1017	169	4,831
% Change	54.0	35.8	65.6	34.7	83.9	45.2	61.1	40.2	50.5	28.0	82.2	45.6

Total	6,503	11,115	2,054	7,419	713	27,804	3,117	5,635	715	3,400	319	13,186
Total (N)	283	405	71	283	15	1,057	283	405	71	283	15	1,057

Note: A/F= Agriculture and Forestry, C/E=Construction and Engineering, and T/H=Tourism and Hospitality

The rate of increase in demand for human resources with technical education and vocational training is relatively higher than all other sectors of employment (66% from the 5% rate of change in the base year). The demand for the health sector's technical workers is equally found to increase. This indicated that the demand for technical human resources required in all sectors of work/employment is increasing over the last seven years at a commendable rate.

Concerning the growth of technical and vocational human resources during the next five and ten years, the opinion of Key Informants are:

"Our country is moving in the way of development, so there is an increased need for technical human resources of different levels and sectors. In the coming five and ten years, we need the maximum number of technical human resources. If you talk about our company, we need 6 and 10 technical human resources of Nayab Subba in the coming 5 and 10 years. Also, we need 25 and 35 technical assistants in the coming 5 and 10 years" KII, Jumla (Urban and building construction)

3.2.2 Education, Skill Level, and Positions of Technical/Vocational Human Resources

It is imperative to understand the education and training level of working technical/vocational human resources in the enterprises and what may be the future direction of their demand in the enterprises. Distribution of the currently working technical and vocational human resources by the level of technical education and vocational training revealed that nearly 53 percent are with Diploma/certificate degree, 22 percent with pre-diploma degrees another 20 percent have received short-term skill training courses and skill testing certificate (Table 8). Two-thirds of the workers from the health sector are with a diploma degree, followed by 58 percent of construction and engineering. The proportion of workers with short training courses and skill testing certificates is over 40 percent in tourism and hospitality and other sectors of employment.

Table 7: Distribution of human resources with technical education and vocational training according to a level of education/training by sector of work/employment and size of enterprises

<i>Sector and size of Enterprises</i>	Diploma/Certificate	Pre-Diploma	Short-term training skill test	Others	Total Employees
<i>The sector of Work/Enterprises</i>					
Agriculture & Forestry	47.4	32.9	8.4	11.3	6,503
Construction/Engineering	57.9	18.9	19.0	4.3	11,115
Tourism/Hospitality	48.6	9.5	40.5	1.4	2,054
Health	66.0	23.0	7.6	3.4	7,419
Others	29.3	20.4	46.1	4.2	713
<i>Size of Enterprises</i>					
Micro industry	55.8	25.4	7.5	11.3	1,416

Cottage Industry	58.3	16.7	25.0	0.0	1,893
Small Industry	47.2	15.7	34.7	2.3	5,511
Medium industry	44.1	26.5	27.2	2.2	3,249
Large Industries	35.0	29.9	26.8	8.3	2,885
Others and NS	60.3	20.2	15.9	3.6	11,581
Other	40.9	42.0	4.5	12.5	1,269
Total	52.7	22.4	19.8	5.1	27,804

Note: Micro=Running capital < Rs. 2 million; Small=Running capital up to 150 million; Medium= Running capital 150 to 500 million; Large= Running capital 500 million and more; Others & NA= government office and public enterprises

Findings from Table 9 indicated that employment enterprises and industries have a clear preference to choose technical and vocational human resources with a minimum level of basic education degree. Except for the health sector, other types of enterprises mostly require human resources with a lower level of technical and vocational qualification/skills.

Table 8:Highly demanded area of the technical and vocational human resources

Sector of Employment	Types of Workers Needed
Agriculture and Forestry	<ul style="list-style-type: none"> - Agricultural farm technicians - Livestock farm technicians - Fishery technicians - Dairy technicians - Land scape and gardener - Fruits and vegetable processors
Construction	<ul style="list-style-type: none"> - Civil/structural engineering; Surveyors and geometrics - Electricians, electrical overseers - Heavy equipment operation and maintenance (<i>Crawler Excavator, Motor Grader, Road Roller, Asphalt Mixing Plant, Wheel Loader</i>). - Batching plant operator - Plumbing and sanitary ware - Tiles, marble, and parqueting fitters - Welder, Scaffolders - Construction site carpenters
Tourism/Hospitality	<ul style="list-style-type: none"> - Waiters - Housekeeping - Innkeepers - Chefs/cooks - Front office management staff - Tourist guide - Sales/marketing - Engineers - Security guards
Health	<ul style="list-style-type: none"> - Laboratory technicians - Nurses
Others	<ul style="list-style-type: none"> - Salespersons

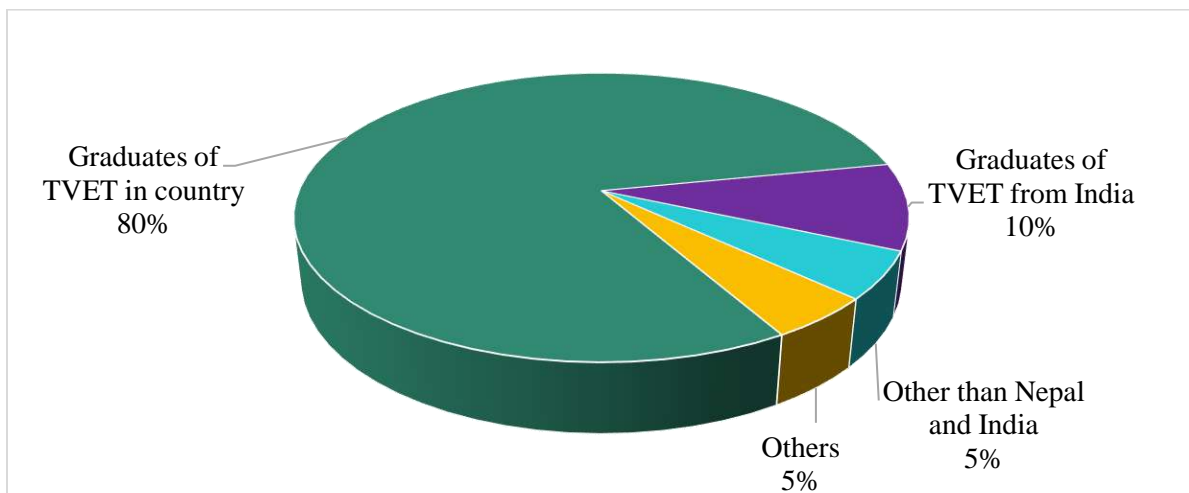
Source: KIIs and FGDs

In explaining the need for technical human resources in the construction sector, the operation and human resource manager of CE construction and General Secretary of FCAN shared similar views:

The construction sector is facing constraints of the shortage of operation and maintenance mechanics of heavy equipment used in projects of hydropower projects, road, and irrigation projects, and building construction projects. The nature of work demands differential operation skills. For instance, a carpenter fixing wooden frames in building construction would not be fit for the framing and fixing of hydro-power project structures. Likewise, the need for welders and scaffolders varies by nature of projects. Further, they added that heavy equipment operators trained in local markets may operate the machine with some longer period of apprenticeships but are unable to maintain it in case of general defects in the machine.

The enterprise/industry survey showed a substantial gap in the fulfillment status of technical/vocation positions. The enterprises/industries are operating with about 60% of the required technical/vocational positions. The analysis also shows that about 80% of the technical human resource employed have got their formal TVET education from within the country (Figure 6). This implies that CTEVT has an important role in supplying technical human resources in Nepal (Annex A, Table 5).

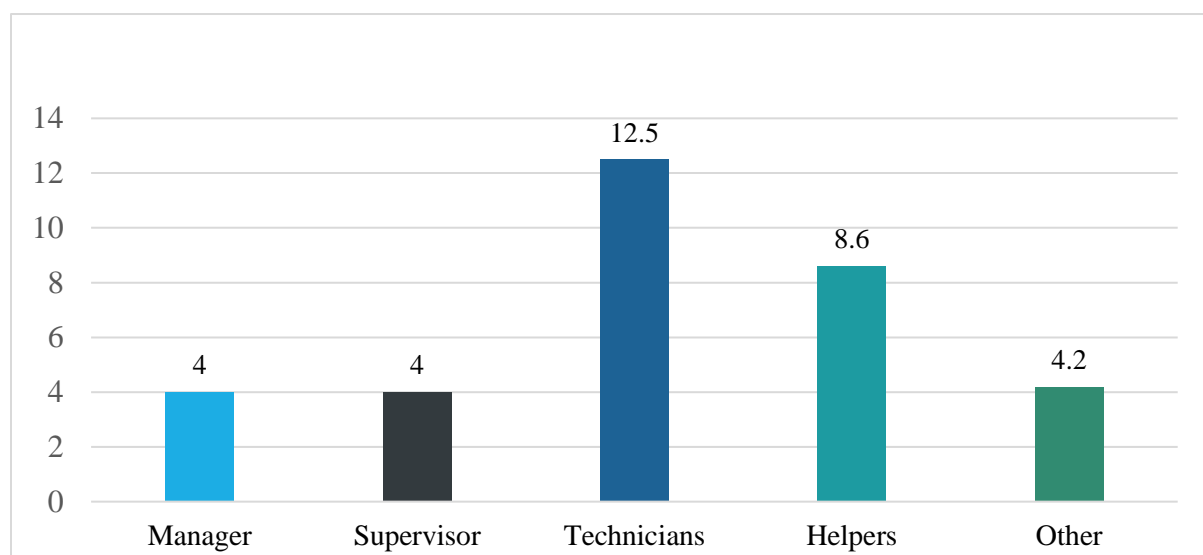
Figure 5: Source of Technical/vocational positions



Projection of human resources needs to understand the status of enterprises/industries in require of additional human resources of specific skills/training by the level of positions. Industries require additional positions of managers, supervisors, technicians, helpers, and others. The extent of the need for technicians is the highest of all (12.5 persons per industry and 1,782 for the 376 surveyed enterprises) followed by helpers (about 9 persons per enterprise and 687 in total).

Overall, the survey estimated a total of 27,804 (Tables 6 & 7) human resources either with technical education or vocational training working in the 376 surveyed enterprises and needed additional 3,010 such human resources to fulfill the required positions (Annex A, Table 6). The need for such human resources is highest in Bagmati province, in health sectors and government/public enterprises.

Figure 6: Average number of additional technical and vocational HR required



To understand the stock and flow and entry and exit level of human resources with technical education and vocational training, an inventory of visited enterprises was compiled about the annual number of retired and voluntary job changes. Job changers remain in the stock and flow of such human resources, but we need to subtract the proportion of retired while doing an estimation of total human resources. An inventory of the retired technical and vocational human resources of the surveyed industries found 670 persons during the period of 2072/73 to 2077/78. Likewise, 1652 had change their jobs indicating problems associated to the retention of technical/vocational human resources in the enterprise/industries (Table 10).

Table 9: Total number of retired and voluntary job changing technical and vocational human resources by year and other attributes of industry/enterprises

<i>Background Attributes</i>	Retired		Job Changers		Total Retired + Job Changers
	Total Retired	Enterprises with Retired workers	Total Job Changers	Enterprises with job-changing workers	
Fiscal year					

Fy2072_73	60	21	33	13	93
Fy2073_74	63	18	201	17	264
Fy2074_75	65	21	194	23	259
Fy2075_76	90	34	281	50	371
Fy2076_77	120	46	350	70	470
Fy2077_78	272	105	593	117	865
<i>Sector of Enterprises</i>					
Agriculture & Forestry	138	56	214	71	352
Construction/Engineering	91	59	238	85	329
Tourism/Hospitality	41	16	62	18	103
Health	268	67	1051	90	1,319
Others	132	47	87	26	219
Total	670	245	1652	290	2,322

The extent of job changing was found to be higher than the job retirement. Total job changers during last seven years sums – 1652 in the 290 industries. The extent of job changing consistently increases in recent years. It is more pronounced in health sector occupations as well as in public agencies.

3.2.3 Hard to fill in positions

The study identified a range of hard-to-fill-in positions in the field of human resources with technical education and vocational pieces of training. Each sector of the economy is facing this problem in the country. For instance, the construction sector is constrained by the unavailability of the required number of surveyors, geometric workers, heavy equipment operators, and maintenance of heavy equipment (especially earth movers), the manufacturing sector is looking for efficient salespersons, and the hotels and tourism sector finds the problem of retain-in of the workers. All employer enterprises are of the view to design technical education and vocational training courses with ample provision of on-the-job training (OJT) schemes so that both employers and training sectors could be benefitted. Of the 376 enterprises that compiled an inventory of the currently employed human resource, hard-to-fill-in jobs by level of education/training and positions, and others, only 80 (21%) could provide such information (Table 11).

Table 10: Average and total number of hard-to-fill-in human resources in the surveyed enterprises by the level of qualification, positions, and sector of work/enterprises

<i>Minimum qualification</i>	Average	Total No.	N
Diploma	4.2	233	56
Pre-diploma	6.9	96	14
Training and skill test level-1	3.1	22	7
Training and skill test level-3	23.3	70	3
<i>Position/Level of Workers</i>			
Manager	2.5	27	11
Supervisor	2.7	32	12
Technicians	6.2	237	38
Helpers	8.5	111	13

Other	2.3	14	6
The sector of Work Enterprises			
Agriculture & Forestry	5.2	99	19
Construction/Engineering	4.0	93	23
Tourism/Hospitality	10.0	120	12
Health	4.3	108	25
Others	1.0	1	1
Total	5.3	421	80

However, it was hard to obtain the exact name of the technical position that is hard-to-fill-in. Of the 80 enterprises, 56 find diploma-level graduates of any discipline as hard to fill-in-positions. These enterprises currently needed 233 such human resources to be fulfilled (4.2 persons per enterprise). Positions of technicians by level or workers are in high demand. The size of the current demand for technicians is the highest (237 persons in 38 enterprises), however, the average number of hard-to-fill-in positions is higher for technical helpers (8.5 persons).

Hard to retain human resources with technical and vocational training is a problem in enterprises. Justifying this, an owner of a reputed hotel in Kathmandu shared an experience:

In his hotel, a boy joined in work as a dishwasher some seven-eight years back. Gradually they very minutely picked up all kitchen and cookery work and now is efficient to prepare any recipe for the guests. His work and devotion are trustworthy, can handle all kitchen electric and electronic apparatus and do general maintenance of the same. The owner is sure that, if he got the chance to participate in a skill test, he will achieve the level-4 certificate. But the owner is reluctant to send him due to fear of the boy may immediately leave his hotel and fly abroad. He further added that most of his employees, graduates of Tourism and Hotel management courses ask for an experience letter after some months of engagement. Most of them ask for it to fly abroad. Some even say, if 'I do not go abroad, there will be a problem of getting married'. (KII from HAN)

Similarly, the members of the Federation of Contractors Association of Nepal (FCAN) and the CE construction have a similar saying,

Where do the products/graduates of CTEVT go? They do not come in contact of the construction sector enterprises. If some of them approached, are with poor aptitude and skills of workmanships. After working sometimes, start asking for experience letter, as they get the letter in hand fly from the industry (KII from FCAN & CE Construction)

They further viewed that CTEVT needs to prepare short-term training and technical education courses for heavy equipment operation and maintenance. Due to the scarcity of these human resources, they claimed, many construction companies are working with half the capacity of each heavy equipment and yield poor cost-efficiency in outputs. The HR manager of an industry sees salespersons with marketing efficiencies are hard-to-fill-in positions and suggests CTEVT to design training and education courses/modules in close collaboration with business houses with ample provision of OJT.

In interaction with agriculture extension workers (National Association of Technicians of Agriculture) revealed the scarcity of plant science technicians of herbs/herbals and medicinal plants. Agricultural diversification, according to them, has opened the scope of the cultivation and processing of medicinal plants and they need to depend on trained persons outside of the country. Views of the local level authorities are worthwhile to note here:

It is difficult to get skilled and capable human resources. There is a high prevalence of brain drain because skilled human resources are not getting enough salary and facilities according to their ability and competence. There is a higher possibility that the need for human resources can be doubled in the coming years because our country is pacing in construction and development works. - KII, Jumla (Urban and building construction)

3.2.4 Current Demand for Technical/vocational Human Resources

This section estimated the total human resources with technical education and vocational training adjusting all vacant positions, hard-to-fill-in positions, number of job changes, and requirement of additional technical/vocational positions after the extension of production capacity or branches of the agencies. A higher number of workers (3,391) are employed in construction/ engineering enterprises/industries followed by agriculture/forestry and health sectors. The proportion of unfulfilled positions is higher in the agriculture/forestry sector (48%) followed by the construction/engineering and health sectors. After adjustment of vacant positions, the number of workers with technical/vocation training/skills increases to 13,707. Current vacant positions are in addition to the position of hard-to-fill-in positions. Several hard-to-fill-in jobs account for 421 positions, with a higher extent in the tourism/hospitality and health sectors. Overall, the surveyed enterprises/industries reported the need for additional 3,010 positions of technical and vocational human resources in the immediate future as they opt to the extent of the business plan or in the current context. The size of job changers during the last seven years of observation is 1,652. All these positions are assumed to be adjusted in unfulfilled positions (Vacant). Therefore, the sum of the current demand for technical/vocational human resources is 13,707 (Table 12).

Table 11: Current demand level of technical and vocational human resources in the surveyed enterprises by sector of the economy

Sector of Employment	Currently at work	The factor of Vacant position	After adj. of Vacant Position
Agriculture & Forestry	2,644	1.480	3,915
Construction/Engineering	3,391	1.375	4,662
Tourism/Hospitality	916	1.320	1,209
Health	2,464	1.360	3,351
Others	402	1.400	563
Total	9,816	1.396	13,707

3.3 Strategies of Planning and Hiring Technical Human Resources

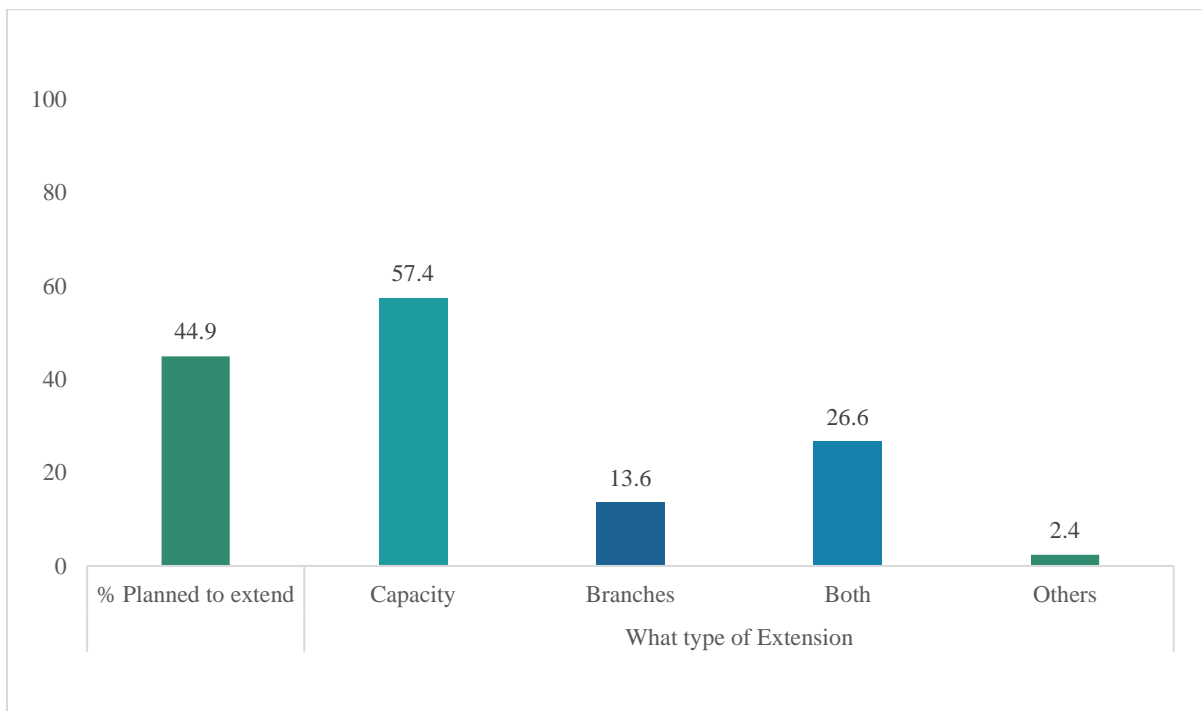
This section discusses the plan of the enterprise/industry to extend the capacity of the production of goods and services or extension of branches of the office/agency, strategies adopted to hire human resources with technical education and vocational training, and faced hurdles faced to fulfill the positions hiring proper persons. Further, it looks at sources of training of the working human

resources and perception of enterprises/industries on the work efficiency/performance of such employees by position in work and source of training they received.

3.3.1 Planning for Capacity Extension

Table 4.7 shows the planning of surveyed enterprises/industries to extend their production capacity of goods or services and the timing of extension. From the table apparent to see is that about 45% of the enterprises have plans to expand their production capacity or branches. The propensity for extension is highest in the enterprises/industries of Karnali Pradesh (63%) and lowest among the enterprises of Gandaki Pradesh (26%). Similarly, enterprises in the health sector, ownership arrangements of public-private partnerships, and large-scale enterprises showed a higher propensity for extension of the enterprises. Of the enterprises that planned to extend capacity or branches, 57.4% said that they would increase the present production capacity, 13.6% would increase the branches, while 26.6% of them have planned to increase both production capacities and branches (Figure 8 & Annex A, Table 6). This indicated that a sizable percentage of the enterprises/industries are planning for the expansion of the business in near future indicating high demand of the technical human resources in the country.

Figure 7: Planning to extend the capacity and Branches of the Agency

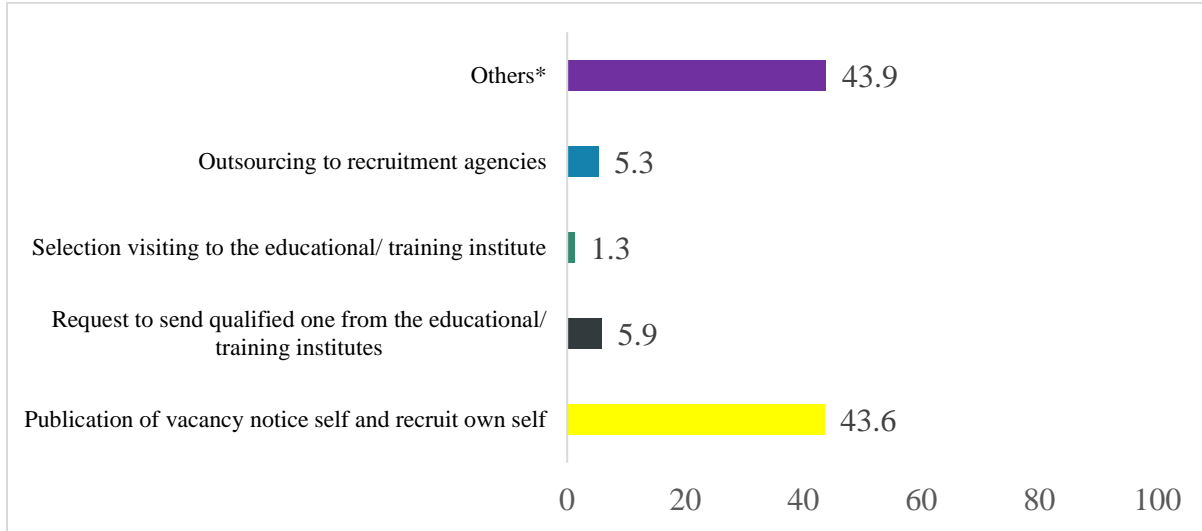


3.3.2 Strategies of Human Resource Hiring and Hurdles

Figure 4.8 shows how the surveyed enterprises are fulfilling their vacant position for the technical and vocational skilled manpower in their enterprises. About 6 % of the enterprises said that they request educational/training institutes to send qualified human resource while about 5% of the enterprises reported that they fulfill their vacancies from outsourcing agencies. About 43% of the enterprises reported that they fulfill vacancies by vacancy notice while about 44% of the

enterprises reported that they prefer 'other' methods to fulfill their vacancies which includes personal recommendations (Annex a, Table 7).

Figure 8: Ways adopted to fulfil the vacant technical and vocational skilled HR



The majority (44%) of the enterprises choose other options. The reported other options⁷ adopted of hiring required human resources with technical education and vocational training are of three to four categories i.e., management from the central office, as per provision of public service commission, outsourcing to the recruitment agencies and from the personal contract, employees' networks, and the like.

The public service commission also noted the main way of fulfilling the vacant positions of the technical/vocational human resources. An official at municipal level in the KII said:

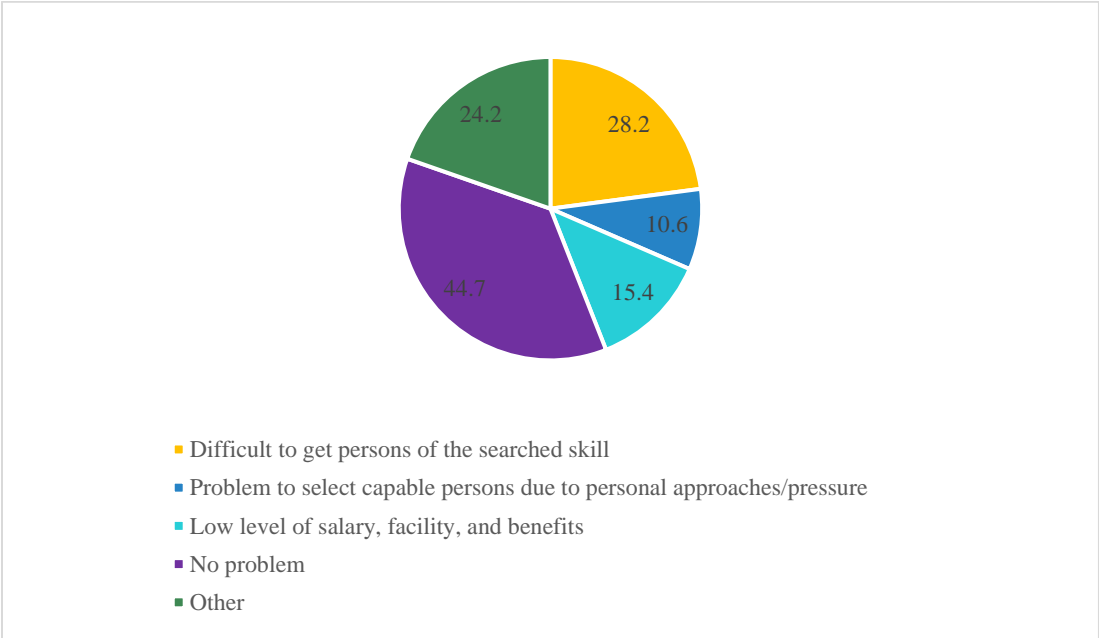
The province assigns three levels of staff, including permanent, temporary, and rahat. The province has been fulfilling the staff requirements by itself, but the post is vacant due to a delay in the public service commission exam. Till now, staff having all types of skills have been fulfilled by the public service commission. In the case of the temporary (contractual) posts, they are fulfilled through the announcement of advertisements from the central level as per the demand (vacant posts). However, maintenance field expert position is hard to fill as most of them are from neighboring country India. - KII from Pokhara Metropolitan City, Kaski

Figure 4.8 shows hurdles faced by surveyed enterprises in finding technical and vocational human resources. About 28% of the enterprises said it was difficult to get persons with required skills sets for the job/occupation, while about 11% of the enterprises said that interference in the selection

⁷ Others include management from the central office, personal social contact, local government's management, persons sent by public service commission; contact to local recruitment companies Use of employee's network, need to depend on the decision of higher-level offices; personal contact; use of contact circle and calling from the collected roster of workers; workers contact themselves. Demanded to ministry, demanded to province, giving higher priority to best performing in on-the-job-training OJT; Online and other electronic mediums application, Outsourcing, Referral, selecting from graduates' roster collected in the enterprises; selection on basis of experience; Facebook homepage. Employing own students and use of friends or family circle.

process and personal pressure/approaches is the main hurdle in recruitment. About 15% of the enterprises/industries said that the low level of salary, facilities and benefits are the main hurdle in finding the required technical human resources. On the other hand, about 45% of the respondents said that there was no problem at all while finding persons with technical and vocational training. About a quarter of the respondents mentioned 'other' as a reason for finding qualified persons (Annex A, Table 8).

Figure 9: Hurdles faced in hiring technical/vocational human resources



A dual dilemma is reported as their hurdles in hiring and retaining human resources by public and private agencies and enterprises. Public, for the most part, faces delays in vacancy calling and fulfilling processes abiding by the rules and regulations set by public service commissions and

central and or higher offices not fulfilling the vacant seats. Meanwhile, such public agencies face a high level of personal approaches and pressures to select a preferred one than on a competence basis. On the other, the private sector faces problems of not finding persons with a competent skills and workmanship. Therefore, the private sector, particularly in construction and hotel shared their problem of hiring technical human resources of the required skills from India and other countries.

3.3.3 Source of Training and Work Efficiencies

This section made discussion on the source of education/training of technical/vocational human resources and employer's rating of worker's working attitude and workmanship by the level of education/training and its sources. Of the total, 88.8% of workers with technical education and vocational training are the graduates of CTEVT system. It is as high as 95% in the case of the health sector, 82 and 78 percent respectively that of agriculture and forestry and construction and engineering sector and 68% in tourism and hospitality (Figure 11).

Figure 10: Proportion of technical and vocational employees who graduated from CTEVT system by sectors of employment

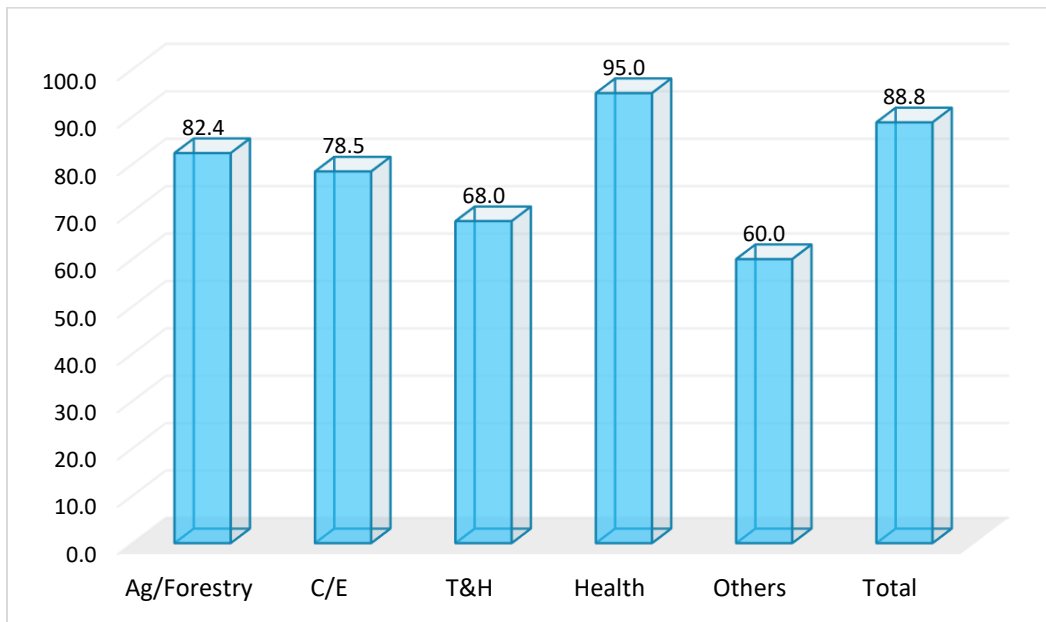


Table 13 reports the perceptions of the working efficiency and work motivation of the technical and vocational human resources by the level of technical education/training and the position they work. Almost 60% of enterprises rated the work attitude and motivation toward work by the level of education/training and position in a job as good. Good and excellent rating of the work attitude and workmanship of the technical/vocational employees is high for the workers with diploma level of education and graduates of the CTEVT courses and university courses. This implied that courses of CTEVT have a relevance in the job market, but the need is there for timely modification.

Table 12: Rating of the attitude of the workers toward work motivation and dedication by the level and sources of technical education and vocational training

Level and Sources of Education/training	Rating of work performance and efficiency			Total (N)
	Excellent	Good	Satisfactory & Poor	
<i>Level of education/training</i>				
Diploma	14.4	63.9	21.8	299
Pre-diploma	9.9	54.3	35.8	223
Short training or skill test	5.6	57.0	37.3	107
Others	20.4	62.1	17.5	103
Total	12.6	59.7	27.7	732
<i>Sources of Education/Training</i>				
Technical schools and training centers of CTEVT	15.7	61.9	22.5	312
Successful in skill test	9.9	53.8	36.3	91
Self-products of enterprise	21.4	54.8	23.8	42
From abroad	30.0	52.5	17.5	80
University educated	29.7	62.6	7.7	222
Other	20.0	60.0	20.0	20
Total	21.0	59.7	19.2	767

Note: Due to two separate multiple response questions, the number may not match each other

On the aspect of these soft skills of the employees, key informants at the central level (HAN, FCAN, Construction Companies, and representatives of technical workers associations), openly praised the work efficiency of the graduates from the CTEVT. For the plant and animal sciences, surveys, mechanics and masonry/plumbing, health/medicine, and others they praised the reputation of the graduates from constituent schools such as in Balaju, Jiri, Jumla, Butwal, and other. A further claim was that enterprises put in first preference to select if products of these schools are available.

Some representative and relevant verbatims on the work efficiency was noted among the employees after receiving the technical/vocational trainings in public sector.

Generally, our office provides long-term and short-term training for the staffs. Those training has increased the work efficiency of the staffs. Good changes can be seen in the working ability of the staff - KII, Birendranagar Municipality, Surkhet

Further, concerning the work excellence and performance of health workers, officials of district health offices of remote areas opined that:

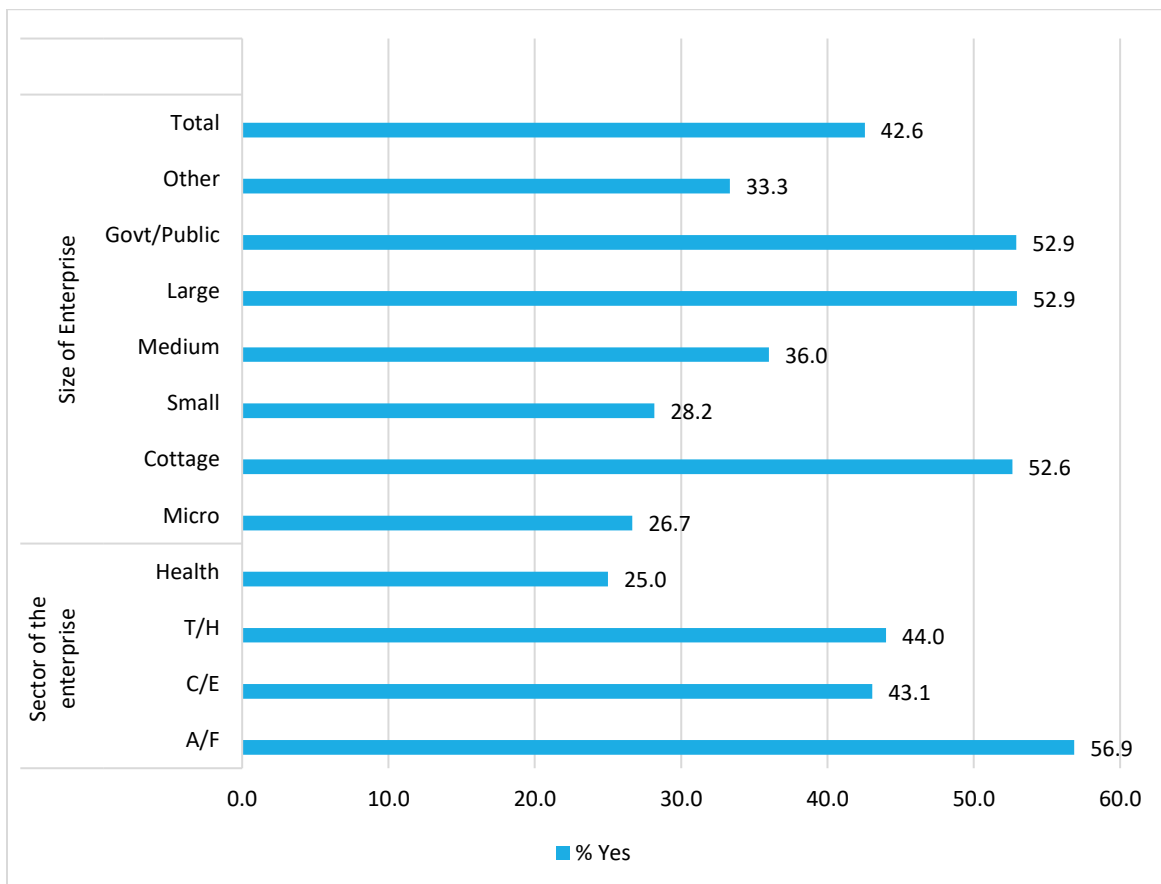
In the first and second wave of the recent COVID-19 pandemic, the health system of the whole country had been handled by the diploma and pre-diploma level human resources at the ground level. Also, in many places of remote and rural areas, these categories of HR were the ones who supported the entire health system. However, additional dexterity/skills need to be uplifted. For instance, the post of CMA, which was dissolved, should have been upgraded. The ability of the HR to work is good, however; all of them need to be upgraded for excellence in work". -District Health Office, Salyan

3.4 Climate Change and Possibility of Green TVET

This section presented issues related to objective five of the study 'to identify areas of green TVET to promote a green economy. It first sees the effect of climate change in the operation of industry/enterprises and then presents an inquiry about the possibility of generating arrays of new forms of employment that promotes environmental sustainability. Further, the inquiry is made about the incorporation of green TVET contents in the curricula of technical education and vocational training and suggests an adjustment of such issues in the curricula with timely revision of CTEVT courses.

The responses summarized in Figure 12 revealed that in total 42 percent of the 376 enterprises/industries said to have experienced either positive or negative effects of climate change. The extent of climate change in the working of enterprise/industry is highest (57%) in agriculture (Except others). According to the size of enterprise/industry, nearly 53% of cottage industries, large-scale industries, and government/public agencies reported climate change has some form of effect on their work. The extent of the effect of climate change is reported to be less in the working of health sector enterprises/agencies, and micro and small industries.

Figure 11: Distribution of enterprises according to the effect of climate change in the operation by size and sector



Note: A/F= Agriculture and Forestry, C/E= Construction and Engineering, T/H= Tourism and Hospitality

Though the construction/engineering sector enterprises reported a relatively lower level of effect of climate change on their working, the officials and representatives of the national-level agencies and associations only accepted that their work disturbs natural settings of the project areas, since

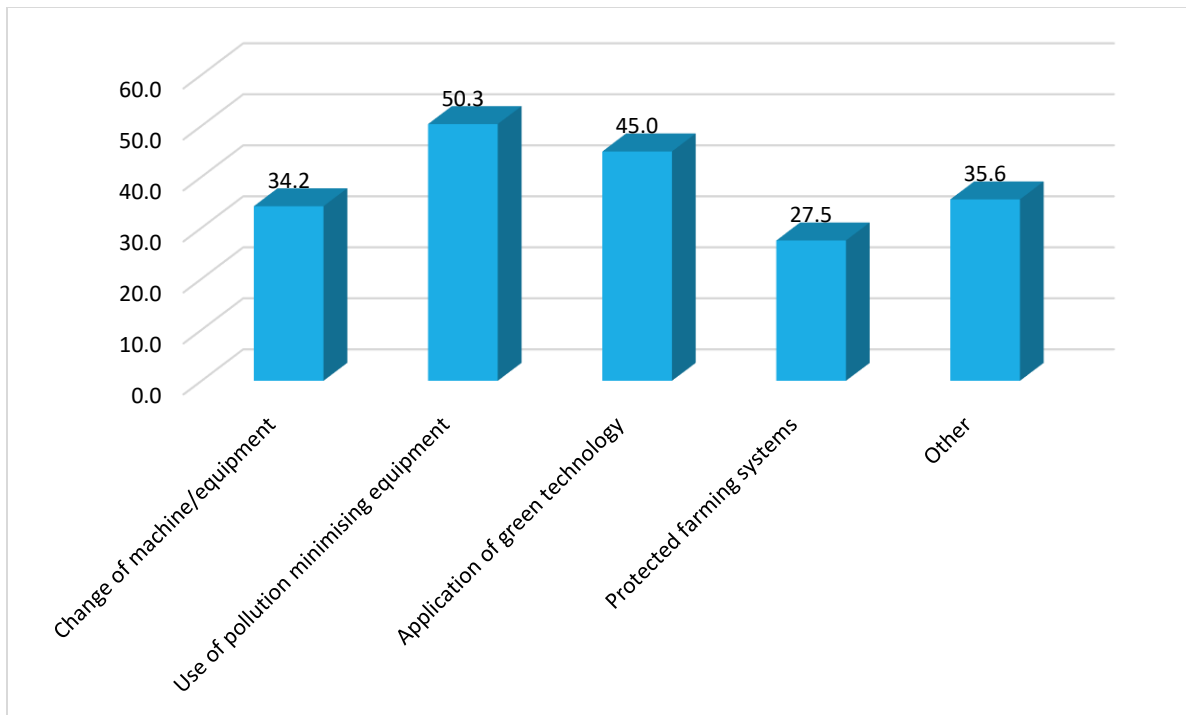
hydropower projects, road and irrigation projects and building and other projects must be done in earth spaces. Therefore, it destroys natural vegetation, habitats of wildlife, land elevation, and others. These are unavoidable while implementing construction projects. But the attempt is made to use less explosive, re-plantation of the top earth removed areas, and control the rate of soil erosion, landslide, and floodings. Therefore, there is a policy to adopt recovery measures for the disturbing environment as soon as possible after the completion of the project (Discussion with HR director of CE construction and GS of FCAN). Further, they added that it is the Environment Impact Assessment guideline for making big and mega projects construction in environment-friendly nature. The construction industries abided to follow this national guideline.

Effects are categorized into two i.e., negative, and positive. Negatives are effects that reduce the production and service generation efficiencies of the enterprise/industry and positives are those beneficial in the operation processes. Received responses are:

Negative Effects	Positive Effects
<p>Heavy rainfall, floods, landslide, and soil erosion, the decline in soil productivity. Air pollution causes degradation in the aesthetic quality of plants outlook, sunburn symptoms are seen in plants due to high heat; weather change and decline in visibility, decline labour efficiency and productivity due to high temperature, and rise in production cost, pesticides used to kill pests before has not found effective these days- pests have developed resistance, use of GM seeds, destroyed local indigenous breeds, The decline in tourist flow, Increase in mental agitation, increase in sound pollution, Sound pollution and hospital is nearby roadside Glacier melting rises the water level and leads to a high level of electricity production. Deforestation, decreasing sources of water Increase in hazardous diseases and flow of patients with new environmental diseases Road and hydropower construction damages jungle and top-level vegetation</p>	<p>Green friendly building construction practices increased Increased demand for electricity and replacing the use of petroleum fuels with electricity for in-home cooking, heating, and others Increased awareness of herbal medicine to curve the environmental effects, high demand for herbal plants production New and clean energy-related technologies becoming familiar</p>

Among the 149 enterprises, that faced effects of the climate change, were asked about the mitigating strategies they have adopted to lessen the impact of climate change in the operation of the enterprises (see Figure 13).

Figure 12: Measures adopted to lessen the negative effect of climate change



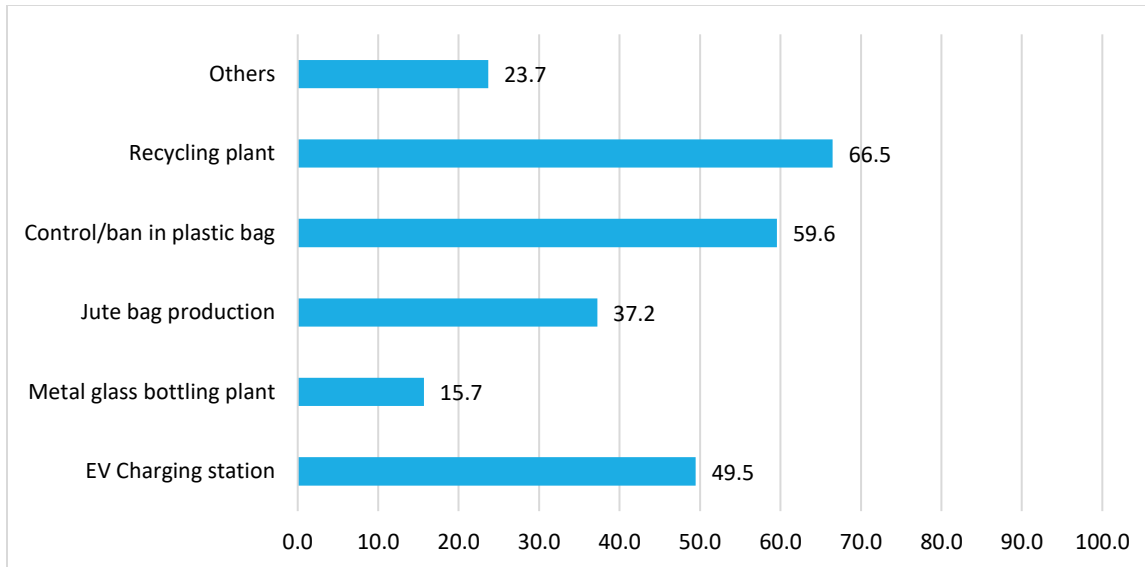
Note: Due to multiple responses, the total percentage may exceed 100

More than one-third of the enterprises/industries said they had changed the machinery/equipment to cope with climate change while about half of them claimed to have adopted pollution-minimizing equipment to cope with climate change. Another 45 percent said that they used green technology to lessen the impact of climate change in the operation of their enterprises, and over 27 percent of the enterprises shared they adopted protected farming systems.

Almost all representatives of the product-based association, construction companies and associations, government agencies, and subjective technician associations who participated in this study unanimously claimed the increased awareness of lessening environmental effects in their working adopting nationally and internationally approved standards. Large manufacturing industries, construction companies, and associations claimed of being aware of the issues of environment-friendly development initiatives in both principle and practice.

In response to the inquiry about the possibility of generating employment and business to promote green technologies in the days to come. Recycling plants (66%+) and controlling/ban in plastic bags (60%) are the major areas seen as avenues for the promotion of green technology and employment. Jute/organic bag production (37%) is also seen as an alternative to the creation of green technology and employment (Figure 14).

Figure 13: % Enterprises/Industries see the possibility of the growth of green technology work/employment



Note: Due to multiple responses, the total percentage may exceed 100

A sizable number of respondents verbally suggested options for the promotion of green technology and related employment. These include:

Agriculture and Forestry:

- Afforestation program and plantation with SRI technology
- Organic farming, organic/compost manure production technology, rooftop farming technology with suitable structures, offseason vegetable production, protected nurseries for healthy seedling production,
- Plant breeders to develop resistant varieties such as stress-resistant, plant pest resistance, cultivars with high yielding
- Dairy plants and technology
- Basic Agriculture training, integrated pest management, professional tunnel farming, mulching technology, massive plantation
- Production of ecofriendly insecticides and pesticide

Health and Medicine:

- Used needle destroyer and segregation of medical waste
- Innovation of less energy consumption machine in hospital waste management and recycling

Construction and Engineering

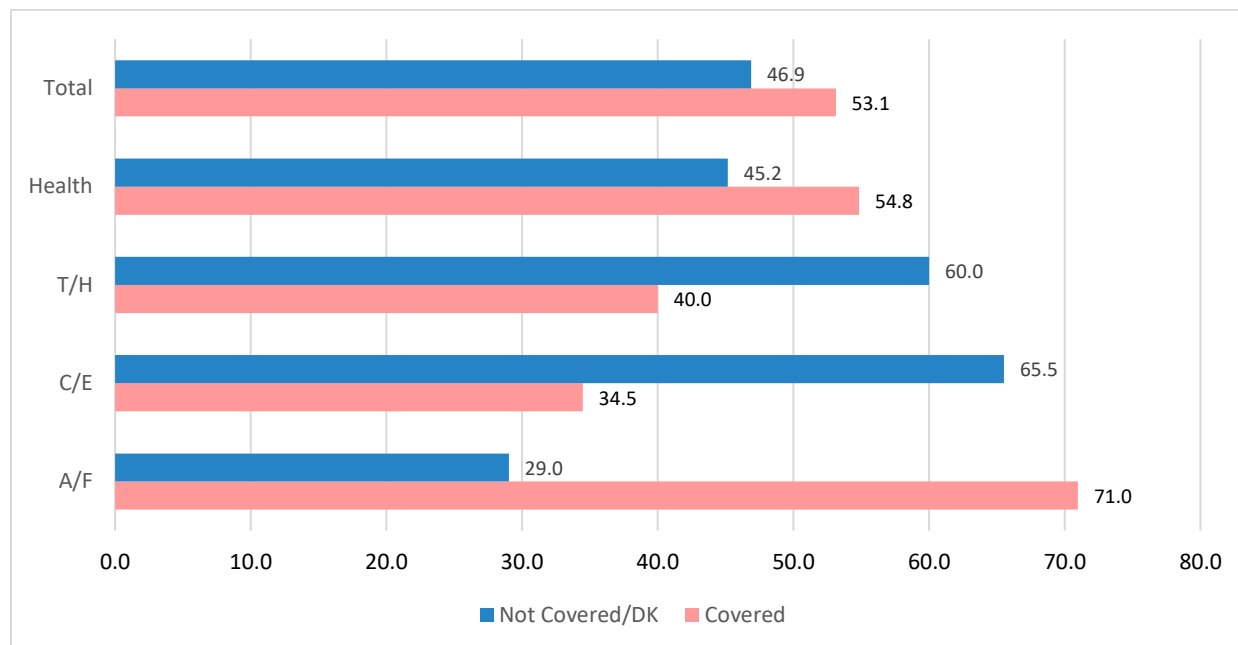
- Introduction of fuel safety devices
- Hydro energy and biogas, induction technology
- Aluminum and cable bottling recycle center
- Automobile workshop waste management and Recycling
- E-rickshaws
- Drip irrigation
- Diploma/pre-diploma in bioengineering and local technology use
- Cost-effective innovation of the substitute of LP gas through electricity (induction and others)
- Solar energy harvesting and efficient use
- Wind energy production and Wireless technology

3.4.1 Green technology in TVET Education Curricula

The survey of technical schools and vocational training centers inquired about the knowledge of the institution about coverage of green technology courses in the curricula of the respective

subjects. The responses presented in Figure 15 envisaged that the majority (53%) of schools/training centers are aware of the coverage of the green TVET contents in the courses of the respective streams and 47% confirm it does not cover. By subject or stream of study/training, 71% running agriculture and forestry courses claimed to have covered the contents followed by 55% of health/medicine subjects. Less coverage is seen in streams of construction and engineering (35%) and tourism and hospitality (40%).

Figure 14: Position of Technical Schools and Vocational Training Centres according to knowledge about coverage of green TVET in curricula of the programme in operation



Note: A/F= Agriculture and Forestry; C/E=Construction and Engineering; T/H=Tourism and Hospitality

The arrays of green TVET contents to be incorporated in courses of different streams of technical education and vocational training along with the types of occupations and human resources needed for the promotion of green technology from the verbatim of school/training centers officials are summarized as follows. They came to suggest several very pertinent contents/courses like herbal and medicinal plant farming sciences, agroforestry of medicinal plants, and others.

Suggestion to include content on green technology in courses by streams	Need for technical/vocational human resources to promote green technology
<p>Agriculture/Forestry:</p> <p>Green environment revolution subjects, Methane gas CO₂ gas reduction subjects and technology</p> <p>Basic courses on animal nutrition</p> <p>Artificial greenhouse,</p> <p>Offseason farming, organic farming, and medicinal herbs plantation and processing</p> <p>Community forestry of herbs, herbal, and medicinal plants</p>	<ul style="list-style-type: none"> - Assistant and instructor level - Agriculture experts knowing the green technology field - Rise campaigns on the preservation of natural resources - Bamboo plates and restaurant crafts persons - Bio geoengineering...organic farming, ...biofertilizer related - BSc science or environmental science - Operators of environment-friendly modern farm equipment

<p><i>Tourism and Hospitality:</i> Agrotourism... ecotourism... entrepreneurship development</p> <p><i>Construction and Engineering:</i> Eco-friendly green building Recycling engineering Bioengineering, sewage treatment, waste management Landscaping design Electronics and electrical courses Electric vehicle technology and electric automobile engineer Highway green concept courses Industrial linkage courses</p> <p>Health Environment health course Environment-friendly pharmaceutical machinery application</p> <p><i>General</i> Courses related to climate change and mitigation, contemporary issues in climate change, Community sciences Solid waste management Subjects related to ecology and ecosystem maintenance Environment-friendly and climate change-related modern technology Concept of Green Campus, Green culture, green society, Green Governance Intense Environment Impact Assessment Courses (EIA)</p>	<ul style="list-style-type: none"> - Organic farming - TVET specialist Industry's expert Specified trainers - Upgraded machinery, environment-friendly equipment - Waste recycles construction experts. - C.M.A., Staff Nurses, Assistant Nurse Midwife - Infection control, patient safety and hospital waste management - Construction/Engineering - Civil engineering - Persons with digital/ computer knowledge - Electrical engineering - Plumbing and sanitary workers - Bioengineering, solid waste management experts - Electrical vehicle and EV automobile engineers
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Likewise, issues of green TVET and human resources for its application at local to national level are well raised by concerned agency persons who participated as Key informants from local to national level. They demanded focal persons to promote green technology and reduce the effect of urbanization. The participants also expressed their concern in the following way:

For now, the major focus should be on the new way to reach the goal of sustainable development. We are coordinating with the focal person of the environment to make the development environment friendly. The main challenge of our municipality is to develop the infrastructure without harming the environment. We do not have environment-friendly equipment, which is affecting the coordination with the focal person of the environment. We need skilled human resources for environment-friendly development. Government should focus on these issues. (KII from Sharada Municipality, Salyan).

Similarly, representatives of the district chapter of FNCCI, and the Urban Building Construction Branch of Jumla are of the view that:

Increased urbanization is resulting emission of harmful gases and causing acid rain which negatively affects the environment. To minimize this issue, we need skilled human resources in the environment.(Uddhyog Badijya Sangh, Jumla)

Increased urbanization is resulting in climate change. Unseasonal rain, drought, landslide, etc., negatively affect living beings. To minimize this issue, we need skilled human resources who work in the environment sector. By utilizing those human resources, we need to run an awareness campaign in the community - KII, Jumla (Urban and building construction)

The stakeholders' interactions confirms that the green skills have become imperative to mitigate the possible consequences of environment degradation caused by human development activities. Furthermore, as expressed by them, promotion of green TVET is beneficial, however, greening skills should be given priority in all the occupational sectors.

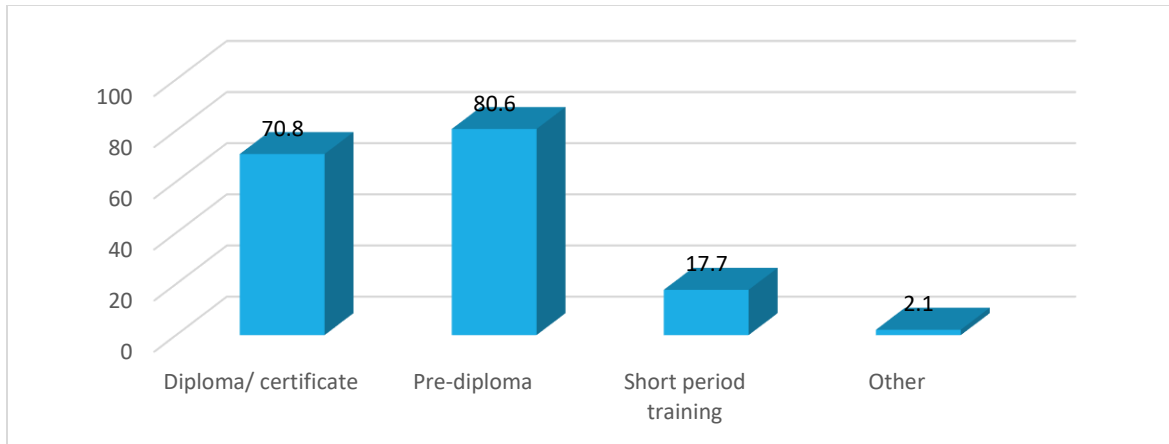
3.5 Supply of TVET Human Resources

The supply of human resources in the general labour market is the function of the age and sex composition of the native population and the flow of internal and external migration. However, the supply of human resources with specific skills and training as per the requirement of the demand of sector of industries depends on the availability and efficiencies of education and training centers producing skillful human resources as per labour demand. Therefore, while doing labour market analysis from a supply-side perspective, it is necessary to assess the functioning, and performance of technical schools and vocational training centers in the country.

3.5.1 Courses offered

Data presented in Figure 15 clearly showed that over 80% of schools/training centers operating pre-diploma level courses, 71% operating diploma/certificate level courses, and about 18 percent are operating/running short-term skill/vocational training courses. All schools included in the survey from Madhesh, Karnali, and Sudurpaschim Pradesh run pre-diploma courses, only 50% of schools in Bagmati province reported running the pre-diploma course (Annex A, Table 9).

Figure 15: Schools running different academic/training programmes



Of the surveyed schools, 32% are running different diploma and pre-diploma courses in health and medicine and the same is size agriculture. The proportion of schools running courses and imparting education/training in the field of construction and engineering comprised 30% and only 5% of schools/training centers offering courses in tourism and hospitality (Annex A. Table 10).

The availability of teachers/instructors of technical education and vocational training has seen mixed results. All surveyed schools in Madhesh Pradesh have no scarcity of teachers/instructors of the taught subjects, whereas the level of unavailability is as high as 38 and 23 percent in the case of Karnali and Sudurpaschim provinces (Annex A, Table 11).

The extent of unavailability of subject teachers is highest (28%) in community schools followed by schools rung in public-private partnership. Subjects with a higher level of teachers unavailable are agriculture followed by construction and engineering.

Half of the studies' schools/training centers are running at less than their total enrollment capacity. Its extent is highest in Karnali province (75%) followed by Province – 1 (70%) and Gandaki and Sudurpaschim Pradesh. Status of school's operation in less than the capacity is highest for CTEVT's constituent school/training centers followed by community-managed ones.

- Nearly 13 percent of technical schools and vocational training centers are having a shortage of required human resources
- Its extent is as high as 38% in Karnali, 23% in Sudurpaschim
- The enrollment rate of 50 percent of schools/training centers is less than the capacity to enroll, and 40 percent are operating at full capacity
- The gap in enrollment capacity and actual enrollment is highest in the case of agriculture (65%) and tourism and hospitality (60%) and it is 32% in the case of health sciences

Failures in the entrance exam and fewer applications than the quota is the main reason for enrollment gaps. Over 79 percent of the surveyed technical schools and vocational training centers, replied as failing in entrance exams is the major problem of less enrollment than the capacity. They said prominent reasons are less application and lack of public awareness of the subject the schools are running and lack of community level awareness on the potentiality of technical education and

vocational training for the prospect of income and future personal development (Annex A, Table 12).

Schools running in below capacity, less application in the offered courses raised issues of diversification of the offered courses/subjects towards market need is required. Most technical schools accepted that students/trainees enrolled have a high motive to go for the university education after graduation of the courses than joining in the occupation of learned skills. The currently offered courses are not enough to attract students/trainees towards the earning and learning motives.

3.5.2 Availability of Teachers/Instructors

On average a technical school and vocational training center running diploma and pre-diploma courses in agriculture sciences and construction and engineering sciences employ 4.7 technical teachers/instructors. Its extent is lower (2.3 persons) in the case of health sciences. Schools are suffering from a shortage of searched human resources. Apparent to seen from Table 14 is that there are two vacant positions in schools operating agriculture and health and medicine courses and nearly three in case of short-term training.

Table 13: Currently working Technical and vocational human resources in the surveyed technical schools and vocational training by sex and vacant positions by subjects

Subject by Level	Average				Total Number				Surveyed Technical Schools
	Male	Female	Total	Vacant position	Male	Female	Total Technical HR	Vacant position	
Diploma/Pre-Diploma in Agriculture									
Diploma/TSLC in Agriculture (Plant Science)	3.5	1.5	5.0	2.7	109	47	155	83	31
Diploma in Agriculture (Animal Science)	3.3	1.7	5.0	1.3	103	52	155	41	31
Technician Level Course in Plant Science (JT)	1.0	1.0	2.0	2.0	31	31	62	62	31
TSLC in Livestock Production /Animal Health	3.0	2.0	5.0	1.0	93	62	155	31	31
Total	3.2	1.5	4.7	2.1	99	48	147	65	31
Engineering/Construction									
Diploma/TSLC in Civil Engineering	3.0	2.0	5.0	1.0	87	58	145	29	29
Diploma/TSLC in Information Technology	3.0	1.0	4.0	1.0	87	29	116	29	29
Diploma/TSLC in Computer Engineering	4.0	1.0	5.0	1.0	116	29	145	29	29
Total	3.3	1.3	4.7	1.0	97	39	135	29	29
Health Sciences									
Diploma in Pharmacy	1.0	1.0	2.0	2.0	31	31	62	62	31
TSLC in Auxiliary Nursing Midwifery (ANM)	0.5	1.5	2.0	1.5	16	47	62	47	31

TSLC in Community Medicine Assistant (CMA)	1.0	2.0	3.0	3.0	31	62	93	93	31
Total	0.8	1.5	2.3	2.0	23	47	70	62	31
Short term Training Programme (All Total)	2.0	0.8	0	2.8	22	9	0	31	11

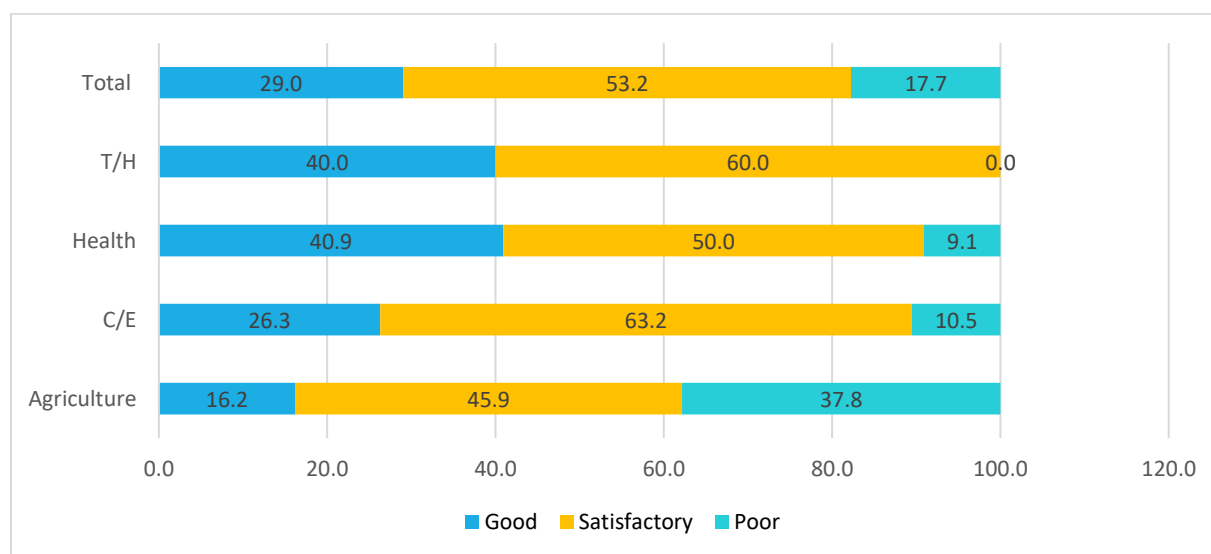
It has been observed that a teacher working in different technical schools and training centres as part-time staff to cover specific courses depending upon time availability.

The surveyed technical schools and vocational training centres were inquired about the planning of the extension of programme in recent future. 47% of 96 such institutions showed their plan for this. The subject they want to add is beauty and cosmetology, beauty therapy, diploma in pharmacy, environmental activities, mechanical, electrical, and civil overseer (sub-engineer), and building and construction technicians. To run the planned courses, schools/technical training centres needed on average 7 additional technical human resources adding 392 in total (Calculated from data file data not shown).

3.5.3 Physical Infrastructure and Laboratory

Technical education and vocational training centres need a higher level of physical facilities i.e., spacious classrooms, classroom furniture, and grounds for practices and exercises. Aphorism is that, most technical schools and training centres are facing a scarcity of physical facilities and infrastructure to meet even the minimum level of prescribed standards. However, the received responses summarized in Figure 17 clearly showed that 53% TVET institutions said they have satisfactory physical infrastructure. Among them 50% of the health sector, 63% of construction and engineering, and 46 percent of agriculture/forestry said so. Likewise, 41% of health and 40% of tourism and hospitality course running institutes claimed the facility is in good condition. Mere 18% of total and 38% institutes of agriculture sectors reported having poor physical infrastructures.

Figure 16: Situations of surveyed technical/vocational institutions according to physical facilities by a stream of study



Note: A/F= Agriculture and Forestry; C/E=Construction and Engineering; T/H=Tourism and Hospitality

The situation of the availability of laboratory facilities also corroborates with the physical facilities. Since 65% of the total, 76% of agriculture and forestry, and 74% of construction and engineering institutions reported having an insufficient but satisfactory level of the laboratory facility. Some 10% in total, 16, 8, and 7 percent of institutions respectively operating agriculture/forestry, construction, and engineering, and health sector courses reported the laboratory facility poor than the minimum standard (Figure 18).

Figure 17: Situation of Laboratory in the surveyed technical school/training centres by streams of study



Note: A/F= Agriculture and Forestry; C/E=Construction and Engineering; T/H=Tourism and Hospitality

3.5.3 Enrollment and Pass-out Status

An inventory of surveyed schools/training centres was compiled on the enrollment capacity and actual enrollment level for the last five years. The compiled information summarized in Table 4.23 revealed that actual enrollment falls below the enrollment capacity for all streams of studies and all the years of observations.

Table 14: Enrolment capacity and actual enrolment level by year and streams of study

Table 4.10: Enrollment capacity and actual enrollment level by year and streams of study

Stream of Study	Indicators of Enrollment	Enrollment capacity by Year					Actual Enrollment by Year				
		2077	2076	2075	2074	2073	2077	2076	2075	2074	2073
Health	Average	38.3	34.7	34.7	34.7	33.7	37.4	33.3	33.7	34.2	31.9
	All School Total	1572	1422	1422	1422	1382	1532	1366	1383	1403	1309
	Average	39.5	39.5	32.7	30.3	27.9	32.0	30.8	30.2	27.5	19.6

Agriculture	All School Total	1305	1305	1080	1000	920	1057	1018	998	909	648
	Average	45.9	41.4	38.3	34.0	34.5	42.1	37.6	35.0	32.3	32.1
C/E	All School Total	1560	1409	1302	1155	1173	1430	1280	1190	1098	1092
	Average	35.0	35.0	35.0	35.0	30.0	29.3	25.0	31.3	30.8	26.3
T/H	All School Total	140	140	140	140	120	117	100	125	123	105
	All total	4577	4276	3944	3717	3595	4136	3764	3696	3533	3154

% Difference in Enrollment Capacity and Actual Enrollment

Level						
Health		2.5	3.9	2.7	1.3	5.3
A/F		19.0	22.0	7.6	9.1	29.6
C/E		8.3	9.2	8.6	4.9	6.9
T/H		16.4	28.6	10.7	12.1	12.5
		9.6	12.0	6.3	5.0	12.3

Note: A/F= Agriculture and Forestry; C/E=Construction and Engineering; T/H=Tourism and Hospitality

The deficit of actual enrollment than that of the enrollment capacity is highest in the agriculture/forestry streams across all years followed by construction and engineering and health/medical sciences. From Figure 4.6, it is clear that fewer applications in the subject and failure in the entrance are the main reasons for the deficit of actual enrollment than the enrollment capacity.

Table 16 presents enrollment parity between males and females during the last four years by streams of technical education/vocational training. Except in health, male outnumbers female enrollment by 11 percentage points in the year 2077 to 21 percentage points in 2074. But in the health sector, female outnumbers male enrollment level by over 120 percentage points in almost all years. Excess of males over females is highly pronounced in construction and engineering followed by tourism and hospitality.

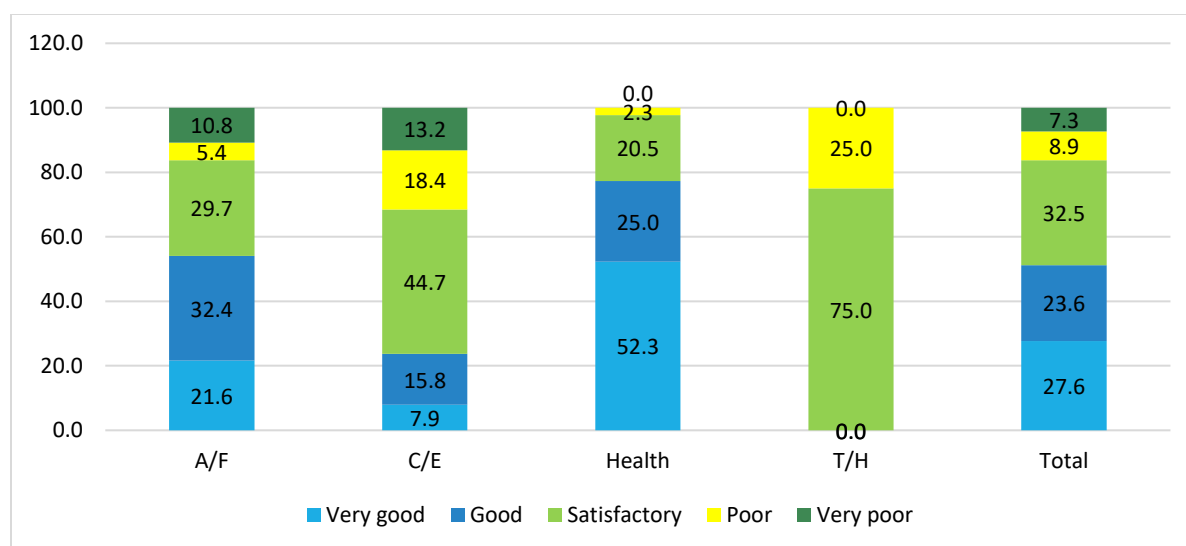
Table 15: Gender parity in enrolment by streams of Study during the last four years

Streams of Study	Enrollment of Male by year				Enrollment of females by year			
	2077	2076	2075	2074	2077	2076	2075	2074
Agriculture								
Mean	15.4	17.2	18.5	16.1	13.7	13.3	12.5	11.7
Sum	478	532	572	499	425	412	388	364
Construction/Engineering								
Mean	29.2	28.1	25.9	26.0	9.9	6.6	5.7	5.6
Sum	875	843	778	779	298	198	171	168
Health/Medicine								
Mean	9.6	9.9	9.7	10.7	23.4	22.9	23.2	22.6
Sum	336	347	339	375	819	803	811	792
Tourism/Hospitality								
Mean	23.7	22.0	25.3	22.0	9.0	8.3	11.3	9.0
Sum	71	66	76	66	27	25	34	27

All total	1760	1788	1765	1719	1569	1438	1404	1351
Male-Female Difference (% points)								
Agriculture	11.1	22.6	32.2	27.1				
Construction/Engineering	65.9	76.5	78.0	78.4				
Health	-143.8	-131.4	-139.2	-111.2				
Tourism/Hospitality	62.0	62.1	55.3	59.1				
All total	10.9	19.6	20.5	21.4				

The pass rate of the students is good (52%) in the case of health streams. In other streams, it is a mixed result. In construction and engineering, 45 percent stands for satisfactory pass out result, and above 54% of the agriculture instructions reported the pass out rate of their students is very good or good (Above 70% of the enrolled get through successfully including grace period). In total, 28% of institutions claimed to achieve very good pass-out result (above 90% including grace period), another 24% stands for a good result, 33% are with a satisfactory result and the rest were either poor or very poor (Figure 19).

Figure 18: Scaling of the pass rate of students/trainees of the courses by streams of study



According to KII the average regular pass percentage is 20-25. After the third Semester, the back paper must be clear by around 35-40% students. When they reached last semester almost 60- 70% of students cleared their previous back paper, and the pass percentage reaches around 65/70%.

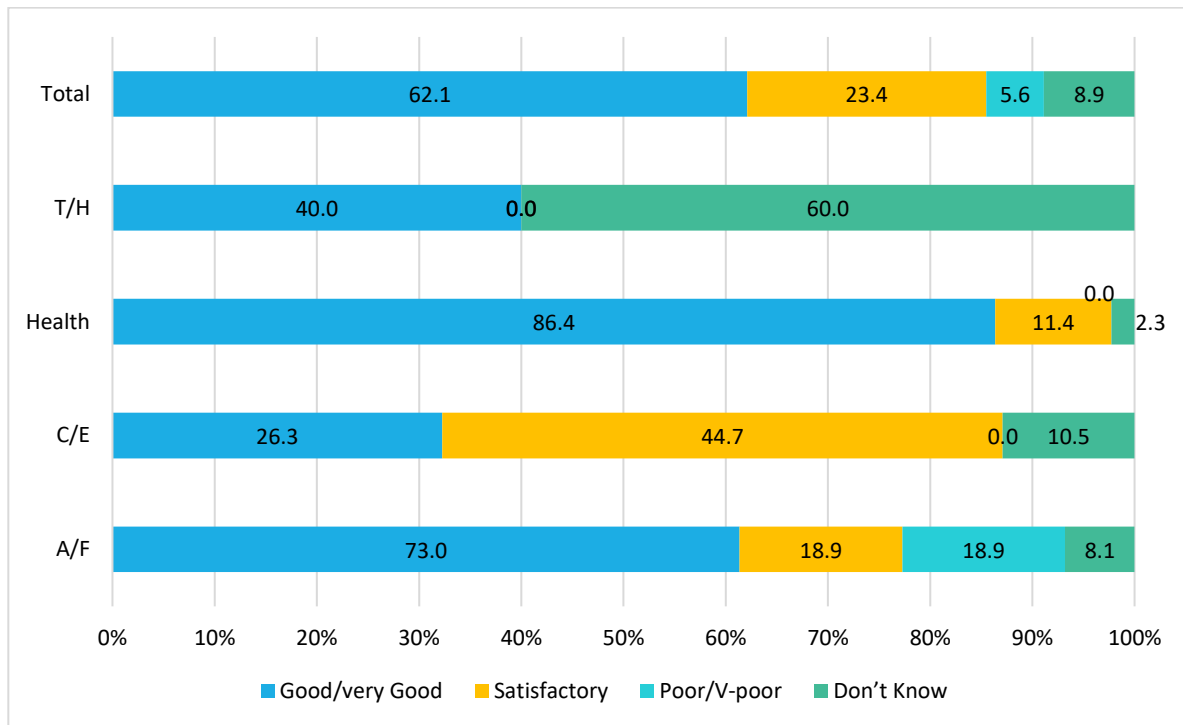
3.5.4 Work Performance and Further Opportunities

Most of the technical schools and vocational training centres rated the exhibited workmanship of their course graduates in the job market as good or very good. In totality, nearly two-thirds of such schools (62%) rated the workmanship of the graduates as good/very good, 23% as satisfactory, and nine and six percent respectively as unknown of the status and poor/very poor (Figure 20).

Over 86% of schools/training centres of health streams, 73% of agriculture and forestry stands for good or very good job market performance of their graduates, while the figure for the construction

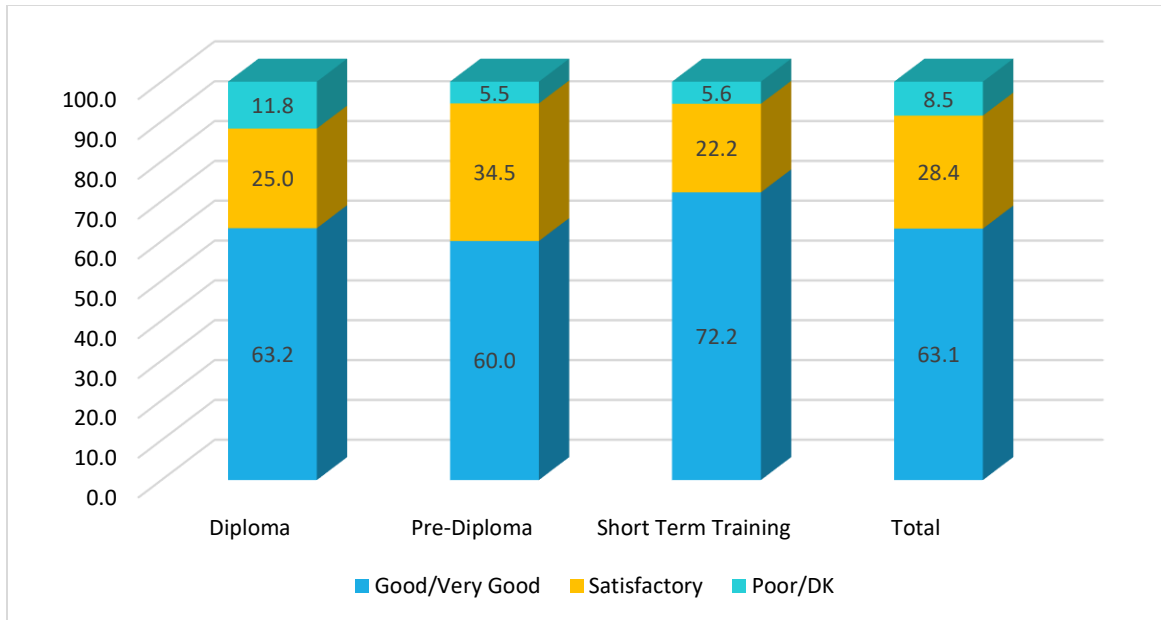
and engineering drops to 26%. This might support the dissatisfaction expressed by participants of construction sector enterprises and associations as graduates of technical schools and vocational training centres being of sub-standards.

Figure 19: Performance of the graduates of the education/training in the job market by streams of study



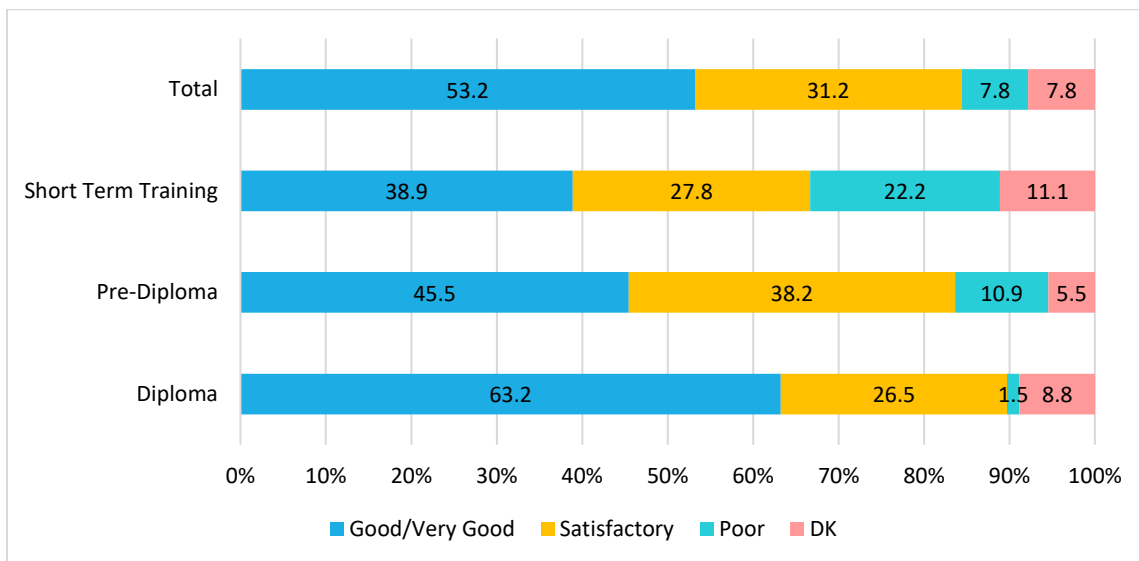
Overall, 63% of technical schools and vocational training centers see good or very good prospects for their graduates of all levels (Diploma, pre-diploma, and short courses) to pursue higher-level education/training in their field. It is the same in the case of diploma and pre-diploma but the prospect for short-term training is seen stronger (Figure 21).

Figure 20: Percentage of School/training centres rating the chances of their graduates to peruse higher education



Chances of promotion to a higher position are weaker (39%) for short-term training graduates of the schools/training centres compared to the graduates of diploma (63%) and pre-diploma courses (45.5%). On the whole, 53% of schools/training centres are of the view that their graduates of any level of courses have good or very good chances to be promoted to higher positions (Figure 21).

Figure 21: Percentage of School/training centres rating the chances of promotion in higher positions of their graduates



In response to how the institution is established and the specific technical education and vocational training courses have been launched, 77 (80%) of the 96 schools/training centres reported it was initiated based on the demand of the local job market of the area. However, the field visit and discussion with the executives of the schools and training centre revealed that most schools/training centres were running through the enrollment of students/trainees from outside of

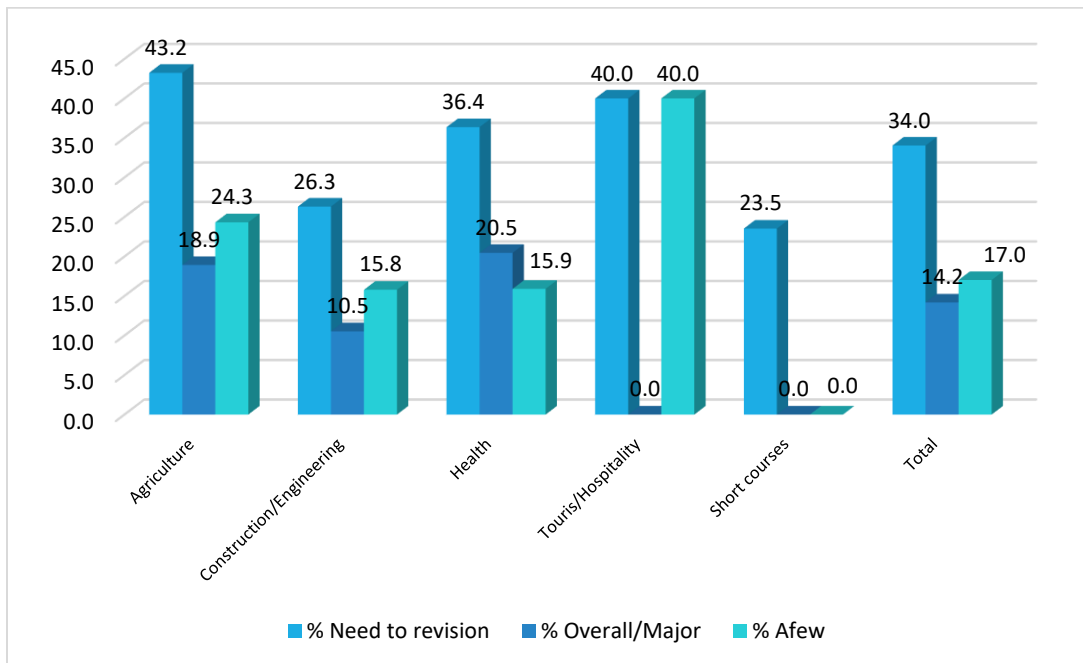
the same community/locality. This was evidenced in most of the cases. Further KIIS from the local level is of the view that:

At first, it is necessary to access the needs/requirements of the local level before providing any training and vocational education. However, in most cases, the unplanned and haphazard distribution of training and vocational education programs leads to a huge gap in demand and supply. It can be observed that the same training programs are repeatedly conducted in the same institutions, which is a waste of resources. Therefore, CTEVT must focus/study on the market requirement before taking any programs to any institution. -Health Development and Coordination Unit, Nawalpur and Chitwan

3.5.5 Revision of Curricula

In response to the perceived need for revision of courses/curricula of the diploma and pre-diploma and training courses of the schools/training centres currently implemented, 34% of 96 reported it is in need (Figure 23). The extent of the course/curricula revision is higher in Agriculture stream (43%) and lowest in the construction/engineering sector (26%). This result contradicts the pass rate of construction and engineering stream students and the performance exhibited in the job market by the graduates of the stream.

Figure 22: Need for revision in courses and extent of revision need by streams of study



About 14% of the schools/training centres see a need of overall/major revision of the courses with higher extent of health (20.5%) and agriculture (19%) streams.

The schools/training centres were asked to give their suggestions to link the TVET curriculum and programmes of education/training with the need for employment/job market. Arras of responses is summarized in the following:

Suggestions to link the TVET curriculum and Programme with the need of employment/job market

- More focused on field-based practice, on-the-job training
- A course compatible with the new technology coming into the global market
- Less theory, more practical
- A course that creates market opportunity after graduation, courses at present are less focused on market opportunity
- A course designed on need-based and addresses the local market need
- Continuation of 'Learned earn and pay' programme
- Introduction of sugarcane, beekeeping, and mushroom production courses
- Need to design local and province-specific courses
- Need to upgrade diploma courses to the bachelor level
- Extension of OJT period for more practical knowledge,
- Creation of industrial linkages
- Need to link with the demand of three levels of government
- Time to time refresher training to faculties and technical staff

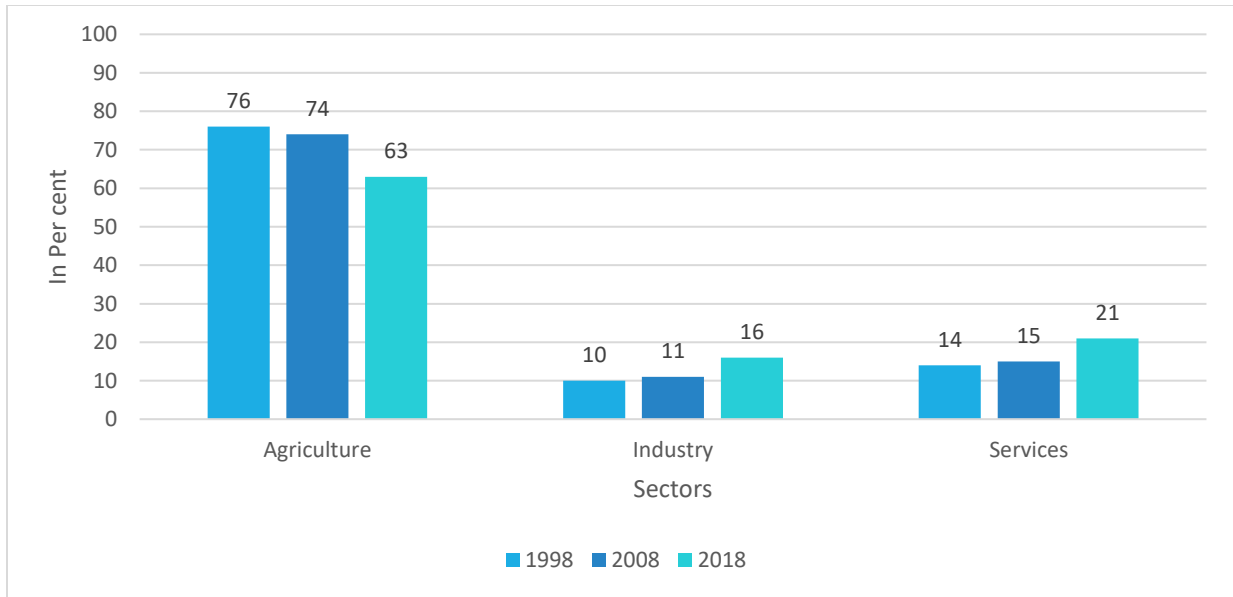
Chapter IV

4.1 Labour Demand Forecasting

One of the major objectives of this study is to forecast the skilled labour demand supplied by the institutions under CTEVT. Demand for a particular kind of labour is derived from the demand for its product and is related to the productivity of the labour. The demand for labour is much more of a technical relationship as compared to the supply of labour; however, these two concepts interact. The demand for labour is a derived demand. It is derived from the demand for the products or services provided by the employer. The demand for labour, therefore, is determined by the economic condition or economic growth of the country. It is directly affected by the wage rate being paid to the workers and by their productivity. The use of capital and technology and the relative prices of labour versus that of capital are further crucial factors influencing the demand for labour.

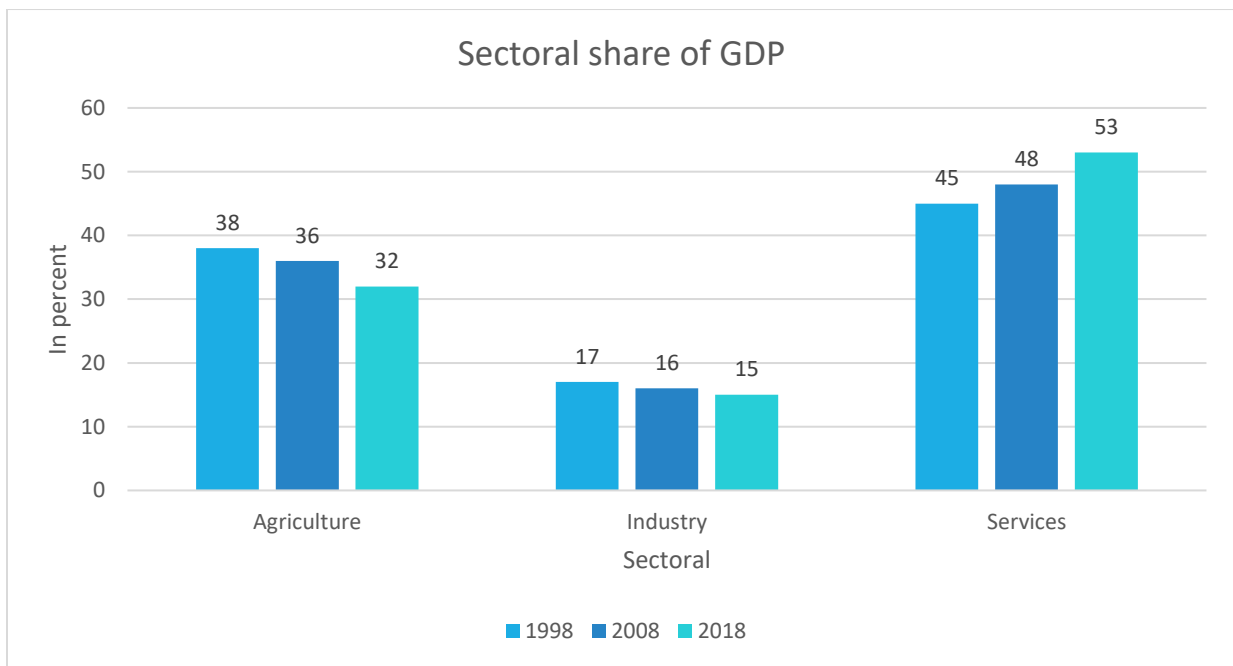
Before forecasting demand for labour, it requires to know the sectoral share of employment and sectoral share of gross domestic products (GDP). At the same time, understanding the patterns and movement of the economy is equally important. The figure suggested that agriculture's share of GDP and employment is declining over the years. The industry is holding steady in the share of GDP, however, there is a slight increase in the share of employment. Both Shares of GDP and share of employment out of total employment are increasing over the years.

Figure 23:Sectoral share of Employment



Source: Bulmer et al (2020)

Figure 24: Sectoral share of GDP



Source: Bulmer et al (2020)

4.2 Concept and perspective

Macro to micro-level analysis is appropriate to produce a reliable and realistic projection of demand for labour. Macro-level forecasting captures patterns, movements and structural changes in the economy. This study focuses on agriculture, construction, tourism and health sectors; however, the contributions of the remaining sectors are important while estimating the demand for labour. Other or remaining sectors also play a significant role through substitution and complementary effects on demand for labour while differentiating the wage rate in different sectors. The higher growth rate of one sector may increase demand for labour, at the same time it may reduce the demand for labour of another sector, and it will create substitutability effects. Similarly, the development of one sector may support development sectors. In this case, demand for skilled labour will be higher. There may be a change in demand for labour due to changes in high-quality training, technology, and government policy. To capture all the situations, macro-level estimation is important. Without forecasting the demand for labour from a macro perspective, micro-level forecasting may not be reliable. Most of the sectors are inter-dependence, but it doesn't mean their movements follow similar paths or same directions. They may have opposite directions as well.

The study aims to estimate the employment need for Nepal up to 2030. For this purpose, several parameters have been quantified, which include nominal GDP by sector, number of employees by sector, and employment elasticity. To forecast employment by assuming that the future will be a replica of the recent past; on real wage rate will change over the projection period, and employment in each sector of the selected labour force will grow at the same rate as total employment in that sector and output tends to increase faster than employment.

Certain assumptions are required while forecasting the demand for labour. Macro-level forecasting provides information for overall planning for the country. Macro-level or sectoral forecasting supports to develop plan for sectoral ministries, CTEVT, however, micro-level forecasting supports to decision making of the institutions or organization or individuals. We adopt different approaches and different sectors while conducting the forecast the demand for labour. These approaches play the roles for complementarity to improve the quality of the study.

4.3 Forecasting the demand for labour based on overall economy

Source of data

The study uses secondary data. The data on nominal GDP⁸ has been obtained from the Central Bureau of Statistics (CBS, 2021). The employment data has been obtained from Nepal Labour Force Survey (NLFS) – III (CBS, 2018). However, the employment elasticity estimated by ILO using NLFS – II has been also used (ILO, 2010).

⁸ The national accounts data after rebasing based on the price of 2010/11 has been used.

Table 16:Description of variables

SN	Variables	Unit	Source
1.	Nominal GDP and Nominal GDP by sector	In million rupees	CBS (2021)
2.	Employment and Employment by sector	In thousand	CBS (2018)
3.	Employment elasticity		ILO (2010)

Estimation method

The projection of employment has been carried out following Youdi and Hinchliffe (1985).

$$\text{Employment} = f\left(X, \frac{X_i}{\sum X}, \frac{L_i}{\sum L}, \rho_{\text{emp}}\right)$$

Here, X = Future level of output

$\frac{X_i}{\sum X}$ = Distribution of GNP by economic sector

$\frac{L_i}{\sum L}$ = Occupational structure of the labour force

ρ_{emp} = Employment elasticity or productivity parameter

The future level of output (X)

The nominal GDP data from FY2010/11 to FY2021/22 have been obtained from CBS (2021) along with ISIC division. The projection of GDP has been carried out by sectors, that is, first, sector growth is estimated and the entire growth is estimated as the weighted average of sectoral growth. The sectoral growth for the coming three years is projected following: (i) monsoon cycle, (ii) cycle of infrastructure projects, (iii) political transition (such as election), (iv) mobility of people, and (v) international price movements. The scenario building for the latter years is difficult and highly uncertain, so the moving average method has been applied. The GDP has been estimated in both real and nominal terms. For nominal GDP, inflation is adjusted to real GDP. The national consumer price index has been used as sectoral consumer price indexes are not available.

The occupational structure of the labour force $\left(\frac{L_i}{\sum L}\right)$

The occupational structure of the labour force has been obtained from NLFS-III (CBS, 2018). The employment data for 2017/18 has been obtained from NFLS – III.

Employment elasticity (ρ_{emp})

Employment elasticity measures the change in output due to a one percent change in employment. The elasticity parameter is high if labour productivity is high. Hence, elasticity also signifies the productivity of labour. The employment elasticity estimated by ILO using NLFS II has been used (ILO, 2010).

Projection of employment

After obtaining the future level of output by sector, occupational structure of labour force, and employment elasticity, the elasticity formula has been used to calculate the demand for labour force.

$$E_{PY} = E_{BY} \left(1 + \frac{NGDP_{PY} - NGDP_{BY}}{\rho_{\text{emp}} \times NGDP_{BY}} \right)$$

Here,

E_{PY} = Employment in the projected year

E_{BY} = Employment in the base year

$NGDP_{PY}$ = Nominal GDP in the projected year

$NGDP_{BY}$ = Nominal GDP in the base year

ρ_{emp} = Employment elasticity

Note: Base year is 2017/18.

Result

The forecast for nominal GDP is based on scenarios developed from the 15th Plan of Nepal (NPC, 2019), but some of them envisioned in the 15th Plan have been relaxed such as 3.5 million in 2023/24. Table 18 presents the nominal GDP forecast in billion rupees. Likewise, the forecast of employment has been carried out using the elasticity of employment, employment of 2017/18, and nominal GDP of 2017/18.

Table 17: Forecast of Nominal GDP and Employment for Agriculture, Construction, Tourism, and Health Sectors⁹

	Industrial Classification	Elasticity*	2017/18**	2026/27	2027/28	2028/29	2029/30
Nominal GDP in billion rupees	Agriculture, forestry, and fishing	-	584.2	805.0	836.6	869.5	903.2
	Construction		217.7	491.4	560.6	639.4	729.4
	Accommodation and food service activities (tourism)		67.3	192.2	237.5	293.4	362.2
	Human health and social work activities		44.1	134.6	152.6	172.9	195.9
Employment in million	Agriculture, forestry, and fishing	0.57	1.52	4.29	4.84	5.45	6.12
	Construction	0.4	0.98	4.05	4.83	5.71	6.72
	Accommodation and food service activities	1.11	0.37	0.99	1.22	1.49	1.84
	Human health and social work activities	1.02	0.17	0.52	0.58	0.66	0.75

Source: Author's estimation

Note: * The employment elasticity estimated by ILO using NLFS II has been used (ILO, 2010).

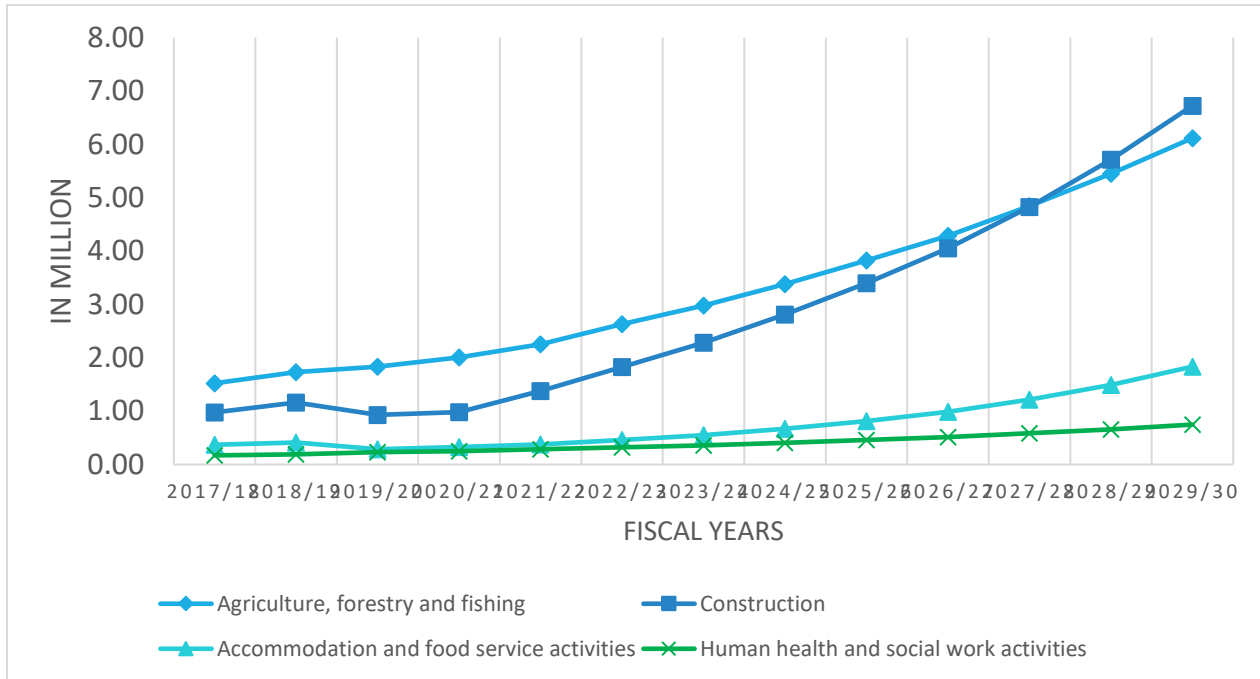
** Actual data for Nominal GDP obtained from CBS (2022) and employment obtained from CBS (2018).

The result reveals that an agriculture GDP of Rs. 903.2 billion demands a total employment of 6.12 million in 2030. Likewise, the construction sector generates 6.72 million employees with a nominal GDP of Rs. 729.4 billion till 2030. Likewise, accommodation and food services activities

⁹ The detailed result has been presented in Annex.

generate 1.84 million employment, and human health and social work activities generate 750 thousand employment.

Figure 25: Forecasting demand for labour by sectors from National data



4.3 Forecasting demand for skilled labour based on sampled data

We conducted the demand side survey to generate the required data for forecasting the demand for labour. Now, we have time series as well as cross-section data. These data provide some rooms to conduct the predictions. Demand for labour can be defined as the amount of labour that employers seek to hire during a given time at a particular wage rate. The demand for labour over the years can be estimated if the patterns of the economy such as the growth rate of the economy, real wage rate, and productivity. The following equation is used to forecast demand for labour over the years.

$$L_i = \alpha + \beta Y_i + \varepsilon_i$$

Where ε_i is the error term, i =time series data and α , β are the parameters of the regression. The parameter β represents the variation of the dependent variable (L = demand for labour) when the independent variable (Y = years) has a unitary variation. The actual demand for labour (L) services (in employee equivalents) in the Construction, Agriculture, Tourism and Hospitality + Health (CAT +H) sectors is derived from the field survey data for last six years. Based on available time-series data, future demand for labour by CAT +H sectors is estimated. Demand for labour-related data was collected by administrating the questionnaire.

4.3.1 Effects of the supply side of skilled human resources on demand for labour

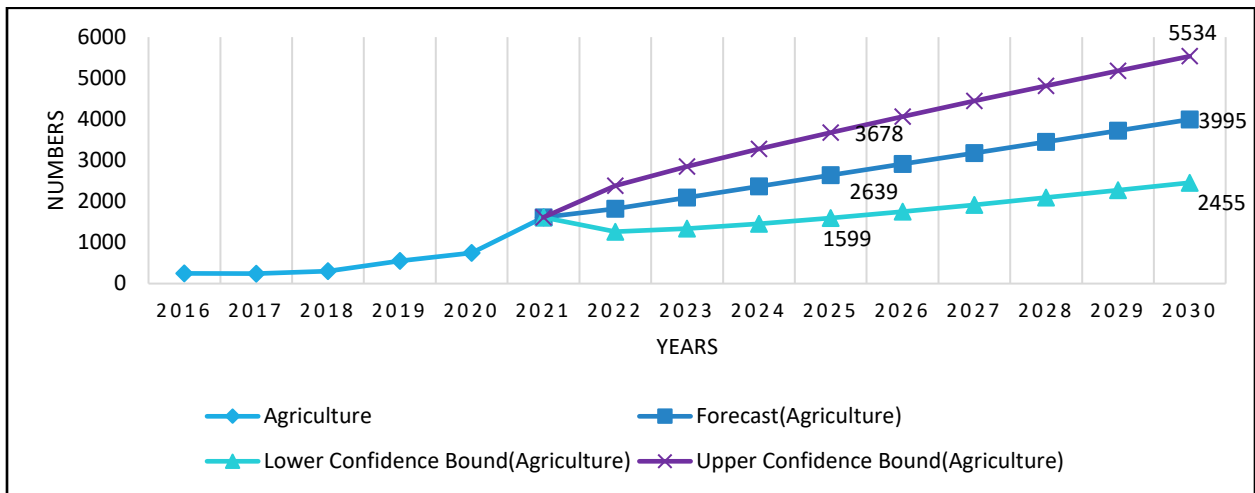
An inherent assumption of human resource forecasting is that it is a demand model, and that the increase in the social demand for TVET and the resulting larger number of graduates does not influence the labour-utilization coefficients. In other words, it is assumed that there may not be any constraints on the supply side while forecasting the demand for labour. However, the utilization of a given type of labour within a given sector may be to depend, among other things, on the supply of that type of labour within the sector. The demand effects operating simultaneously within an economic system or sector it is necessary to formulate an equilibrium model of scope broad enough to include all the relevant functional relationships.

The supply of labour is related to the quantity and rate at which the laborers are ready to work in the given sector. Some factors which affect the supply of labour, for example, skills, experiences, quality of training (practical training), participation rate a labour force, geographical mobility of labour, efficiency or skill of work. Skill mismatched is also constructed from the supply side. Demand for labour, therefore, will be increased if there is an improvement in supply of skill human resources. On the other hand, demand for labour will be lower if there is a deterioration of skill and quality of human resources in the market. Therefore, three scenarios in the supply side for forecasting the demand for labour in given sectors are provided in this study. A) status quo or existing condition in TVET; B) improving the quality of TVET, C) deterioration quality of TVET. We used a confidence interval at 95 % level to display the probability of forecast with certainty and uncertainty. It gives forecast value, upper confidence bound and lower confidence bound. These three values represent status quo, improvement in quality and deterioration in quality respectively.

4.3.2 Forecasting the demand for labour based on currently employee data

Figure 27 reveals that less than 300 skilled human resources were demanded before 2018 based on field survey data. In 2021, the demand for skill labour was 1612. Three scenarios are forecasted and shown in figure 27. In the status quo situation, almost four thousand skill labour in agriculture will be demanded in 2030. The upper value indicates the effects of the improved quality of TVET because higher quality of skilled labour leads to an increase in demand. Similar, a lower bound may indicate effects of deterioration of quality of TVET. Interpretation is similar for CAT+H sectors as shown in figures 28, 29, and 30. It should be noted that the demand for labour is forecasted for CTEVT products only. If we include all the skills and human resources, the number will be different.

Figure 26:Forecasting demand for labour in agriculture



Note: FY2016 means 2016/17

Figure 27: Forecasting demand for labour in construction

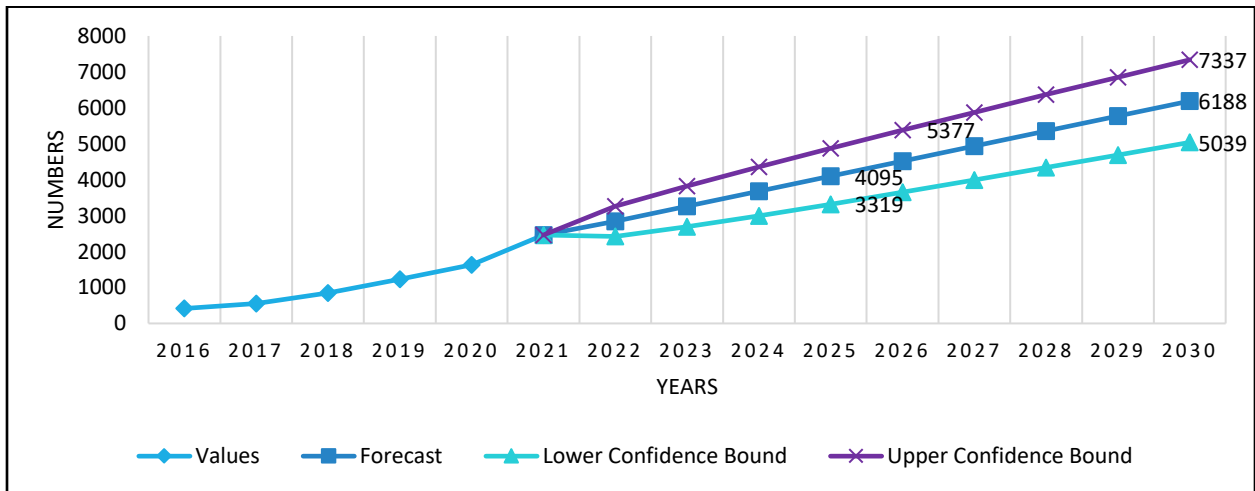


Figure 28: Forecasting demand for labour in the tourism sector

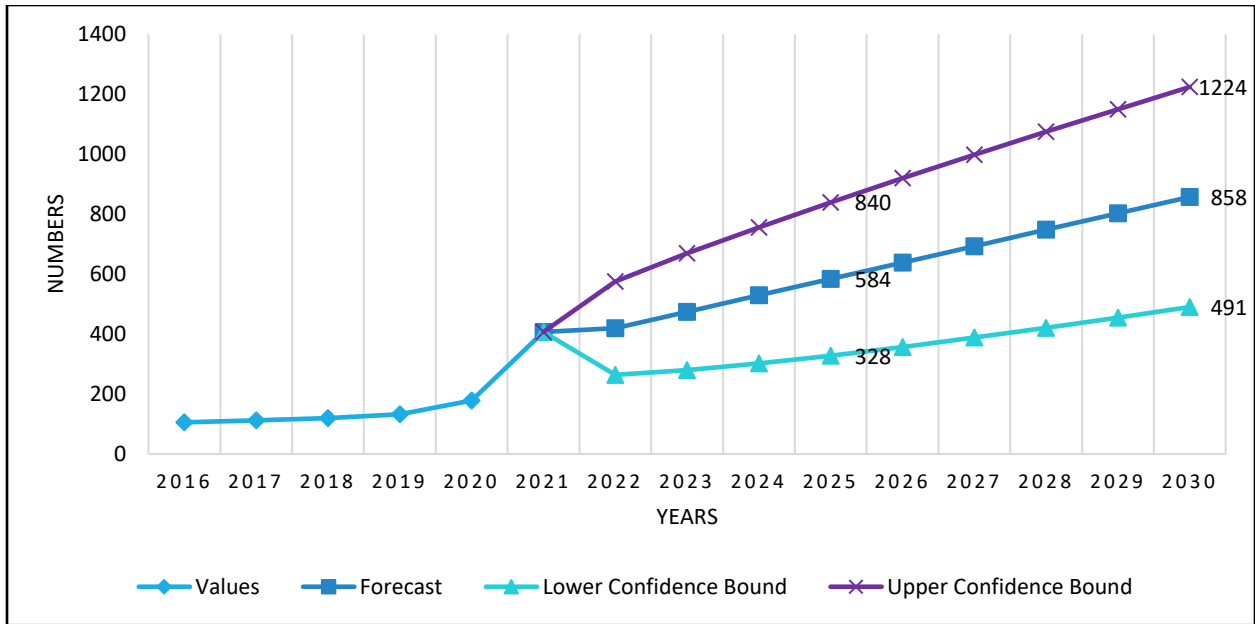


Figure 29: Forecasting demand for Labour in health

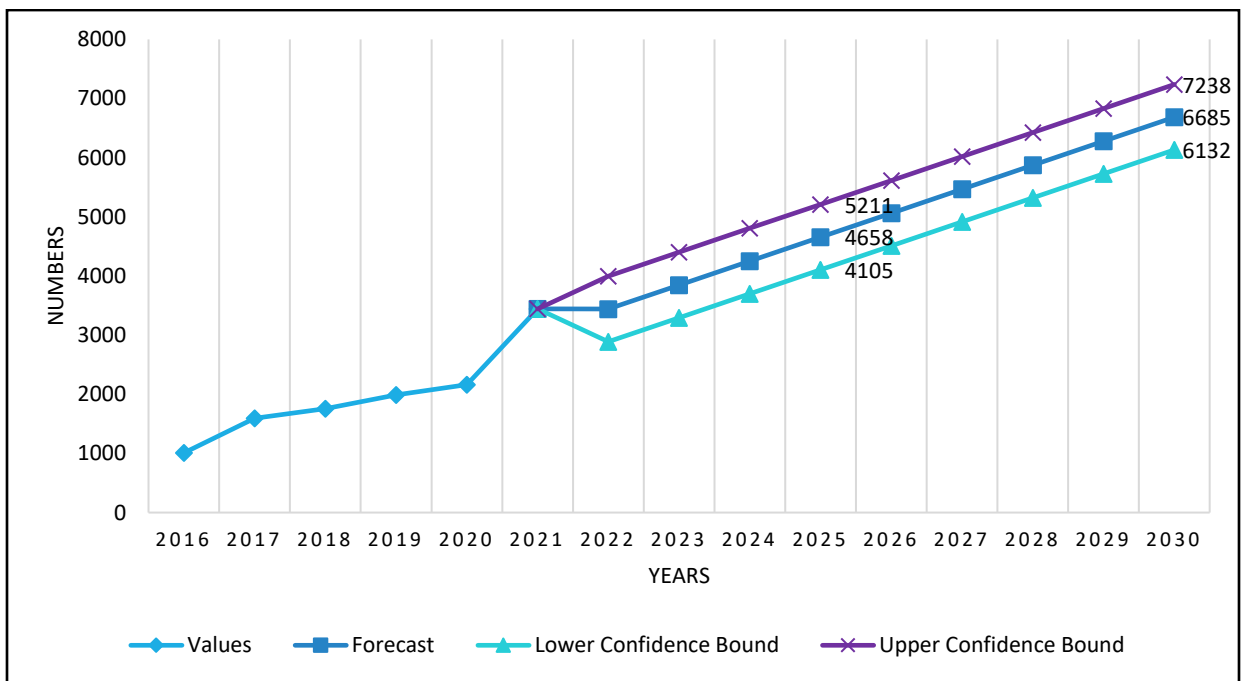
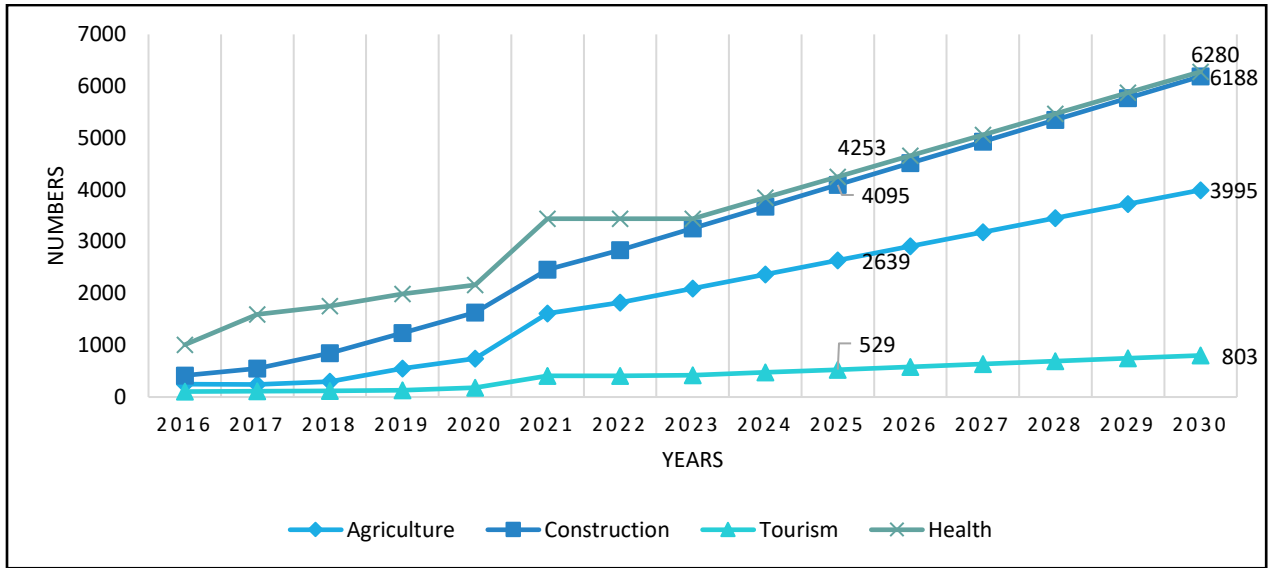


Figure 31 exhibits forecasting the demand labour in CAT+H sectors when an existing situation is applied. Among the given sector, the construction sector has a higher growth rate. It is followed by the health sector. The tourism sector seems almost constant. It may be due to the limited number of graduates in this sector.

Figure 30: Forecasting demand for labour in CAT+H sectors



If we can improve the quality of TVET, such as increased in percentage of practical training (80% practical and 20% theory), lowering skill mismatched, a close relationship between the demand side and supply side of the skill labour market, good behaviour of graduates among others, there is the possibility of increasing demand for labour. The figure 32 suggests that construction sector will lead all other sectors. There will be higher demand in construction, health and agriculture due to improvement in the quality of TVET.

If the quality of TVET will be lower compared to the current situation, it will affect the demand for labour. Lower quality of skilled labour will have lower demand. As mentioned above, higher quality of skilled labour will have higher demand.

Figure 31: Forecasting demand for labour in CAT+H sector if improvement in the Quality of TVET

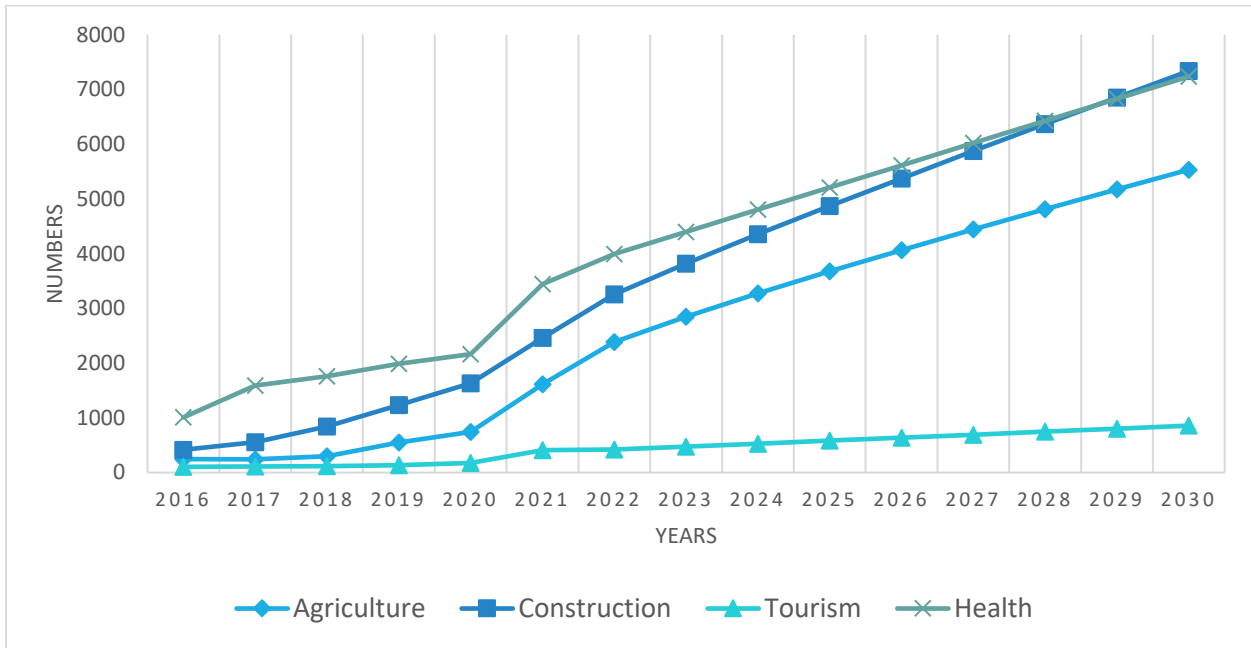
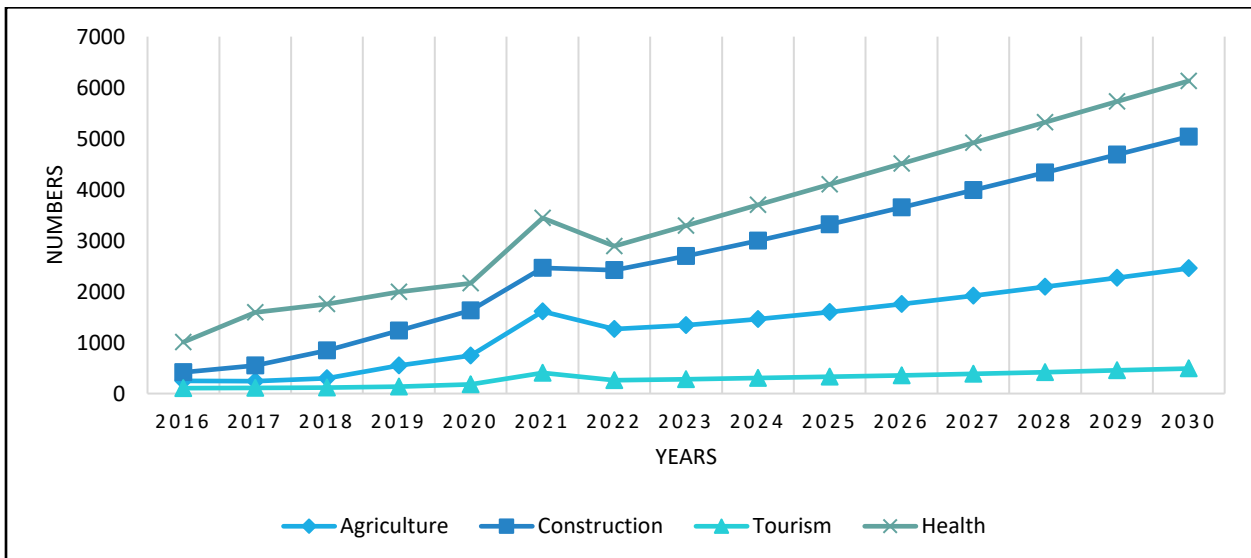


Figure 32: Forecasting demand for labour in CAT+H sectors if there is lower quality of TVET



4.3.3 Forecasting Total demand for labour based on field survey data

Out of the total demand for labour, some of them are fulfilled, however, there are some unfulfilled vacancies. The total demand for labour services (in employee equivalents) in the CAT +H sectors can be expressed as the identity

$$TDL = L+V$$

L= sum of employed in CAT+H sectors; V= sum of Unfiled vacancies in CAT+H sectors

$$L = C_L+A_L+T_L+H_L, \quad V = C_v+A_v+T_v+H_v+C_v$$

C_L = number of employed in Construction, A_L = number of employed in Agriculture; T_L = number of employed in Tourism sector; H_L = number of employed in Health sector

C_v = Number of Unfiled vacancies in Construction, A_v = Number of Unfiled vacancies in Agriculture; T_v = Number of Unfiled vacancies in the Tourism sector; H_v = Number of Unfiled vacancies in Health sector.

It may be thought that all unfilled vacancies would represent planned additions to productive labour or that any vacancies would occur only after all available labour services had been effectively utilized. However, vacancies need not occur in areas where labour services are currently underutilized and factor indivisibility may produce a pattern of vacancies that would be suggested by the production function. It is found that a number of unfilled vacancies is an important element of labour demand and needs to be included in any comprehensive labour demand identity or function.

$r=V/TDL$; r = ratio of unfilled vacancies out of total demand for labour. $0<r<1$

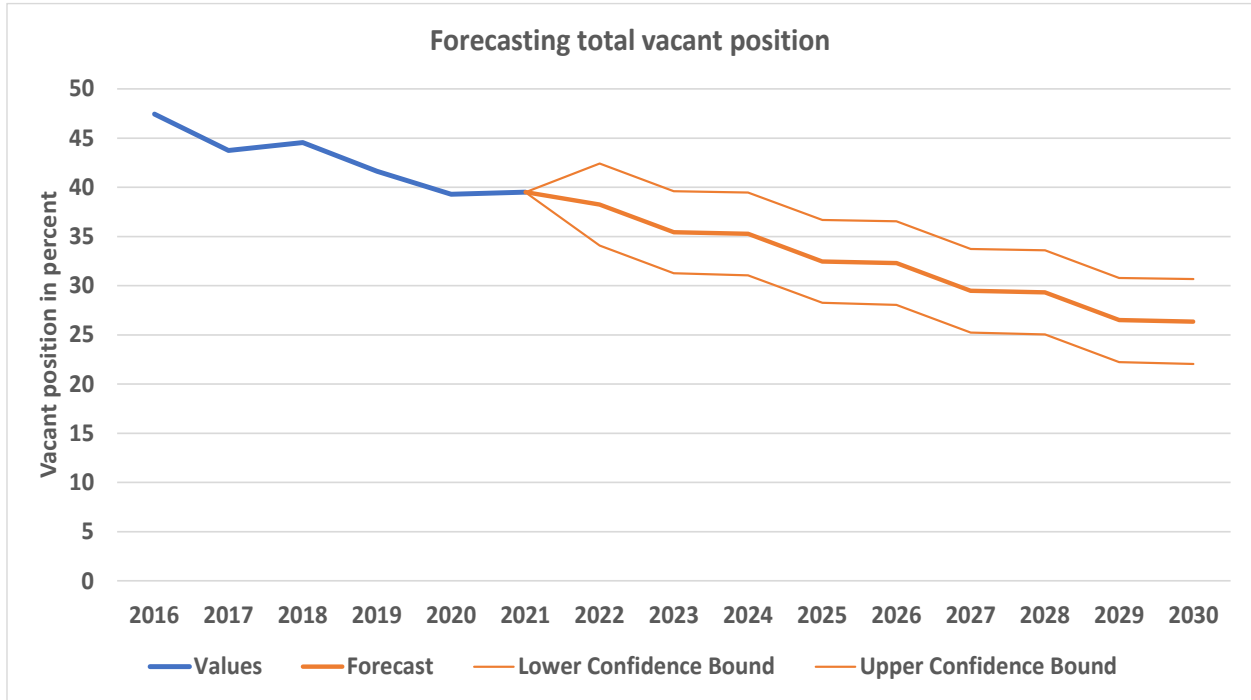
$$TDL = L+rTDL$$

Therefore, forecasting the total demand for labour including unfilled vacancies important because enterprises are interested to fulfill the vacancies. There are many reasons to find unfulfilled vacancies, such as lower skill/quality human resources as required in the market, skill mismatched, and not available of required human resources among others. If other things are remaining same, maps of forecasting the vacant position in percent by sectors are shown in figure 33. In all sectors excluding tourism, vacant positions in percent are decreasing over the years. Some of them are reaching to almost zero percent by 2030. However, vacant position in tourism is increasing over the years because of producing insufficient number of graduates compared to demand for human resources in tourism sector. Forecasting of total vacant position in percent is reducing over the years as shown in figure 34.

Figure 33:Map of forecasting vacant positions by sectors



Figure 34: Forecasting total vacant position



The aim of any enterprises is to fulfill the vacant position as soon as possible. Human resources are active factor of production because skill labours are required to run the machines or capital of the enterprises. It is said that during the discussion with enterprisers while we are in the field, only 60 % of the total capacity of the enterprise are utilized. It may be due to unfulfilled demand for skilled labour.

Total demand for skilled labour, therefore, is important to forecast including currently employed and vacant position based on collected data from the field.

As mentioned in the previous section, three scenarios: status quo, improving the quality of training, lowering the quality of training are presented while forecasting total demand (employed + vacant) for labour by sectors (CAT+H) and total demand for labour as shown in figures 35 and 36.

Figure 35: Map of total demand for labour by sectors based on survey data

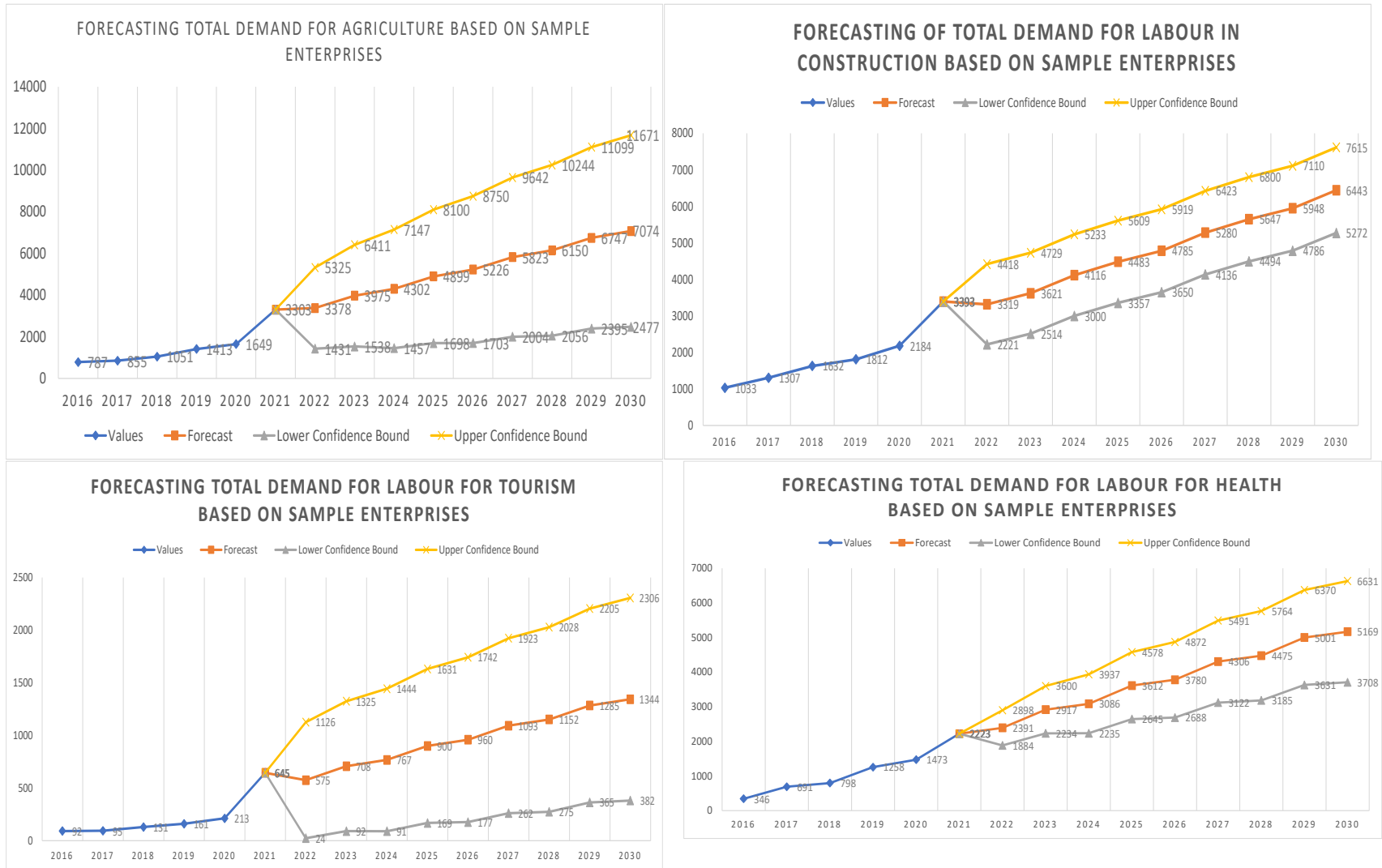
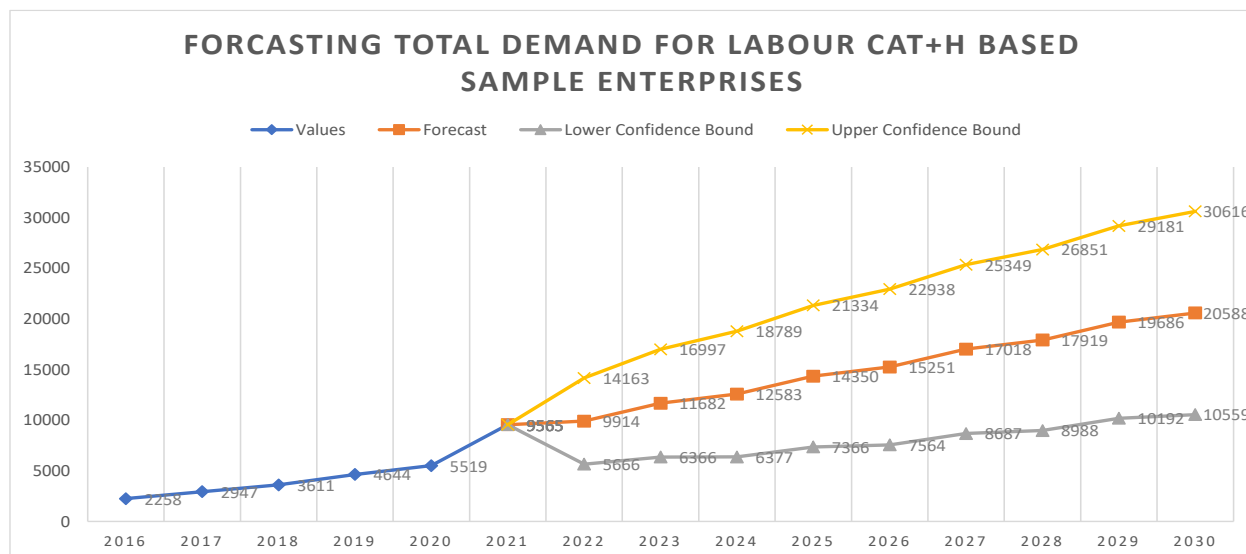


Figure 36: Total demand for labour-based on field survey data



4.4 Forecasting Total demand for labour based on national data

CBS has conducted national economic census to capture all the economic activities of the country. It provides total number of establishments by sectors, total engaged persons in the establishments and sectors. We have collected the data from the selected establishments with focusing on agriculture, construction, tourism and health sectors. Similar characteristics, patterns, distributions are found in the two types of survey. It therefore allows us to create the national level data for agriculture, construction, tourism and health sectors. The table describes the similarities.

Table 18: Data from National Economic Census and data collected from the field survey

Sectors	No of establishments	No of persons engaged	Average engaged per establishment*	Average engaged per establishment**
Agriculture, Forestry and Fishing	24229	106410	4	3
Construction	1608	14750	9	6
Accommodation and food services activities (tourism)	130,540	346,273	3	3
Health (Medical and dental practice activities+ hospital activities)	9807	116136	12	8
* Based on Economic census 2018, CBS				
** based on field survey conducted by CEDECON				

Correlation between average engaged per establishment collected by CBS and average engaged per establishment collected by CEDECON	0.991198
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The result suggested that correlation between average engaged per establishment collected by CBS and average engaged per establishment collected by CEDECON is 99.12%. It confirmed that the data collected by CEDECON and collected by CBS for national economic survey, 2018. If the cross-sectional data are perfectly matching, time series data might have similar patterns. On the other hand, national economic census data might be same in 2021 because of covid-19 in 2019 and 2020. During covid-19 period, there were huge impact on employment. Therefore, the number of engaged persons has been used as reference numbers to develop the time series data at the national level by sectors. we used the numbers as seen in the table to forecast national demand for labour by sectors.

Table 19: establishing the time series patterns of engaged persons in CAT+H sector based on national level

Years	Agriculture	Construction	Tourism	Health
2016	16314	2497	89948	34046
2017	16024	3315	95899	53748
2018	19785	5064	101680	59304
2019	36489	7405	112902	67178
2020	49094	9778	152010	72924
2021	106410	14750	346273	116136

Forecasting the demand for labour is the process of predicting the number of employees or types of skills required for the country. Existing or more advanced economic activities will be continued for several years. Therefore, we can use trend analysis as a tool for forecasting the demand for labour. A trend analysis examines the relationship between past and future staffing needs for the country. Demand for skilled labour is particularly determined by the supply of quality human resources. More advance economic activities indicate more competition in the economy. It requires more efficient human resources. To improve the efficiency, more quality human resources will be required. Similarly previous sections, three scenarios: improving the quality of TVET training, status quo situation and lowering quality of TVET are develop while forecasting the demand for skilled labour at the national level. A total of 20 lakh skilled labour (TVET) will require for the country in 2030, if the quality of TVET training is improved. Details by sectors by years are provided in the following maps of figures.

Figure 37: Map of forecasting demand for labour at national level

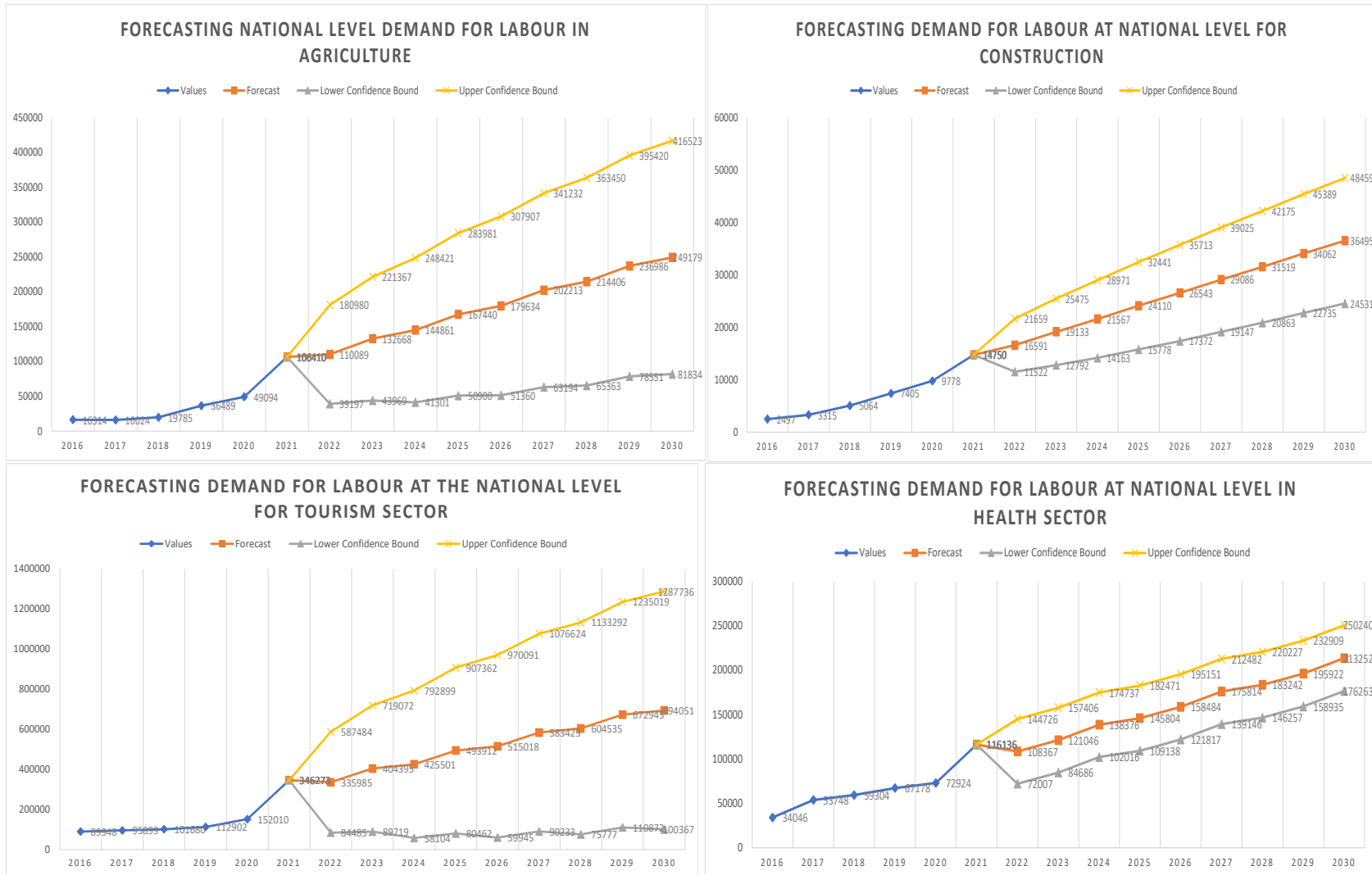
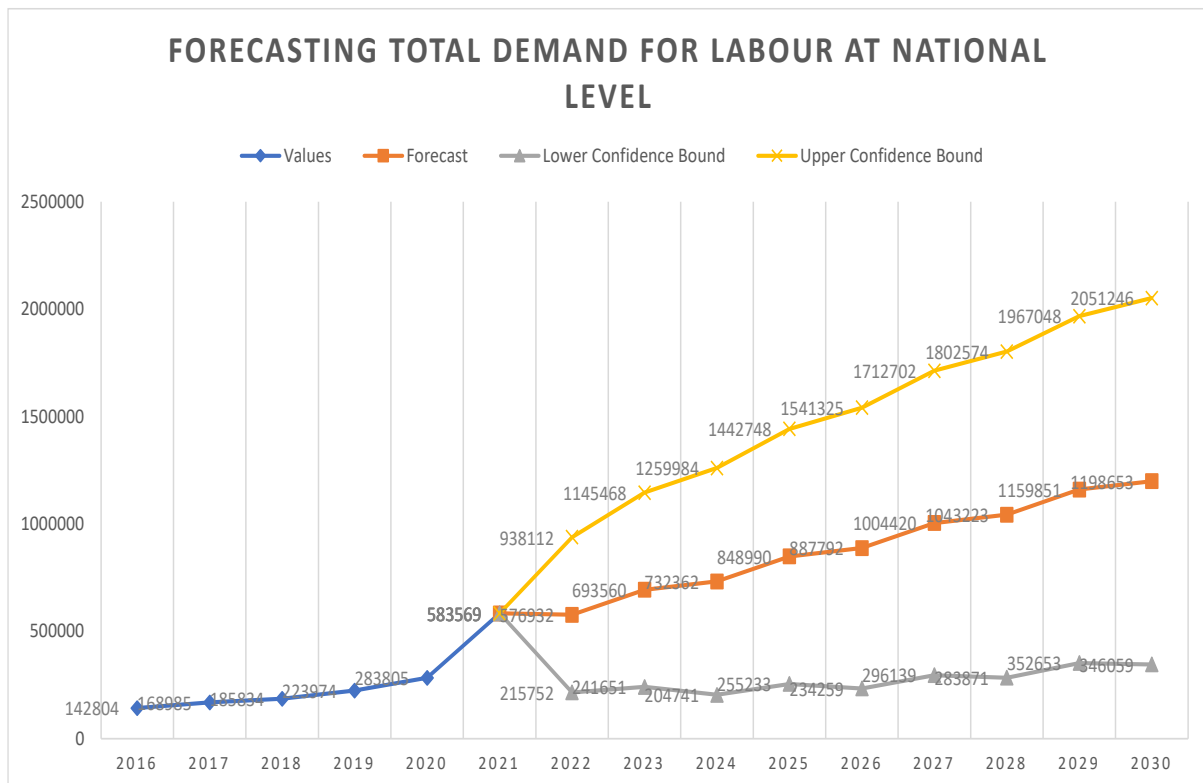


Figure 38: Total demand for labour at national level for CAT+H sectors



4.5 Forecasting the demand for labour for the government agencies

After federalization in the country, there are 761 governments. Each level of government requires skilled labour trained by CTEVT. Primarily, local governments require more skilled labour for local-level activities. Several positions related to CAT+H sector at the local level have created recently. Local and provincial governments have introduced new policy and programmes to provide services to the people. For this purpose, additional skills in human resources will be required for the governments. Therefore, we collected the data related to technical human resources at the local level, government expenditure, household size, and population from secondary sources for all local governments. The nominal GDP of the country was distributed based on the size of the population and the size of economic activities of all the local governments. Human resource-related data were collected from MOFAGA. Agriculture, construction, and health-related human resource were mentioned in the different positions of local government; however, no technical skills in human resources were found in the local government in the existing data.

Demand for a skilled human resource at the local level is determined by the size of local economic activities, size of government expenditure, the interaction between the size of

government expenditure and size of economic activities and the size of the municipality. Demand for total human resources is the dependent variable. There are five categories of local governments: rural municipalities, municipalities with less than 50 thousand population, municipalities with more than 50 thousand population, sub-metropolitan and metropolitan. Therefore, the municipality is a categorical variable. All other variables are continuous variables. There are four models to identify the determinants of demand for total HR.

Model 1

$$\text{Total HR} = \alpha_1 + \beta_1 \text{NGDP} + \beta_2 \text{Pubexp} + \beta_3 \text{NGDP} \times \text{Pubexp} + \beta_4 \text{Municipality} + \beta_5 \text{Sub} - \text{metropolitan} + \beta_6 \text{Metropolitan} + e_1$$

Model 2

$$\text{Health HR} = \alpha_1 + \beta_1 \text{NGDP} + \beta_2 \text{Pubexp} + \beta_3 \text{NGDP} \times \text{Pubexp} + \beta_4 \text{Municipality} + \beta_5 \text{Sub} - \text{metropolitan} + \beta_6 \text{Metropolitan} + e_2$$

Model 3

$$\text{Agro HR} = \alpha_1 + \beta_1 \text{NGDP} + \beta_2 \text{Pubexp} + \beta_3 \text{NGDP} \times \text{Pubexp} + \beta_4 \text{Municipality} + \beta_5 \text{Sub} - \text{metropolitan} + \beta_6 \text{Metropolitan} + e_3$$

Model 4

$$\text{Construction HR} = \alpha_1 + \beta_1 \text{NGDP} + \beta_2 \text{Pubexp} + \beta_3 \text{NGDP} \times \text{Pubexp} + \beta_4 \text{Municipality} + \beta_5 \text{Sub} - \text{metropolitan} + \beta_6 \text{Metropolitan} + e_4$$

Table 20:: Determinants of skilled human resources at the local level

Dependent Variables	Model 1 Total HR	Model 2 Health HR	Model 3 Agro HR	Model 4 Construction HR
NGDP	0.137***	0***	0***	0.193***
Pub_exp	0.0884***	0***	0***	0.125***
NGDP×Pub_exp	0.0126***	0***	0***	0.0178***
Local Body ‘Rural Municipality’ omitted				
Municipality	0.436***	0.405	0.405	0.418***
Sub-metropolitan	1.893***	-0***	0.916	2.140***
Metropolitan	2.237***	-0***	1.253	2.460***
Constant	4.536***	0.693	0.693	3.741***
Observations	751	751	751	751
R-squared	0.991	1.000	1.000	0.985

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 20 exhibits that economic activities, public expenditure, and public-private partnership (interaction between nominal GDP and Public expenditure) are the determinants of skilled human resources in all sectors at the local level. All of them are statistically significant, however, some of them such as Health and agriculture are not economically significant because of very small coefficients. A rural municipality is a base category. The results indicate that all categories of local government require more skilled human resources compared to a rural municipality.

If the economic activities are increased by 10%, it leads to an increase in demand for TVET human resources by 1.37%. Similarly, if the local government has increased public expenditure by 10 percent, it leads to an increase in demand for TVET HR at the local level by almost 1 percent. A ten percent increase in public-private activities has the power to increase the demand for TVET human resources by 0.13 percent.

Table 21: Forecasting demand for skilled labour at the local level

Human Resources needed in thousand						
FY	Agriculture	Construction	Tourism	Health	Others	Total
2023	6.7	8.6	1.6	15.9	4.8	37.7
2024	6.9	8.9	1.7	16.5	5.0	39.0
2025	7.1	9.1	1.7	16.8	5.1	39.7
2026	7.2	9.2	1.7	17.1	5.2	40.5
2027	7.4	9.4	1.8	17.5	5.3	41.3
2028	7.5	9.6	1.8	17.8	5.4	42.1
2029	7.6	9.8	1.8	18.1	5.5	42.9
2030	7.8	10.0	1.9	18.5	5.6	43.8

Note: FY2023 means 2022/23

The projection of demand for human resources has been determined following the regression analysis. OLS has been used to determine the elasticity coefficients of public expenditure and nominal GDP. Based on the elasticity coefficients, the demand for human resources has been determined.

Based on the demand side survey, the human resource need in each sector (Agriculture, Construction, Tourism, Health, and others) has been determined. Following the survey, the total human resource demand has been divided into each sector.

Chapter V

Recommendations

Major findings of the study gave impetus to postulate following recommendation that have ample ground to influence policy and programmatic reforms in both demand sectors (Industries and enterprises) and agencies working for the supply of technical and vocational human resources i.e., ministry of education, science, and technology and CTEVT.

A. General/ overall recommendation

- This study found that CTEVT produces the largest share of mid-level technical and vocational human resource in Nepal, therefore, strengthened role of the council is most for the timely introduction of new areas of technical education and vocational training in accordance with the changing need of economies and labour markets.
- The study showed that there were some hurdles in filling up the vacant positions among the surveyed industries/enterprises. This is associated to the hierarchy of authority and lengthy process of procurements. This calls for delicate autonomy to the floor level enterprises/industries to fulfil the vacant positions of the needed skills/positions. Presently, it was found that most of the industries relied on higher/central level authority within the enterprise to fulfil the vacant positions.
- The industries/enterprises interviewed were found to be aware of the issues of green TVET. However, many respondents mentioned that the required human resources and skill trainings are not available in promoting towards green TVET. Hence, this could be new avenue for CTEVT to update curricula addressing the issues and contents of green TVET and design courses to produce green-TVET related human resource.
- The lack of the competent instructors was found to be one of major problems faced by technical schools/institutes in delivering quality education. Hence, the vacancy fulfilment in the constituent campuses/schools should done in timely manner. Similarly, monitoring mechanism should be developed so that the instructors with required level of skills and knowledge are hired by private schools/institutes as per ToR.
- Many schools/institutes reported that lack of students (low enrolment rate) is one of the problems they are facing. Hence, to address this, schools/institutes should be encouraged to merge programmes/schools within district. The curriculum should be designed based on economy of the priority of the local and regional needs. This will also help to increase the enrolment of the students.
- The format of the curriculum should also be revised, and technical contents should be given high priority. During the development and revision times of TVET it should be mandatory of the intensive engagement of employers' agency should also be involved so that industry linkages could be created and needs of the industry could be addressed.
- CTEVT should ensure the minimum requirement of the physical infrastructure and laboratory facilities in the constituent and affiliated schools/institutes. Since most of the surveyed institutions in the study are having just a satisfactory or poor level of such facilities. Therefore, CTEVT should have mandatory provision of meeting minimum standard of the facilities. There should have a strict monitoring/supervision scheme of the required facilities in periodic basis and suspension of operation licence of the failing ones.
- CTEVT should make sufficient provisions of on-the-job training (OJT) and apprenticeship with extensive engagement of the employer agencies to reduce skill

mismatch. This will help the graduates to adapt to the skills needed in industry. Coordination between supply institutions and employer agencies should be established to address the problem of skill mismatch. The coordination with the district chapter of FNCCI/CNI and other organizations is desirable to address the problem of skill mismatch. At least one month internship program should be implemented with the coordination of demand side employer agencies during the last semester of the study period.

- The ratio between teacher/instructor and students assures the quality and efficiency of TVET graduates. Therefore, there must be an acceptable number of qualified instructors with good understanding of vocational pedagogy. Therefore, the ratio of instructors to trainees as per the curriculum should be maintained.
- The tools and equipment in the technical schools are recommended to be updated as per the change of technologies.
- The updated faculty as per the demand of the employers needs to be implemented, like Fast Moving Confectionary Consumers (FMCC).
- To reduce the gap of competencies mismatch, school management committees should be represented by business and industries.
- The employers demand pre-diploma graduates but the enrolment in the pre-diploma is in decreasing trend, so needs to review the entrance procedure and provide scholarship to them.
- To make the existing TVET program more relevant and effective, regular labour need survey should be carried out in accordance with the changing economic demands of the country.

Sectoral recommendations

Construction sector

- The construction sector is expanding in Nepal both in terms of the size of the industry and advancement of the use of technology. There is critical skill gap and shortages of the skilled human resources in operation and maintenance of heavy equipment, etc. Hence, the courses should be designed to address the skill gaps and new skill sets required by the industry to increase employability of the graduates. CTEVT is urged to design courses as per the need of specific sector of construction. For instance, mason for the construction of residential houses may not fit for the construction of hydro electricity power houses and the same in case of carpenters and plumbers.
- According to KII and FGD following type of technical human resources is highly demanded in the construction sector- Civil/structural engineering; Surveyors and geometrics, electrical overseers, heavy equipment operator and maintenance, batching plant operator, plumbing and sanitary ware tiles, marble, and parqueting fitters and construction site carpenters. So, priority should be given by CTEVT in these areas. This will help to reduce the skill mismatch in the construction sector.

Tourism sector

- There are limited numbers of CTEVT institutions providing tourism-related technical and vocational trainings with geographical concentration in certain areas. Hence, the coverage should be increased in both in terms of coverage and enrolment.

- The retention of the skilled human resources is one of the major challenges faced by tourism sector. Inadequate remuneration has been one of the reasons for this. However, the lack of proper orientation and information/knowledge on the scope the skills in Nepal are another reason for high employee turnover. Hence, proper orientation should be carried out to established graduates-industry linkage.
- Waiters, housekeeping, innkeepers, cooks, front line management staffs, tourist guide, sales/marketing engineers and security guards should be highly demanded according to demand site employers. So, priority should be given in this area in the future.

Agriculture

- The technical and vocational training/skills focused on high-value crops and medicinal plants has potential for providing employment opportunities. Hence, CTVET should focus on designing courses focusing on high-value crops and medicinal plants, herbs and herbarium. Similarly, technical, and vocational training programmes on organic farming techniques should be developed.
- In agriculture sector agriculture farm technician, livestock farm technician, fishery technician, dairy technician, landscape and gardeners, fruits and vegetable processor, medicinal plants and herbal producers and processors are the types of technical/vocational human resources are in high demand.

Health

- The courses and curriculum should be updated in the regular basis. As the skill sets required in the field has evolved rapidly and old skill sets has become obsolete. So, focus should be given to update the contents of the curriculum.
- Lab technician and qualified nurses are in high demand in case of health sector.

Others

Manufacturing and business sector sees salespersons are at the category of hard to fill-in positions. Therefore, they urge CTEVT to design and implement short term and degree awarding courses on marketing management, sales skills and schemes, and accounting. For this cause, manufacturing and business houses are ready to cooperate with CTEVT.

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Annex-I: The survey output

Provinces	Districts	Demand Survey by Sector of the enterprise						Supply Side Survey by Sector of the enterprise				
		A/F	C/E	T/H	Health	Others	Total	A/F	C/E	T/H	Health	Total
Province One	Bhojpu	8	7	0	8	0	23	1	1	0	0	2
	Dhankuta	4	2	0	0	0	6	1	1	0	1	3
	Sunsari	6	9	7	6	0	28	1	2	0	2	5
	Mahottari	5	8	0	5	0	18	2	2	0	1	5
Madhesh Pradesh	Parsa	2	5	1	4	0	12	1	1	0	2	4
	Siraha	5	9	0	7	0	21	1	1	0	1	3
	Chitwan	4	5	0	3	0	12	1	1	0	4	6
Bagmati Pradesh	Kathmandu	6	7	0	2	2	17	1	3	2	5	11
	Kavre	5	10	6	4	0	25	2	1	1	1	5
Gandaki Pradesh	Kaski	2	8	2	11	0	23	3	2	1	4	10
	Mustang	3	4	1	2	0	10	1	0	1	0	2
	Nawalparasi_East	12	12	0	7	0	31	2	3	0	2	7
Lumbini Pradesh	Banke	3	1	1	1	1	7	2	1	0	1	4
	Palpa	6	8	2	5	0	21	1	0	0	1	2
	Rupandehi	3	9	2	4	0	18	1	4	0	1	6
	Jumla	6	7	1	9	1	24	1	1	0	1	3
Karnali Pradesh	Slyan	2	12	0	5	0	19	1	0	0	1	2
	Surkhet	5	6	0	2	1	14	1	1	0	1	3
	Dadeldhura	6	3	0	2	0	11	3	1	0	1	5
Sudurpaschim Pradesh	Doti	5	7	0	4	0	16	2	2	0	1	5
	Kailali	4	5	2	9	0	20	2	1	0	0	3
	Total	102	144	25	100	5	376	31	29	5	31	96

Besides the proposed survey sides/districts may changes during the field work processes.

Annex A: Appendix Tables

Table 1: Distribution of Surveyed Employer Industries/enterprises by Provinces and Types of Local Governments and types of ownership

Background Attributes	Agriculture & Forestry	Construction/Engineering	Tourism/Hospitality	Health	Others	Total (Row %)	Total (N)	Total (Col%)
Provinces								
Province One	23.5	29.4	8.8	38.2	0.0	100.0	34	9.0
Madhesh Pradesh	30.4	42.0	7.2	18.8	1.4	100.0	69	18.4
Bagmati Pradesh	14.8	54.1	11.5	18.0	1.6	100.0	61	16.2
Gandaki Pradesh	34.0	30.2	11.3	24.5	0.0	100.0	53	14.1
Lumbini Pradesh	26.7	33.3	3.3	36.7	0.0	100.0	60	16.0
Karnali Pradesh	44.2	20.9	0.0	34.9	0.0	100.0	43	11.4
Sudurpaschim Pradesh	19.6	48.2	3.6	23.2	5.4	100.0	56	14.9
Size of Enterprises								
Micro industry	40.0	26.7	2.2	31.1	0.0	100.0	45	12.0
Cottage Industry	36.8	42.1	0.0	15.8	5.3	100.0	19	5.1
Small Industry	9.9	32.4	22.5	35.2	0.0	100.0	71	18.9
Medium sized industry	16.0	28.0	16.0	36.0	4.0	100.0	25	6.6
Large Industries	11.8	47.1	5.9	29.4	5.9	100.0	17	4.5
Others and NA	31.4	47.7	1.7	18.0	1.2	100.0	172	45.7
Other	37.0	14.8	0.0	48.1	0.0	100.0	27	7.2
Type of Ownership								
Private single	29.6	41.7	5.6	23.1	0.0	100.0	108	28.7
Public/Government	24.8	36.6	7.2	30.1	1.3	100.0	153	40.7
Private Partnership	29.9	40.3	6.0	23.9	0.0	100.0	67	17.8
Cooperative	26.7	13.3	6.7	40.0	13.3	100.0	15	4.0
Public/Private partnership	26.1	43.5	8.7	17.4	4.3	100.0	23	6.1
Other	20.0	40.0	10.0	30.0	0.0	100.0	10	2.7
Total	27.1	38.3	6.6	26.6	1.3	100.0	376	100.0

Note: Micro industry (Running capital < Rs. 2 million); Small Industry (Running capital up to 150 million); Medium sized industry (Running capital 150 to 500 million); Large Industries (Running capital 500 million and more); Others and NA= government office and public enterprises

Table 2: Distribution of surveyed industries/enterprises according to current operation status by background attributes

Background attributes	Good	Satisfactory	Not well	N	Total
Province					
Province One	82.4	17.6	0.0	34	100.0
Madhesh Pradesh	63.8	34.8	1.4	69	100.0
Bagmati Pradesh	47.5	52.5	0.0	61	100.0
Gandaki Pradesh	64.2	34.0	1.9	53	100.0
Lumbini Pradesh	40.0	53.3	6.7	60	100.0
Karnali Pradesh	23.3	76.7	0.0	43	100.0
Sudurpaschim Pradesh	44.6	50.0	5.4	56	100.0
Sector of the enterprise					
Agriculture & Forestry	56.9	41.2	2.0	102	100.0

Construction/Engineering	57.6	39.6	2.8	144	100.0
Tourism/Hospitality	48.0	52.0	0.0	25	100.0
Health	39.0	61.0	0.0	100	100.0
Others	40.0	0.0	60.0	5	100.0
Type of ownership					
Private single	41.7	54.6	3.7	108	100.0
Public/Government	60.1	36.6	3.3	153	100.0
Private Partnership	41.8	58.2	0.0	67	100.0
Cooperative	33.3	66.7	0.0	15	100.0
Public/Private partnership	69.6	30.4	0.0	23	100.0
Other	80.0	20.0	0.0	10	100.0
Total	51.6	46.0	2.4	376	100.0

Table 3: Average number of Technical and non-technical employees working in the surveyed industries/enterprises during last seven years and other characteristics

Background Attributes	Non-Technical			Technical			Ratio T/nT	N
	Male	Female	Total	Male	Female	Total		
<i>Last 7 Fiscal Years</i>								
Fy2072_73	7.9	3.7	11.1	17.5	7.9	25.4	2.3	78
Fy2073_74	8.8	3.7	12.0	19.3	9.9	29.2	2.4	96
Fy2074_75	9.0	4.6	13.1	18.4	9.3	27.7	2.1	119
Fy2075_76	8.8	4.0	12.4	17.6	8.5	26.1	2.1	173
Fy2076_77	8.4	3.8	11.7	16.4	7.6	24.0	2.0	224
Fy2077_78	9.3	4.3	13.2	18.4	8.4	26.7	2.0	367
<i>Provinces</i>								
Province One	4.5	2.6	6.2	11.4	5.2	16.6	2.7	112
Madhesh Pradesh	7.4	2.3	9.3	12.2	5.4	17.7	1.9	148
Bagmati Pradesh	16.2	10.1	26.3	28.7	18.2	46.9	1.8	170
Gandaki Pradesh	6.7	3.6	9.7	20.3	7.6	27.8	2.9	58
Lumbini Pradesh	13.4	6.8	19.7	27.4	11.3	38.7	2.0	186
Karnali Pradesh	5.9	1.3	7.0	10.7	4.4	15.1	2.2	168
Sudurpaschim Pradesh	5.0	1.4	5.8	13.2	5.4	18.6	3.2	215
<i>Sector of Enterprise/Agencies</i>								
Agriculture & Forestry	8.2	3.3	11.0	15.3	7.7	23.0	2.1	283
Construction/Engineering	9.4	5.0	13.9	18.0	9.4	27.4	2.0	405
Tourism/Hospitality	8.8	2.0	10.1	19.1	9.8	28.9	2.9	71
Health	8.5	3.9	12.0	19.1	7.1	26.2	2.2	283
Others	11.5	10.5	21.3	32.2	15.4	47.5	2.2	15
<i>Size of Enterprises/Industries</i>								
Micro industry	6.7	3.7	10.0	6.5	5.0	11.5	1.2	123
Cottage Industry	8.2	5.9	13.5	18.2	10.4	28.7	2.1	66
Small Industry	8.1	2.4	10.0	21.3	10.2	31.5	3.2	175
Medium sized industry	10.7	1.7	12.0	34.4	10.7	45.1	3.8	72
Large Industries	7.8	2.0	9.0	47.8	12.3	60.1	6.7	48

Public agencies	10.4	5.6	15.5	15.4	8.5	24.0	1.5	483
Others	4.4	1.9	5.7	10.0	4.1	14.1	2.5	90
Total	8.8	4.1	12.5	17.9	8.4	26.3	2.1	1057

Note: Due to multiple responses total number reached to 1057

Table 4: Distribution of Surveyed Employer agencies by fulfilment status of Technical/vocational positions and source of the availability of such human resources

Background attributes	% Fulfilled	N	Graduates of TVET in country	Graduates of TVET from India	Other than Nepal and India	Others	Total (N)
Sector of Industry							
Agriculture & Forestry	52.0	102	82.7	9.6	5.8	1.9	52
Construction/Engineering	62.5	144	76.7	12.3	4.1	6.8	73
Tourism/Hospitality	68.0	25	64.3	7.1	7.1	21.4	14
Health	64.0	100	82.8	9.4	7.8	0.0	64
Others	60.0	5	87.5	4.2	0.0	8.3	24
Province							
Province One	47.1	34	87.5	0.0	6.3	6.3	16
Madhesh Pradesh	62.3	69	81.4	11.6	4.7	2.3	43
Bagmati Pradesh	68.9	61	76.2	9.5	14.3	0.0	42
Gandaki Pradesh	66.0	53	60.0	14.3	5.7	20.0	35
Lumbini Pradesh	76.7	60	89.1	8.7	0.0	2.2	46
Karnali Pradesh	58.1	43	80.0	16.0	4.0	0.0	25
Sudurpaschim Pradesh	35.7	56	95.0	0.0	0.0	5.0	20
Ownership status							
Private single	82.4	108	80.9	7.9	4.5	6.7	89
Public/Government	37.3	153	86.0	7.0	1.8	5.3	57
Private Partnership	85.1	67	80.7	10.5	7.0	1.8	57
Cooperative	33.3	15	100.0	0.0	0.0	0.0	5
Public/Private partnership	47.8	23	63.6	18.2	18.2	0.0	11
Other	80.0	10	37.5	37.5	12.5	12.5	8
Total	60.4	376	80.2	9.7	5.3	4.8	227

Table 5: Average and total number of additional human resources with technical education and vocational training required in the surveyed enterprises

Characteristics of Industry/Enterprise	Level or Ranking of Human Resource										Total Additional
	Manager		Supervisor		Technicians		Helpers		Other		
	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	Avg.	Total	
Province											
Province One	1.3	4	1.0	2	12.5	163	2.0	6	1.0	1	176
Madhesh Pradesh	3.6	18	2.5	15	17.2	344	6.7	67	5.6	28	472
Bagmati Pradesh	3.4	58	4.4	93	26.4	713	13.3	292	3.4	24	1,180

Gandaki Pradesh	11.0	33	5.6	28	7.2	79	6.3	38	0	178	
Lumbini Pradesh	1.3	4	6.0	18	10.7	236	10.6	169	5.4	27	454
Karnali Pradesh	7.2	36	4.0	68	5.7	153	4.5	67	0	324	
Sudurpaschim Pradesh	2.9	20	3.4	48	4.3	94	6.0	48	3.2	16	226
Sector of the enterprise											
Agriculture & Forestry	2.8	25	3.3	40	3.0	95	4.0	68	4.0	24	252
Construction/Engineering	1.6	8	4.1	81	9.4	321	8.9	133	2.0	6	549
Tourism/Hospitality	1.6	8	3.6	18	4.9	39	7.5	45	0.0	110	
Health	4.8	95	3.8	95	18.9	888	8.6	240	5.9	47	1,365
Others	9.3	37	6.3	38	20.9	439	14.4	201	3.2	19	734
Type of enterprise/agency ownership											
Private single	5.3	85	3.0	69	10.5	460	6.5	156	3.8	19	789
Public/Government	2.7	30	3.2	57	11.9	488	6.5	137	5.1	51	763
Private Partnership	4.1	33	3.8	49	8.5	238	6.6	131	5.2	26	477
Cooperative	1.0	1	7.0	21	8.0	48	9.3	28	0.0	0	98
Public/Private partnership	3.2	16	6.3	57	25.3	480	21.3	213	0.0	0	766
Other	4.0	8	9.5	19	17.0	68	11.0	22	0.0	0	117
Category/size of Enterprise											
Micro industry	2.0	6	2.6	13	19.4	271	7.6	53	6.5	13	356
Cottage Industry	6.0	12	8.5	17	23.0	138	11.4	57	15.0	15	239
Small Industry	2.4	12	4.9	69	18.2	364	12.3	111	0.5	1	557
Medium	2.5	5	6.0	6	6.9	69	8.0	56	0.0	0	136
Large Industries	25.0	25	2.5	15	8.9	62	10.0	30	4.5	9	141
Others NA	4.0	108	4.0	133	11.1	825	7.9	354	3.6	58	1,478
Other	1.7	5	2.7	19	4.8	53	6.5	26	0.0	0	103
Total	4.0	173	4.0	272	12.5	1,782	8.6	687	4.2	96	3,010

Note: Micro=Running capital < Rs. 2 million; Small=Running capital up to 150 million; Medium= Running capital 150 to 500 million; Large= Running capital 500 million and more; Others & NA= government office and public enterprises

Table 6: Distribution of enterprises/industries according to planning to extend the capacity and Branches of the Agency, types of extension and years planned to extend by background attributes

Characteristics of Surveyed Industries	% Planned to extend	Total (N)	What type of Extension					Years to extend
			Capacity	Branches	Both	Others	Total (N)	
Province								
Province One	44.1	34	80.0	13.3	6.7	0.0	15	2.3
Madhesh Pradesh	39.1	69	51.9	22.2	25.9	0.0	27	3.2
Bagmati Pradesh	49.2	61	60.0	13.3	23.3	3.3	30	2.5
Gandaki Pradesh	26.4	53	64.3	14.3	14.3	7.1	14	2.8
Lumbini Pradesh	48.3	60	44.8	13.8	37.9	3.4	29	2.9
Karnali Pradesh	62.8	43	70.4	0.0	29.6	0.0	27	3.2
Sudurpaschim Pradesh	48.2	56	44.4	18.5	33.3	3.7	27	2.1
Sector of the enterprise								
Agriculture & Forestry	40.2	102	51.2	7.3	41.5	0.0	41	2.5
Construction/Engineering	42.4	144	57.4	24.6	13.1	4.9	61	2.6
Tourism/Hospitality	36.0	25	33.3	33.3	33.3	0.0	9	2.4
Health	56.0	100	66.1	3.6	28.6	1.8	56	3.2

Others	40.0	5	50.0	0.0	50.0	0.0	2	2.0
Type of Ownership								
Private single	48.1	108	57.7	19.2	21.2	1.9	52	2.9
Public/Government	33.3	153	52.9	11.8	33.3	2.0	51	2.5
Private Partnership	49.3	67	66.7	9.1	24.2	0.0	33	3.1
Cooperative	46.7	15	42.9	28.6	28.6	0.0	7	3.0
PPP	87.0	23	65.0	10.0	15.0	10.0	20	2.0
Other	60.0	10	33.3	0.0	66.7	0.0	6	3.5
Size of enterprise								
Micro industry	46.7	45	42.9	19.0	38.1	0.0	21	3.1
Cottage Industry	52.6	19	70.0	20.0	10.0	0.0	10	3.1
Small Industry	52.1	71	67.6	13.5	16.2	2.7	37	2.8
Medium sized industry	52.0	25	61.5	7.7	30.8	0.0	13	3.0
Large Industries	58.8	17	80.0	0.0	10.0	10.0	10	2.8
Others and NA	40.7	172	52.9	12.9	31.4	2.9	70	2.5
Other	29.6	27	37.5	25.0	37.5	0.0	8	2.9
Total	44.9	376	57.4	13.6	26.6	2.4	169	2.7

Note: PPP= Public-private partnership; NA= Not applicable; Micro=Running capital < Rs. 2 million; Small=Running capital up to 150 million; Medium= Running capital 150 to 500 million; Large= Running capital 500 million and more; Others & NA= government office and public enterprises

Table 7: Ways adopted to fulfil the vacant technical and vocational skilled human resources in the Agency and Enterprises

Characteristics of Industry/ Enterprise	Publication of vacancy notice self and recruit own self	Request to send qualified one from the educational/ training institutes	Selection visiting to the educational/ training institute	Outsourcing to recruitment agencies	Others*	Total (N)	Total (%)
Province							
Province One	35.3	0.0	2.9	2.9	58.8	34	100.0
Madhesh Pradesh	37.7	2.9	0.0	4.3	55.1	69	100.0
Bagmati Pradesh	57.4	3.3	1.6	8.2	29.5	61	100.0
Gandaki Pradesh	20.8	3.8	0.0	11.3	64.2	53	100.0
Lumbini Pradesh	66.7	5.0	1.7	8.3	18.3	60	100.0
Karnali Pradesh	41.9	27.9	2.3	0.0	27.9	43	100.0
Sudurpaschim Pradesh	39.3	1.8	1.8	0.0	57.1	56	100.0
Sector of the enterprise							
Agriculture & Forestry	35.3	4.9	2.9	3.9	52.9	102	100.0
Construction/Engineering	38.9	5.6	1.4	6.3	47.9	144	100.0
Tourism/Hospitality	36.0	12.0	0.0	20.0	32.0	25	100.0
Health	63.0	6.0	0.0	1.0	30.0	100	100.0
Others	0.0	0.0	0.0	20.0	80.0	5	100.0
Type of ownership							
Private single	64.8	4.6	2.8	4.6	23.1	108	100.0
Public/Government	26.1	4.6	0.0	3.3	66.0	153	100.0
Private Partnership	53.7	13.4	1.5	4.5	26.9	67	100.0
Cooperative	20.0	0.0	6.7	6.7	66.7	15	100.0
Public/Private partnership	43.5	0.0	0.0	21.7	34.8	23	100.0

Other	50.0	10.0	0.0	10.0	30.0	10	100.0
Category/size of Enterprise							
Micro industry	57.8	4.4	6.7	2.2	28.9	45	100.0
Cottage Industry	63.2	5.3	0.0	0.0	31.6	19	100.0
Small Industry	56.3	9.9	0.0	5.6	28.2	71	100.0
Medium sized	64.0	8.0	0.0	12.0	16.0	25	100.0
Large Industries	47.1	5.9	0.0	11.8	35.3	17	100.0
Others and NA	25.6	4.1	0.0	5.8	64.5	172	100.0
Other	66.7	7.4	7.4	0.0	18.5	27	100.0
Total	43.6	5.9	1.3	5.3	43.9	376	100.0

Note: PPP= Public-private partnership; NA= Not applicable; Micro=Running capital < Rs. 2 million; Small=Running capital up to 150 million; Medium= Running capital 150 to 500 million; Large= Running capital 500 million and more; Others & NA= government office and public enterprises

Table 8: Hurdles in finding the searched human resource with Technical and Vocational training

Characteristics of Industry/Enterprise	Difficult to get persons of the searched skill	Problem to select capable persons due to personal approaches/pressure	Low level of salary, facility, and benefits	No problem	Other	Total (N)
Sector of the enterprise						
Agriculture & Forestry	12.7	7.8	10.8	41.2	27.5	102
Construction/Engineering	13.9	8.3	8.3	45.1	24.3	144
Tourism/Hospitality	36.0	0.0	20.0	24.0	20.0	25
Health	20.0	6.0	10.0	49.0	15.0	100
Others	0.0	20.0	0.0	60.0	20.0	5
Type of enterprise						
Private single	44.4	8.3	24.1	40.7	12.0	108
Public/Government	15.0	11.8	6.5	45.8	38.6	153
Private Partnership	37.3	10.4	17.9	50.7	9.0	67
Cooperative	6.7	6.7	13.3	46.7	26.7	15
Public/Private partnership	26.1	21.7	30.4	34.8	26.1	23
Other	30.0	0.0	10.0	50.0	30.0	10
Category/size of Enterprise						
Micro industry	53.3	8.9	20.0	35.6	4.4	45
Cottage Industry	36.8	0.0	36.8	47.4	21.1	19
Small Industry	49.3	12.7	26.8	38.0	12.7	71
Medium sized	16.0	8.0	12.0	48.0	24.0	25
Large Industries	29.4	5.9	5.9	70.6	5.9	17
Others and NA	14.5	9.3	8.1	47.1	36.0	172
Other	22.2	29.6	18.5	40.7	25.9	27
Total	28.2	10.6	15.4	44.7	24.2	376

Table 9: Level of courses being run/offered in the school/training centre by background attributes

Background attributes of the schools/training centres	Diploma/certificate	Pre-diploma	Short period training	Other	N	Total	Col. (%)
Province							
Province 1	80.0	71.4	30.0	0.0	10	100.0	10.4
Madhesh Pradesh	75.0	100.0	16.7	0.0	12	100.0	12.5

Bagmati	81.8	50.0	18.2	9.1	22	100.0	22.9
Gandaki	63.2	76.5	26.3	0.0	19	100.0	19.8
Lumbini	66.7	88.9	16.7	0.0	12	100.0	12.5
Karnali	87.5	100.0	0.0	0.0	8	100.0	8.3
Sudurpaschim	46.2	100.0	7.7	0.0	13	100.0	13.5
Type of local government							
Gaupalika	55.6	100.0	22.2	0.0	9	100.0	9.4
Nagarpalika	70.4	83.8	13.0	1.9	54	100.0	56.3
Upamahanagerpalika	54.5	100.0	27.3	0.0	11	100.0	11.5
Mahanagarpalika	86.4	50.0	22.7	4.5	22	100.0	22.9
Type of ownership							
Private-Private partnership	64.3	92.3	7.1	0.0	28	100.0	29.2
Public/CTEVT constituent	88.9	68.2	44.4	7.4	27	100.0	28.1
Community	77.8	92.9	0.0	0.0	18	100.0	18.8
Private sole proprietorship	46.7	90.0	13.3	0.0	15	100.0	15.6
Public-Private partnership	40.0	60.0	0.0	0.0	5	100.0	5.2
Others	100.0	66.7	33.3	0.0	3	100.0	3.1
Streams of courses offered							
Agriculture	58.1	85.7	16.1	0.0	31	100.0	32.3
Health	87.1	63.6	9.7	3.2	31	100.0	32.3
Construction/Engineering	69.0	87.0	17.2	0.0	29	100.0	30.2
Tourism and Hospitality	60.0	60.0	80.0	20.0	5	100.0	5.2
Total	70.8	80.6	17.7	2.1	96	100.0	100.0

Table 10: Level of courses being run/offered in the school/training centre by background attributes

Background attributes of the schools/training centres	Diploma/certificate	Pre-diploma	Short period training	Other	N	Total	Col. (%)
Province							
Province 1	80.0	71.4	30.0	0.0	10	100.0	10.4
Madhesh Pradesh	75.0	100.0	16.7	0.0	12	100.0	12.5
Bagmati	81.8	50.0	18.2	9.1	22	100.0	22.9
Gandaki	63.2	76.5	26.3	0.0	19	100.0	19.8
Lumbini	66.7	88.9	16.7	0.0	12	100.0	12.5
Karnali	87.5	100.0	0.0	0.0	8	100.0	8.3
Sudurpaschim	46.2	100.0	7.7	0.0	13	100.0	13.5
Type of local government							
Gaupalika	55.6	100.0	22.2	0.0	9	100.0	9.4
Nagarpalika	70.4	83.8	13.0	1.9	54	100.0	56.3
Upamahanagerpalika	54.5	100.0	27.3	0.0	11	100.0	11.5
Mahanagarpalika	86.4	50.0	22.7	4.5	22	100.0	22.9
Type of ownership							
Private-Private partnership	64.3	92.3	7.1	0.0	28	100.0	29.2
Public/CTEVT constituent	88.9	68.2	44.4	7.4	27	100.0	28.1
Community	77.8	92.9	0.0	0.0	18	100.0	18.8
Private sole proprietorship	46.7	90.0	13.3	0.0	15	100.0	15.6
Public-Private partnership	40.0	60.0	0.0	0.0	5	100.0	5.2
Others	100.0	66.7	33.3	0.0	3	100.0	3.1

Streams of courses offered							
Agriculture	58.1	85.7	16.1	0.0	31	100.0	32.3
Health	87.1	63.6	9.7	3.2	31	100.0	32.3
Construction/Engineering	69.0	87.0	17.2	0.0	29	100.0	30.2
Tourism and Hospitality	60.0	60.0	80.0	20.0	5	100.0	5.2
Total	70.8	80.6	17.7	2.1	96	100.0	100.0

Table 11: Types of courses being offered in the surveyed schools/training centres by subject of study

Subject and Level	N	%
Health and Medicine		
PCL in General Medicine	7	7.3
Diploma in Pharmacy	6	6.3
PCL in Medical Lab Technology	4	4.2
PCL in Diagnostic Radiography	4	4.2
PCL in Ophthalmic Science	2	2.1
PCL in Health Science (Ayurveda)	1	1.0
PCL in Dental Science (Dental Hygiene)	1	1.0
PCL in Nursing	12	12.5
TSLC in Ayurveda	1	1.0
TSLC in Auxiliary Nursing Midwifery (ANM)	4	4.2
TSLC in Community Medicine Assistant (CMA)	5	5.2
Total Health and Medicine	31	32.3
Agriculture		
Diploma/TSLC in Agriculture (Plant Science)	25	26.0
Diploma in Agriculture (Animal Science)	9	9.4
Technician Level Course in Plant Science (JT)	6	6.3
TSLC in Livestock Production /Animal Health	8	8.3
TSLC in Veterinary Science	3	3.1
Total Agriculture	31	32.3
Construction and Engineering		
Diploma/TSLC in Civil Engineering	23	24.0
Diploma/TSLC in Mechanical Engineering	5	5.2
Diploma/TSLC in Electronics Engineering	2	2.1
Diploma/TSLC in Electrical Engineering	4	4.2
Diploma/TSLC in Geometrics/Survey Engineering	3	3.1
Diploma/TSLC in Computer Engineering	3	3.1
Diploma/TSLC in Automobile Engineering	4	4.2
Diploma in Electrical & Electronics Engineering	1	1.0
Diploma/TSLC in Refrigeration & Air Conditioning	1	1.0
Total Construction/Engineering	29	30.2
Tourism/Hospitality		
Diploma/TSLC in Hotel management	4	4.2
TSLC in Culinary Arts	3	3.1
Total Tourism/Hospitality	5	5.4
All Total	96.0	100.0

Table 12: Availability of teachers/instructors of technical education and vocational training as per the level and subject of courses offered in the school/training centre

Background attributes	Available sufficiently	Not available in sufficient number	N	Total
Type of ownership				
Private sole proprietorship	100.0	0.0	15	100.0
Private partnership	100.0	0.0	28	100.0
Community	72.2	27.8	18	100.0
Public/CTEVT constituent	100.0	0.0	5	100.0
Public/Private partnership	74.1	25.9	27	100.0
Others	100.0	0.0	3	100.0
Streams of courses offered				
Agriculture	77.4	22.6	31	100.0
Construction/Engineering	89.7	10.3	29	100.0
Tourism and Hospitality	100.0	0.0	5	100.0
Health	93.5	6.5	31	100.0
Total	87.5	12.5	96	100.0

Table 13: Distribution of surveyed technical school/vocational training centres according to enrollment status by background attributes

Background Attributes	Quota is fulfilled as per capacity	Demand is more than the capacity	Enrollment is less than capacity to enroll	N	Total
Type of ownership					
Private sole proprietorship	46.7	6.7	46.7	15	100.0
Private partnership	53.6	14.3	32.1	28	100.0
Community	22.2	5.6	72.2	18	100.0
Public/CTEVT constituent	20.0	0.0	80.0	5	100.0
Public/Private Partnership	40.7	11.1	48.1	27	100.0
Others	0.0	33.3	66.7	3	100.0
Streams of courses offered					
Agriculture	29.0	6.5	64.5	31	100.0
Construction/Engineering	37.9	10.3	51.7	29	100.0
Tourism and Hospitality	40.0	0.0	60.0	5	100.0
Health	51.6	16.1	32.3	31	100.0
Total	39.6	10.4	50.0	96	100.0

ANNEX B

Projection of Nominal GDP and Employment up to 2029/30

	Industrial Classification	Elasticity	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30
Nominal GDP in billion rupees	Agriculture, forestry and fishing	-	584.2	614.3	629.2	647.1	662.0	693.3	717.2	745.4	775.5	805.0	836.6	869.5	903.2
	Construction		217.7	234.3	213.5	217.9	253.5	293.4	334.0	381.1	433.3	491.4	560.6	639.4	729.4
	Accommodation and food service activities		67.3	75.7	50.4	58.8	67.9	84.8	103.3	127.5	156.9	192.2	237.5	293.4	362.2
	Human health and social work activities		44.1	49.8	60.3	65.3	73.7	83.3	93.8	106.2	119.6	134.6	152.6	172.9	195.9
Nominal GDP share	Agriculture, forestry and fishing	-	33.4	25.6	24.9	25.2	24.9	23.9	23.4	22.8	22.3	21.7	21.1	20.5	19.9
	Construction		6.4	7.2	7.0	6.2	5.9	6.2	6.3	6.4	6.5	6.5	6.6	6.6	6.7
	Accommodation and food service activities		1.7	2.2	2.3	1.5	1.6	1.7	1.8	2.0	2.2	2.4	2.6	2.8	3.1
	Human health and social work activities		1.2	1.5	1.5	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Employment in million	Agriculture, forestry and fishing	0.57	1.52	1.73	1.84	2.01	2.25	2.63	2.98	3.38	3.82	4.29	4.84	5.45	6.12
	Construction	0.25	0.98	1.28	0.90	0.98	1.62	2.34	3.07	3.91	4.85	5.90	7.14	8.55	10.17
	Accommodation and food service activities	1.11	0.37	0.41	0.29	0.33	0.37	0.46	0.55	0.67	0.82	0.99	1.22	1.49	1.84
	Human health and social work activities	1.02	0.17	0.19	0.23	0.25	0.28	0.32	0.36	0.41	0.46	0.52	0.58	0.66	0.75

Source: Author's estimation

ANNEX C: Details HR data at local level

Name of Local Level	Household Size	Public Expenditure (Rs.)	Population	Nominal GDP (in Arba Rs.)	Construction	Agriculture	Tourism	Health	CA T-H	Others Technical	Non-Technical	Total HR
आठराई त्रिवेणी गाउँपालिका	2,869	246,827,377.26	12,288	4.53	11	2	0	2	15	4	17	36
मैवाखोला गाउँपालिका	2,275	247,163,737.46	10,365	4.53	11	2	0	2	15	4	17	36
मेरिङदेन गाउँपालिका	2,683	286,021,565.96	12,040	4.53	11	2	0	2	15	4	17	36
मिक्वाखोला गाउँपालिका	1,862	227,658,827.36	7,991	4.53	11	2	0	2	15	4	17	36
फक्ताङलुङ गाउँपालिका	2,864	276,027,617.66	11,925	4.53	11	2	0	2	15	4	17	36
सिदिङ्वा गाउँपालिका	2,604	277,693,285.77	10,981	4.53	11	2	0	2	15	4	17	36
सिरीजङ्घा गाउँपालिका	3,329	393,207,949.84	14,186	4.53	11	2	0	2	15	4	17	36
पाथीभरा याङवरक गाउँपालिका	2,738	258,301,718.00	11,797	4.53	11	2	0	2	15	4	17	36
फालेलुङ गाउँपालिका	4,940	391,182,312.84	20,531	4.53	11	2	0	2	15	4	17	36
फाल्गुनन्द गाउँपालिका	5,293	375,555,408.05	21,253	4.53	11	2	0	2	15	4	17	36
हिलिहाङ गाउँपालिका	4,878	339,574,962.49	20,537	4.53	11	2	0	2	15	4	17	36
कुम्मायक गाउँपालिका	3,199	268,105,062.50	13,020	4.53	11	2	0	2	15	4	17	36
मिक्लाजुङ गाउँपालिका	5,509	412,209,115.70	21,328	4.53	11	2	0	2	15	4	17	36
तुम्बेवा गाउँपालिका	2,752	262,808,548.85	11,063	4.53	11	2	0	2	15	4	17	36
याङवरक गाउँपालिका	3,964	301,841,881.60	16,828	4.53	11	2	0	2	15	4	17	36
चुलाचुली गाउँपालिका	5,624	339,335,480.54	22,856	4.53	11	2	0	2	15	4	17	36

फाकफोकथुम गाउँपालिका	4,923	288,496,396.69	20,004	4.53	11	2	0	2	15	4	17	36
माईजोगमाई गाउँपालिका	4,957	320,180,641.42	19,295	4.53	11	2	0	2	15	4	17	36
माडसेबुङ गाउँपालिका	3,891	269,327,912.44	16,897	4.53	11	2	0	2	15	4	17	36
रोड गाउँपालिका	4,715	327,492,458.13	17,555	4.53	11	2	0	2	15	4	17	36
सन्दकपुर गाउँपालिका	4,031	280,003,612.91	15,460	4.53	11	2	0	2	15	4	17	36
बाहदशी गाउँपालिका	9,053	342,076,068.97	37,916	4.53	11	2	0	2	15	4	17	36
बुद्धशान्ति गाउँपालिका	13,276	490,106,904.90	52,911	4.53	11	2	0	2	15	4	17	36
गौरिगञ्ज गाउँपालिका	8,712	334,703,769.62	36,058	4.53	11	2	0	2	15	4	17	36
हल्दीबारी गाउँपालिका	7,894	393,570,069.82	33,054	4.53	11	2	0	2	15	4	17	36
झापा गाउँपालिका	8,554	370,602,349.18	39,372	4.53	11	2	0	2	15	4	17	36
कचनकवल गाउँपालिका	10,200	222,838,445.81	42,386	4.53	11	2	0	2	15	4	17	36
कमल गाउँपालिका	13,356	473,935,167.00	53,710	4.53	11	2	0	2	15	4	17	36
बुढीगंगा गाउँपालिका	12,455	533,338,185.39	51,640	4.53	11	2	0	2	15	4	17	36
धनपालथान गाउँपालिका	9,935	330,520,842.50	45,204	4.53	11	2	0	2	15	4	17	36
ग्रामथान गाउँपालिका	9,483	377,242,825.74	36,500	4.53	11	2	0	2	15	4	17	36
जहदा गाउँपालिका	9,868	356,455,765.08	47,836	4.53	11	2	0	2	15	4	17	36
कानेपोखरी गाउँपालिका	10,760	319,902,501.50	43,177	4.53	11	2	0	2	15	4	17	36
कटहरी गाउँपालिका	10,522	368,663,115.54	48,633	4.53	11	2	0	2	15	4	17	36
केराबारी गाउँपालिका	8,809	431,430,227.61	34,725	4.53	11	2	0	2	15	4	17	36
मिक्लाजुङ गाउँपालिका	8,390	355,711,946.51	33,315	4.53	11	2	0	2	15	4	17	36

बर्जु गाउँपालिका	8,034	342,360,898.24	36,533	4.53	11	2	0	2	15	4	17	36
भोक्राहा नरसिंह गाउँपालिका	9,299	362,228,498.10	49,371	4.53	11	2	0	2	15	4	17	36
देवानगञ्ज गाउँपालिका	7,814	355,260,533.83	39,367	4.53	11	2	0	2	15	4	17	36
गढी गाउँपालिका	8,751	331,749,566.31	39,478	4.53	11	2	0	2	15	4	17	36
हरिनगर गाउँपालिका	8,765	409,108,833.94	49,501	4.53	11	2	0	2	15	4	17	36
कोशी गाउँपालिका	9,377	395,343,271.43	48,768	4.53	11	2	0	2	15	4	17	36
चौबिसे गाउँपालिका	4,493	364,101,818.87	17,914	4.53	11	2	0	2	15	4	17	36
छथर जोरपाटी गाउँपालिका	4,143	298,508,683.00	16,477	4.53	11	2	0	2	15	4	17	36
सहिदभूमि गाउँपालिका	4,109	276,906,941.05	17,784	4.53	11	2	0	2	15	4	17	36
साँगुरीगढी गाउँपालिका	5,025	350,565,020.56	19,601	4.53	11	2	0	2	15	4	17	36
आठराई गाउँपालिका	4,427	334,184,073.30	18,210	4.53	11	2	0	2	15	4	17	36
छथर गाउँपालिका	3,509	277,850,233.50	14,245	4.53	11	2	0	2	15	4	17	36
मेन्द्रयायेम गाउँपालिका	1,708	224,383,500.84	6,698	4.53	11	2	0	2	15	4	17	36
फेदाप गाउँपालिका	3,671	300,654,373.10	15,236	4.53	11	2	0	2	15	4	17	36
भोटखोला गाउँपालिका	1,717	181,818,514.00	6,509	4.53	11	2	0	2	15	4	17	36
चिचिला गाउँपालिका	1,672	192,909,990.70	6,720	4.53	11	2	0	2	15	4	17	36
मकालु गाउँपालिका	3,485	264,646,246.24	13,492	4.53	11	2	0	2	15	4	17	36
सभापोखरी गाउँपालिका	2,533	193,732,730.16	10,005	4.53	11	2	0	2	15	4	17	36
सिलीचोङ गाउँपालिका	2,501	212,867,061.10	10,432	4.53	11	2	0	2	15	4	17	36

आमचोक गाउँपालिका	3,566	276,906,941.05	15,237	4.53	11	2	0	2	15	4	17	36
अरुण गाउँपालिका	3,582	283,776,108.00	14,853	4.53	11	2	0	2	15	4	17	36
हतुवागढी गाउँपालिका	4,040	260,729,349.00	16,302	4.53	11	2	0	2	15	4	17	36
पौवादुङ्मा गाउँपालिका	2,933	249,021,604.00	12,170	4.53	11	2	0	2	15	4	17	36
रामप्रसादराई गाउँपालिका	3,700	281,614,162.41	15,632	4.53	11	2	0	2	15	4	17	36
साल्पासिलिछो गाउँपालिका	3,019	246,453,200.19	12,229	4.53	11	2	0	2	15	4	17	36
टेम्केमैयुङ गाउँपालिका	3,855	307,028,496.76	15,491	4.53	11	2	0	2	15	4	17	36
थुलुङ दुधकोशी गाउँपालिका	4,672	425,157,905.13	18,459	4.53	11	2	0	2	15	4	17	36
माप्य दुधकोशी गाउँपालिका	3,142	284,506,461.56	12,746	4.53	11	2	0	2	15	4	17	36
खुम्बु पासाङल्हामु गाउँपालिका	2,611	480,865,938.77	9,226	4.53	11	2	0	2	15	4	17	36
लिखु पिके गाउँपालिका	1,255	177,106,496.30	5,264	4.53	11	2	0	2	15	4	17	36
माहाकुलुङ गाउँपालिका	2,909	237,247,891.52	11,971	4.53	11	2	0	2	15	4	17	36
नेचासल्यान गाउँपालिका	2,662	317,403,032.00	10,828	4.53	11	2	0	2	15	4	17	36
सोताङ गाउँपालिका	2,321	201,841,192.40	9,261	4.53	11	2	0	2	15	4	17	36
चम्पादेवी गाउँपालिका	4,040	306,469,966.71	16,528	4.53	11	2	0	2	15	4	17	36
चिशंखुगढी गाउँपालिका	3,346	307,361,660.66	13,761	4.53	11	2	0	2	15	4	17	36
खिजिदेम्वा गाउँपालिका	3,496	343,038,614.00	15,867	4.53	11	2	0	2	15	4	17	36
लिखु गाउँपालिका	3,189	278,079,393.28	11,930	4.53	11	2	0	2	15	4	17	36

मानेभन्ज्याङ गाउँपालिका	4,855	297,931,206.60	19,883	4.53	11	2	0	2	15	4	17	36
मोलुङ गाउँपालिका	4,173	280,236,157.77	16,944	4.53	11	2	0	2	15	4	17	36
सुनकोशी गाउँपालिका	4,417	333,756,845.90	18,024	4.53	11	2	0	2	15	4	17	36
ऐसेलुखर्क गाउँपालिका	3,506	274,876,772.84	13,581	4.53	11	2	0	2	15	4	17	36
बराहपोखरी गाउँपालिका	2,591	268,542,839.99	11,461	4.53	11	2	0	2	15	4	17	36
दिप्रुङ चुइचुम्मा गाउँपालिका	3,848	323,300,036.60	16,549	4.53	11	2	0	2	15	4	17	36
जन्तेढुङ्गा गाउँपालिका	2,765	320,593,207.00	12,066	4.53	11	2	0	2	15	4	17	36
केपिलासगढी गाउँपालिका	3,346	299,925,977.77	13,339	4.53	11	2	0	2	15	4	17	36
खोटेहाङ गाउँपालिका	4,149	328,969,818.26	16,952	4.53	11	2	0	2	15	4	17	36
रावा बेसी गाउँपालिका	2,724	207,445,431.30	11,218	4.53	11	2	0	2	15	4	17	36
साकेला गाउँपालिका	2,307	226,808,369.28	9,605	4.53	11	2	0	2	15	4	17	36
रौतामाई गाउँपालिका	4,586	384,282,024.05	20,418	4.53	11	2	0	2	15	4	17	36
लिम्चुङबुङ गाउँपालिका	2,257	222,838,445.81	9,789	4.53	11	2	0	2	15	4	17	36
ताप्ली गाउँपालिका	2,884	204,733,402.48	13,377	4.53	11	2	0	2	15	4	17	36
उदयपुरगढी गाउँपालिका	6,810	466,880,274.62	28,929	4.53	11	2	0	2	15	4	17	36
अग्निसाइर कृष्णसवरन गाउँपालिका	6,726	484,210,062.28	32,047	3.72	11	2	0	2	15	4	17	36
बलान बिहुल गाउँपालिका	5,004	237,760,879.96	24,059	3.72	11	2	0	2	15	4	17	36
राजगढ गाउँपालिका	6,942	249,643,767.44	32,975	3.72	11	2	0	2	15	4	17	36
बिष्णुपुर गाउँपालिका	5,780	300,721,215.90	28,072	3.72	11	2	0	2	15	4	17	36

छिन्नमस्ता गाउँपालिका	6,373	318,034,618.35	30,664	3.72	11	2	0	2	15	4	17	36
महादेवा गाउँपालिका	6,522	209,095,407.63	31,048	3.72	11	2	0	2	15	4	17	36
रुपनी गाउँपालिका	6,963	186,618,796.24	30,064	3.72	11	2	0	2	15	4	17	36
तिलाठी कोईलाडी गाउँपालिका	6,874	124,990,471.70	34,257	3.72	11	2	0	2	15	4	17	36
तिरहुत गाउँपालिका	5,151	197,819,407.20	23,987	3.72	11	2	0	2	15	4	17	36
अर्नमा गाउँपालिका	5,208	226,637,446.20	28,137	3.72	11	2	0	2	15	4	17	36
औरही गाउँपालिका	5,891	129,882,045.93	27,194	3.72	11	2	0	2	15	4	17	36
बरियारपट्टी गाउँपालिका	5,965	242,868,180.46	29,859	3.72	11	2	0	2	15	4	17	36
भगवानपुर गाउँपालिका	4,650	202,805,200.71	23,324	3.72	11	2	0	2	15	4	17	36
बिष्णुपुर गाउँपालिका	4,870	246,774,021.29	22,796	3.72	11	2	0	2	15	4	17	36
लक्ष्मीपुर पतारी गाउँपालिका	6,666	226,989,128.00	31,103	3.72	11	2	0	2	15	4	17	36
नरहा गाउँपालिका	4,419	209,591,059.08	23,656	3.72	11	2	0	2	15	4	17	36
नवराजपुर गाउँपालिका	4,268	188,347,552.48	20,832	3.72	11	2	0	2	15	4	17	36
सखुवानान्कारकट्टी गाउँपालिका	4,263	239,295,874.88	20,951	3.72	11	2	0	2	15	4	17	36
औरही गाउँपालिका	4,846	255,001,531.20	24,338	3.72	11	2	0	2	15	4	17	36
बटेश्वर गाउँपालिका	4,766	185,411,987.00	21,473	3.72	11	2	0	2	15	4	17	36
धनौजी गाउँपालिका	4,683	258,259,931.00	21,960	3.72	11	2	0	2	15	4	17	36
जनकनन्दिनी गाउँपालिका	5,627	186,495,253.00	28,267	3.72	11	2	0	2	15	4	17	36
लक्ष्मीनिया गाउँपालिका	6,609	331,718,397.76	33,212	3.72	11	2	0	2	15	4	17	36

मुखियापट्टी मुसहरमिया गाउँपालिका	5,585	281,994,549.80	29,351	3.72	11	2	0	2	15	4	17	36
एकडारा गाउँपालिका	6,000	255,939,932.01	32,060	3.72	11	2	0	2	15	4	17	36
महोत्तरी गाउँपालिका	6,845	281,045,143.82	32,652	3.72	11	2	0	2	15	4	17	36
पिपरा गाउँपालिका	8,514	402,312,795.18	39,500	3.72	11	2	0	2	15	4	17	36
सम्सी गाउँपालिका	7,100	159,384,421.00	38,676	3.72	11	2	0	2	15	4	17	36
सोनमा गाउँपालिका	9,252	209,525,669.20	51,736	3.72	11	2	0	2	15	4	17	36
बसवरिया गाउँपालिका	4,675	348,292,364.20	26,406	3.72	11	2	0	2	15	4	17	36
विष्णु गाउँपालिका	4,784	167,172,157.57	25,870	3.72	11	2	0	2	15	4	17	36
ब्रह्मपुरी गाउँपालिका	5,383	277,551,812.71	27,878	3.72	11	2	0	2	15	4	17	36
चक्रघट्टा गाउँपालिका	5,041	243,668,660.58	29,166	3.72	11	2	0	2	15	4	17	36
चन्द्रनगर गाउँपालिका	6,808	267,386,858.77	37,517	3.72	11	2	0	2	15	4	17	36
धनकौल गाउँपालिका	5,121	261,575,944.80	28,500	3.72	11	2	0	2	15	4	17	36
कौडेना गाउँपालिका	5,805	274,075,572.42	29,226	3.72	11	2	0	2	15	4	17	36
पर्सा गाउँपालिका	4,656	302,965,580.00	24,039	3.72	11	2	0	2	15	4	17	36
रामनगर गाउँपालिका	5,853	198,551,944.55	31,687	3.72	11	2	0	2	15	4	17	36
दुर्गा भगवती गाउँपालिका	4,136	313,113,505.58	23,226	3.72	11	2	0	2	15	4	17	36
यमुनामाई गाउँपालिका	4,728	230,625,751.61	28,607	3.72	11	2	0	2	15	4	17	36
आदर्श कोटवाल गाउँपालिका	5,196	184,593,869.68	29,586	3.72	11	2	0	2	15	4	17	36
बारागढी गाउँपालिका	5,118	223,619,249.48	29,836	3.72	11	2	0	2	15	4	17	36

विश्रामपुर गाउँपालिका	4,310	258,093,383.77	23,891	3.72	11	2	0	2	15	4	17	36
देवताल गाउँपालिका	3,936	159,597,152.95	25,082	3.72	11	2	0	2	15	4	17	36
करैयामाई गाउँपालिका	5,154	331,486,377.00	29,045	3.72	11	2	0	2	15	4	17	36
परवानीपुर गाउँपालिका	3,664	157,196,445.51	22,466	3.72	11	2	0	2	15	4	17	36
फेटा गाउँपालिका	5,195	337,986,737.90	28,922	3.72	11	2	0	2	15	4	17	36
प्रसौनी गाउँपालिका	3,400	265,940,869.91	21,747	3.72	11	2	0	2	15	4	17	36
सुवर्ण गाउँपालिका	5,584	221,866,029.94	35,875	3.72	11	2	0	2	15	4	17	36
बिन्दबासिनी गाउँपालिका	3,832	203,696,051.50	24,466	3.72	11	2	0	2	15	4	17	36
छिपहरमाई गाउँपालिका	4,316	345,314,083.07	26,742	3.72	11	2	0	2	15	4	17	36
धोबीनी गाउँपालिका	3,585	234,124,089.42	22,846	3.72	11	2	0	2	15	4	17	36
जगरनाथपुर गाउँपालिका	5,846	387,923,928.30	32,737	3.72	11	2	0	2	15	4	17	36
जिराभवानी गाउँपालिका	5,287	295,787,466.39	22,602	3.72	11	2	0	2	15	4	17	36
कालिकामाई गाउँपालिका	3,788	169,692,700.07	23,740	3.72	11	2	0	2	15	4	17	36
पकाहा मैनपुर गाउँपालिका	3,825	248,102,959.80	22,957	3.72	11	2	0	2	15	4	17	36
पटेर्वा सुगौली गाउँपालिका	4,850	318,353,242.92	25,508	3.72	11	2	0	2	15	4	17	36
सखुवा प्रसौनी गाउँपालिका	6,382	163,980,880.27	35,712	3.72	11	2	0	2	15	4	17	36
ठोरी गाउँपालिका	4,546	271,710,468.68	17,494	3.72	11	2	0	2	15	4	17	36
घ्याङलेख गाउँपालिका	2,875	212,659,283.42	12,701	12.16	11	2	0	2	15	4	17	36
गोलन्जोर गाउँपालिका	4,537	360,280,282.44	19,012	12.16	11	2	0	2	15	4	17	36

हरिहरपुरगढी गाउँपालिका	5,298	331,407,363.73	26,829	12.16	11	2	0	2	15	4	17	36
मरिण गाउँपालिका	6,089	369,517,216.54	28,988	12.16	11	2	0	2	15	4	17	36
फिक्कल गाउँपालिका	3,091	340,026,049.89	14,359	12.16	11	2	0	2	15	4	17	36
सुनकोशी गाउँपालिका	5,075	375,772,345.00	18,136	12.16	11	2	0	2	15	4	17	36
तीनपाटन गाउँपालिका	7,939	554,128,984.67	35,145	12.16	11	2	0	2	15	4	17	36
दोरम्बा शैलुङ गाउँपालिका	5,036	342,359,125.00	17,529	12.16	11	2	0	2	15	4	17	36
गोकुलगङ्गा गाउँपालिका	4,897	541,509,256.46	18,363	12.16	11	2	0	2	15	4	17	36
खाँडादेवी गाउँपालिका	5,507	520,811,750.65	19,381	12.16	11	2	0	2	15	4	17	36
लिखु तामाकोशी गाउँपालिका	5,310	349,297,237.91	18,675	12.16	11	2	0	2	15	4	17	36
सुनापती गाउँपालिका	4,201	278,597,091.20	14,616	12.16	11	2	0	2	15	4	17	36
उमाकुण्ड गाउँपालिका	4,216	363,089,136.44	16,709	12.16	11	2	0	2	15	4	17	36
वैतेश्वर गाउँपालिका	5,412	321,402,487.86	17,947	12.16	11	2	0	2	15	4	17	36
विगु गाउँपालिका	5,055	402,353,775.34	16,299	12.16	11	2	0	2	15	4	17	36
गौरिशंकर गाउँपालिका	4,667	381,306,630.21	15,982	12.16	11	2	0	2	15	4	17	36
कालिन्चोक गाउँपालिका	6,268	380,797,430.04	21,210	12.16	11	2	0	2	15	4	17	36
मेलुङ गाउँपालिका	4,877	346,493,575.72	16,051	12.16	11	2	0	2	15	4	17	36
शैलुङ गाउँपालिका	5,248	363,089,136.44	18,328	12.16	11	2	0	2	15	4	17	36
तामाकोशी गाउँपालिका	4,759	405,493,900.70	15,237	12.16	11	2	0	2	15	4	17	36
बलेफी गाउँपालिका	4,730	353,999,228.20	16,465	12.16	11	2	0	2	15	4	17	36

भोटेकोशी गाउँपालिका	3,769	358,343,719.42	14,239	12.16	11	2	0	2	15	4	17	36
हेलम्बु गाउँपालिका	4,755	354,188,239.50	17,723	12.16	11	2	0	2	15	4	17	36
ईन्द्रावती गाउँपालिका	6,812	531,888,993.89	25,518	12.16	11	2	0	2	15	4	17	36
जुगल गाउँपालिका	4,698	334,369,236.68	19,148	12.16	11	2	0	2	15	4	17	36
लिसंखु पाखर गाउँपालिका	3,746	287,324,768.25	11,560	12.16	11	2	0	2	15	4	17	36
पाँचपोखरी थाङपाल गाउँपालिका	5,917	406,664,421.64	20,978	12.16	11	2	0	2	15	4	17	36
सुनकोशी गाउँपालिका	4,597	348,464,081.86	15,307	12.16	11	2	0	2	15	4	17	36
त्रिपुरासुन्दरी गाउँपालिका	3,653	276,710,061.36	12,194	12.16	11	2	0	2	15	4	17	36
बेथानचोक गाउँपालिका	3,900	365,795,507.28	14,996	12.16	11	2	0	2	15	4	17	36
भुम्लु गाउँपालिका	4,524	339,011,556.74	15,858	12.16	11	2	0	2	15	4	17	36
चौरीदेउराली गाउँपालिका	4,181	376,492,016.84	14,106	12.16	11	2	0	2	15	4	17	36
खानीखोला गाउँपालिका	2,484	285,872,462.50	12,375	12.16	11	2	0	2	15	4	17	36
महाभारत गाउँपालिका	3,327	125,116,286.99	16,148	12.16	11	2	0	2	15	4	17	36
रोशी गाउँपालिका	6,148	538,199,315.29	23,551	12.16	11	2	0	2	15	4	17	36
तेमाल गाउँपालिका	4,930	390,399,854.95	16,959	12.16	11	2	0	2	15	4	17	36
बागमती गाउँपालिका	2,800	269,248,270.64	11,196	12.16	11	2	0	2	15	4	17	36
कोन्ज्योसोम गाउँपालिका	2,176	261,121,816.39	9,042	12.16	11	2	0	2	15	4	17	36
महाङ्गल गाउँपालिका	1,878	339,057,358.31	7,861	12.16	11	2	0	2	15	4	17	36
दुप्चेश्वर गाउँपालिका	5,195	334,758,454.41	21,019	12.16	11	2	0	2	15	4	17	36

ककनी गाउँपालिका	6,388	413,499,152.82	24,323	12.16	11	2	0	2	15	4	17	36
किस्पाड गाउँपालिका	3,969	240,170,939.63	14,122	12.16	11	2	0	2	15	4	17	36
लिखु गाउँपालिका	4,604	290,449,106.34	17,737	12.16	11	2	0	2	15	4	17	36
म्यागड गाउँपालिका	3,755	295,435,201.11	12,417	12.16	11	2	0	2	15	4	17	36
पञ्चकन्या गाउँपालिका	3,629	276,793,841.00	13,864	12.16	11	2	0	2	15	4	17	36
शिवपुरी गाउँपालिका	4,877	342,218,384.00	16,979	12.16	11	2	0	2	15	4	17	36
सुर्यगढी गाउँपालिका	3,842	229,715,149.23	14,929	12.16	11	2	0	2	15	4	17	36
तादी गाउँपालिका	4,031	292,414,997.17	16,055	12.16	11	2	0	2	15	4	17	36
तारकेश्वर गाउँपालिका	3,792	244,838,288.23	14,164	12.16	11	2	0	2	15	4	17	36
गोसाईकुण्ड गाउँपालिका	2,477	177,524,690.86	8,043	12.16	11	2	0	2	15	4	17	36
कालीका गाउँपालिका	2,474	255,257,925.82	10,172	12.16	11	2	0	2	15	4	17	36
नौकुण्ड गाउँपालिका	2,899	157,715,344.98	12,095	12.16	11	2	0	2	15	4	17	36
आमाछोदिडमो गाउँपालिका	1,727	155,820,544.51	6,673	12.16	11	2	0	2	15	4	17	36
उत्तरगया गाउँपालिका	2,264	224,126,851.18	8,571	12.16	11	2	0	2	15	4	17	36
बेनीघाट रोराङ्ग गाउँपालिका	7,791	605,680,735.18	34,473	12.16	11	2	0	2	15	4	17	36
गजुरी गाउँपालिका	6,909	550,047,789.87	28,756	12.16	11	2	0	2	15	4	17	36
गल्छी गाउँपालिका	6,212	401,889,394.57	24,206	12.16	11	2	0	2	15	4	17	36
गङ्गाजमुना गाउँपालिका	5,305	376,112,951.23	19,460	12.16	11	2	0	2	15	4	17	36
ज्वालामूखी गाउँपालिका	6,116	399,679,029.80	21,202	12.16	11	2	0	2	15	4	17	36

खनियाबास गाउँपालिका	2,640	204,336,784.25	10,680	12.16	11	2	0	2	15	4	17	36
नेत्रावती डबजोड गाउँपालिका	3,295	246,696,671.98	11,271	12.16	11	2	0	2	15	4	17	36
रुबी भ्याली गाउँपालिका	3,005	245,296,554.40	10,472	12.16	11	2	0	2	15	4	17	36
सिद्धलेक गाउँपालिका	5,883	405,243,021.38	22,212	12.16	11	2	0	2	15	4	17	36
थाक्रे गाउँपालिका	7,745	506,125,307.44	31,554	12.16	11	2	0	2	15	4	17	36
त्रिपुरासुन्दरी गाउँपालिका	5,748	424,722,225.87	21,188	12.16	11	2	0	2	15	4	17	36
बागमती गाउँपालिका	6,498	379,250,950.24	30,625	12.16	11	2	0	2	15	4	17	36
बकैया गाउँपालिका	9,028	517,101,400.92	40,671	12.16	11	2	0	2	15	4	17	36
भिमफेदी गाउँपालिका	5,128	517,463,599.97	21,626	12.16	11	2	0	2	15	4	17	36
ईन्द्रसरोवर गाउँपालिका	3,415	235,108,894.70	13,758	12.16	11	2	0	2	15	4	17	36
कैलाश गाउँपालिका	4,487	299,724,473.31	21,992	12.16	11	2	0	2	15	4	17	36
मकवानपुरगढी गाउँपालिका	5,342	507,726,816.93	24,252	12.16	11	2	0	2	15	4	17	36
मनहरी गाउँपालिका	10,762	371,906,360.07	47,144	12.16	11	2	0	2	15	4	17	36
राक्सिराङ्ग गाउँपालिका	5,077	386,244,887.63	25,871	12.16	11	2	0	2	15	4	17	36
इच्छाकामना गाउँपालिका	6,174	408,224,379.33	26,965	12.16	11	2	0	2	15	4	17	36
आरुघाट गाउँपालिका	6,220	350,928,821.25	21,876	4.11	11	2	0	2	15	4	17	36
अजिरकोट गाउँपालिका	3,667	273,384,868.48	13,002	4.11	11	2	0	2	15	4	17	36
भिमसेनथापा गाउँपालिका	5,265	304,587,687.00	17,118	4.11	11	2	0	2	15	4	17	36
चुमनुत्री गाउँपालिका	2,134	164,887,523.65	6,789	4.11	11	2	0	2	15	4	17	36

धार्चे गाउँपालिका	3,790	186,811,026.12	14,563	4.11	11	2	0	2	15	4	17	36
गण्डकी गाउँपालिका	5,688	359,346,177.57	21,662	4.11	11	2	0	2	15	4	17	36
शहीद लखन गाउँपालिका	6,812	388,206,064.76	22,429	4.11	11	2	0	2	15	4	17	36
सिरानचोक गाउँपालिका	6,026	323,204,111.18	19,829	4.11	11	2	0	2	15	4	17	36
बारपाक सुलिकोट गाउँपालिका	6,583	405,218,317.37	23,222	4.11	11	2	0	2	15	4	17	36
दोर्दी गाउँपालिका	4,597	322,181,231.79	15,639	4.11	11	2	0	2	15	4	17	36
दुधपोखरी गाउँपालिका	2,492	215,404,141.33	8,558	4.11	11	2	0	2	15	4	17	36
क्व्होलासोथार गाउँपालिका	2,285	218,660,020.28	8,008	4.11	11	2	0	2	15	4	17	36
मसूर्याडदी गाउँपालिका	4,620	379,413,114.53	17,267	4.11	11	2	0	2	15	4	17	36
आँबुखैरेनी गाउँपालिका	6,284	337,874,509.51	22,349	4.11	11	2	0	2	15	4	17	36
बन्दिपुर गाउँपालिका	5,418	304,572,373.50	19,403	4.11	11	2	0	2	15	4	17	36
देवघाट गाउँपालिका	3,878	268,952,047.30	14,941	4.11	11	2	0	2	15	4	17	36
घिरिङ गाउँपालिका	4,490	257,776,084.18	15,038	4.11	11	2	0	2	15	4	17	36
म्याग्दे गाउँपालिका	6,532	277,493,169.40	23,385	4.11	11	2	0	2	15	4	17	36
ऋषिङ्ग गाउँपालिका	4,981	325,228,467.57	18,821	4.11	11	2	0	2	15	4	17	36
आँधीखोला गाउँपालिका	4,718	387,461,851.92	14,970	4.11	11	2	0	2	15	4	17	36
अर्जुनचौपारी गाउँपालिका	3,810	242,735,131.07	14,094	4.11	11	2	0	2	15	4	17	36
बिरुवा गाउँपालिका	3,980	279,355,330.00	13,900	4.11	11	2	0	2	15	4	17	36
हरिनास गाउँपालिका	3,591	242,515,440.00	12,979	4.11	11	2	0	2	15	4	17	36

कालीगण्डकी गाउँपालिका	4,946	405,714,782.05	18,008	4.11	11	2	0	2	15	4	17	36
फेदीखोला गाउँपालिका	3,222	268,203,626.10	10,786	4.11	11	2	0	2	15	4	17	36
अन्नपूर्ण गाउँपालिका	6,406	455,649,868.00	22,517	4.11	11	2	0	2	15	4	17	36
माछापुच्छ्रे गाउँपालिका	6,144	382,675,603.00	22,013	4.11	11	2	0	2	15	4	17	36
मादी गाउँपालिका	4,115	397,780,649.71	16,318	4.11	11	2	0	2	15	4	17	36
रूपा गाउँपालिका	3,674	307,725,788.62	14,741	4.11	11	2	0	2	15	4	17	36
चामे गाउँपालिका	391	107,900,899.94	1,272	4.11	11	2	0	2	15	4	17	36
नार्पा भूमि गाउँपालिका	125	91,639,014.23	398	4.11	11	2	0	2	15	4	17	36
नासौं गाउँपालिका	471	158,206,736.52	1,671	4.11	11	2	0	2	15	4	17	36
मनाङ डिस्याङ गाउँपालिका	558	130,180,112.04	1,584	4.11	11	2	0	2	15	4	17	36
वारागुड मुक्तिक्षेत्र गाउँपालिका	738	93,207,375.61	2,611	4.11	11	2	0	2	15	4	17	36
लो-घेकर दामोदरकुण्ड गाउँपालिका	459	138,258,099.00	1,535	4.11	11	2	0	2	15	4	17	36
घरपझोड गाउँपालिका	1,169	237,024,138.64	4,875	4.11	11	2	0	2	15	4	17	36
लोमन्थाङ गाउँपालिका	540	138,245,284.00	1,997	4.11	11	2	0	2	15	4	17	36
थासाङ गाउँपालिका	845	178,927,793.03	3,578	4.11	11	2	0	2	15	4	17	36
अन्नपूर्ण गाउँपालिका	3,618	256,797,859.89	12,351	4.11	11	2	0	2	15	4	17	36
धवलागिरी गाउँपालिका	3,192	260,256,586.77	12,604	4.11	11	2	0	2	15	4	17	36
मालिका गाउँपालिका	4,818	314,908,276.91	18,346	4.11	11	2	0	2	15	4	17	36
मंगला गाउँपालिका	3,934	293,301,676.16	14,772	4.11	11	2	0	2	15	4	17	36

रघुगंगा गाउँपालिका	4,174	273,607,816.18	14,232	4.11	11	2	0	2	15	4	17	36
बिहादी गाउँपालिका	3,192	236,189,603.60	12,521	4.11	11	2	0	2	15	4	17	36
जलजला गाउँपालिका	6,095	419,053,266.70	21,375	4.11	11	2	0	2	15	4	17	36
महाशिला गाउँपालिका	2,093	246,942,723.51	8,233	4.11	11	2	0	2	15	4	17	36
मोदी गाउँपालिका	5,148	398,394,020.58	18,018	4.11	11	2	0	2	15	4	17	36
पैयूँ गाउँपालिका	3,292	209,350,916.00	12,705	4.11	11	2	0	2	15	4	17	36
वडिगाड गाउँपालिका	6,819	413,790,023.25	28,797	4.11	11	2	0	2	15	4	17	36
वरेड गाउँपालिका	2,981	140,714,131.51	11,162	4.11	11	2	0	2	15	4	17	36
काठेखोला गाउँपालिका	5,961	422,736,158.00	22,732	4.11	11	2	0	2	15	4	17	36
निसीखोला गाउँपालिका	5,711	270,525,268.61	23,215	4.11	11	2	0	2	15	4	17	36
तमानखोला गाउँपालिका	2,622	184,542,312.78	9,795	4.11	11	2	0	2	15	4	17	36
ताराखोला गाउँपालिका	2,356	231,497,718.95	10,167	4.11	11	2	0	2	15	4	17	36
विनयीत्रिवेणी गाउँपालिका	9,348	400,020,861.83	39,201	4.11	11	2	0	2	15	4	17	36
बुलिङटार गाउँपालिका	3,569	235,893,449.20	14,596	4.11	11	2	0	2	15	4	17	36
बौदीकाली गाउँपालिका	2,914	222,557,134.67	11,339	4.11	11	2	0	2	15	4	17	36
हुप्सेकोट गाउँपालिका	6,250	286,748,088.08	26,861	4.11	11	2	0	2	15	4	17	36
चन्द्रकोट गाउँपालिका	5,148	352,715,908.57	18,751	5.01	11	2	0	2	15	4	17	36
छत्रकोट गाउँपालिका	5,320	348,846,493.91	19,239	5.01	11	2	0	2	15	4	17	36
धुर्कोट गाउँपालिका	5,405	394,175,205.10	18,699	5.01	11	2	0	2	15	4	17	36
गुल्मीदरबार गाउँपालिका	5,288	383,385,131.24	19,413	5.01	11	2	0	2	15	4	17	36

इस्मा गाउँपालिका	5,013	295,333,521.80	18,530	5.01	11	2	0	2	15	4	17	36
कालिगण्डकी गाउँपालिका	3,793	375,033,050.00	15,106	5.01	11	2	0	2	15	4	17	36
मदाने गाउँपालिका	5,274	315,199,157.03	19,820	5.01	11	2	0	2	15	4	17	36
मालिका गाउँपालिका	5,273	376,818,364.00	20,173	5.01	11	2	0	2	15	4	17	36
रुरुक्षेत्र गाउँपालिका	4,691	315,068,939.38	16,638	5.01	11	2	0	2	15	4	17	36
सत्यवती गाउँपालिका	5,252	411,620,871.04	19,751	5.01	11	2	0	2	15	4	17	36
बगनासकाली गाउँपालिका	4,648	346,309,611.00	16,934	5.01	11	2	0	2	15	4	17	36
माथागढी गाउँपालिका	5,840	381,014,659.44	24,024	5.01	11	2	0	2	15	4	17	36
निस्दी गाउँपालिका	4,075	372,373,244.98	17,629	5.01	11	2	0	2	15	4	17	36
पुर्वखोला गाउँपालिका	4,138	290,462,926.71	16,145	5.01	11	2	0	2	15	4	17	36
रैनादेवी छहरा गाउँपालिका	6,390	410,258,769.03	23,124	5.01	11	2	0	2	15	4	17	36
रम्भा गाउँपालिका	4,696	325,358,627.90	17,077	5.01	11	2	0	2	15	4	17	36
रिब्दीकोट गाउँपालिका	4,459	403,655,055.00	15,636	5.01	11	2	0	2	15	4	17	36
तिनाउ गाउँपालिका	4,326	356,015,214.00	18,291	5.01	11	2	0	2	15	4	17	36
पाल्हीनन्दन गाउँपालिका	7,383	381,473,048.73	40,325	5.01	11	2	0	2	15	4	17	36
प्रतापपुर गाउँपालिका	10,753	302,035,058.91	50,326	5.01	11	2	0	2	15	4	17	36
सरावल गाउँपालिका	8,840	444,591,460.38	42,217	5.01	11	2	0	2	15	4	17	36
सुस्ता गाउँपालिका	7,892	334,541,510.08	39,798	5.01	11	2	0	2	15	4	17	36
गैडहवा गाउँपालिका	10,020	540,617,267.24	56,529	5.01	11	2	0	2	15	4	17	36
कन्चन गाउँपालिका	10,483	413,497,326.54	42,528	5.01	11	2	0	2	15	4	17	36

कोटहीमाई गाउँपालिका	7,921	343,078,429.23	46,417	5.01	11	2	0	2	15	4	17	36
मर्चवारी गाउँपालिका	6,972	308,535,716.31	41,058	5.01	11	2	0	2	15	4	17	36
मायादेवी गाउँपालिका	10,040	384,651,424.82	57,341	5.01	11	2	0	2	15	4	17	36
ओमसतिया गाउँपालिका	8,218	350,427,023.99	41,080	5.01	11	2	0	2	15	4	17	36
रोहिणी गाउँपालिका	8,096	318,779,708.59	43,277	5.01	11	2	0	2	15	4	17	36
सम्मरीमाई गाउँपालिका	7,303	473,111,443.87	43,300	5.01	11	2	0	2	15	4	17	36
सियारी गाउँपालिका	9,060	380,757,489.76	45,274	5.01	11	2	0	2	15	4	17	36
शुद्धोधन गाउँपालिका	8,717	379,597,769.12	41,472	5.01	11	2	0	2	15	4	17	36
विजयनगर गाउँपालिका	7,144	369,475,152.53	43,440	5.01	11	2	0	2	15	4	17	36
मायादेवी गाउँपालिका	8,383	363,775,635.68	57,121	5.01	11	2	0	2	15	4	17	36
शुद्धोधन गाउँपालिका	8,593	359,494,743.95	53,417	5.01	11	2	0	2	15	4	17	36
यसोधरा गाउँपालिका	7,045	290,770,320.72	45,169	5.01	11	2	0	2	15	4	17	36
छत्रदेव गाउँपालिका	6,263	425,503,402.98	21,691	5.01	11	2	0	2	15	4	17	36
मालारानी गाउँपालिका	6,842	431,957,827.81	23,780	5.01	11	2	0	2	15	4	17	36
पाणिनी गाउँपालिका	6,214	406,782,210.28	22,330	5.01	11	2	0	2	15	4	17	36
ऐरावती गाउँपालिका	5,145	292,914,366.60	20,404	5.01	11	2	0	2	15	4	17	36
गौमुखी गाउँपालिका	5,616	363,549,321.90	26,000	5.01	11	2	0	2	15	4	17	36
झिमरुक गाउँपालिका	6,592	424,350,178.53	26,491	5.01	11	2	0	2	15	4	17	36
मल्लरानी गाउँपालिका	4,152	326,876,983.98	15,846	5.01	11	2	0	2	15	4	17	36
माण्डवी गाउँपालिका	3,904	273,754,836.00	15,778	5.01	11	2	0	2	15	4	17	36

नौबहिनी गाउँपालिका	7,163	361,465,095.42	32,524	5.01	11	2	0	2	15	4	17	36
सरुमारानी गाउँपालिका	4,488	298,252,485.55	19,370	5.01	11	2	0	2	15	4	17	36
परिवर्तन गाउँपालिका	4,765	365,519,017.53	22,001	5.01	11	2	0	2	15	4	17	36
लुङ्ग्री गाउँपालिका	5,668	270,284,462.00	26,539	5.01	11	2	0	2	15	4	17	36
माडी गाउँपालिका	4,143	265,286,077.98	18,013	5.01	11	2	0	2	15	4	17	36
रुन्टीगढी गाउँपालिका	6,387	395,179,586.00	29,094	5.01	11	2	0	2	15	4	17	36
सुनिल स्मृति गाउँपालिका	7,066	365,558,348.88	30,523	5.01	11	2	0	2	15	4	17	36
गंगादेव गाउँपालिका	4,474	326,554,912.02	21,738	5.01	11	2	0	2	15	4	17	36
सुनछहरी गाउँपालिका	3,607	229,200,145.62	17,281	5.01	11	2	0	2	15	4	17	36
थबाङ गाउँपालिका	2,575	234,862,952.42	11,008	5.01	11	2	0	2	15	4	17	36
त्रिवेणी गाउँपालिका	5,468	389,396,808.00	23,190	5.01	11	2	0	2	15	4	17	36
भूमे गाउँपालिका	4,194	351,873,455.89	19,835	5.01	11	2	0	2	15	4	17	36
पुथा उत्तरगंगा गाउँपालिका	4,573	336,024,439.00	18,954	5.01	11	2	0	2	15	4	17	36
सिस्ने गाउँपालिका	4,396	389,311,011.23	18,751	5.01	11	2	0	2	15	4	17	36
बबई गाउँपालिका	7,538	339,605,190.30	31,317	5.01	11	2	0	2	15	4	17	36
बंगलाचुली गाउँपालिका	5,173	463,620,734.70	22,877	5.01	11	2	0	2	15	4	17	36
दंगीशरण गाउँपालिका	5,897	238,642,295.58	23,672	5.01	11	2	0	2	15	4	17	36
गढवा गाउँपालिका	10,084	387,009,994.48	46,275	5.01	11	2	0	2	15	4	17	36
राजपुर गाउँपालिका	5,896	236,289,666.79	28,410	5.01	11	2	0	2	15	4	17	36
राप्ती गाउँपालिका	11,837	459,163,363.40	52,158	5.01	11	2	0	2	15	4	17	36

शान्तिनगर गाउँपालिका	7,137	322,328,301.08	27,666	5.01	11	2	0	2	15	4	17	36
बैजनाथ गाउँपालिका	16,765	472,226,141.06	70,315	5.01	11	2	0	2	15	4	17	36
डुडुवा गाउँपालिका	8,112	421,413,968.17	43,039	5.01	11	2	0	2	15	4	17	36
जानकी गाउँपालिका	9,124	392,612,848.55	46,536	5.01	11	2	0	2	15	4	17	36
खजुरा गाउँपालिका	13,885	611,438,869.66	63,749	5.01	11	2	0	2	15	4	17	36
नरैनापुर गाउँपालिका	8,680	347,472,901.00	43,698	5.01	11	2	0	2	15	4	17	36
राप्ती सोनारी गाउँपालिका	15,491	590,695,009.72	67,782	5.01	11	2	0	2	15	4	17	36
बढैयाताल गाउँपालिका	12,736	575,844,477.71	52,056	5.01	11	2	0	2	15	4	17	36
गेरुवा गाउँपालिका	7,788	590,695,009.72	33,742	5.01	11	2	0	2	15	4	17	36
बाँफिकोट गाउँपालिका	4,827	293,250,980.83	20,940	2.09	11	2	0	2	15	4	17	36
सानीभेरी गाउँपालिका	5,313	330,479,319.55	24,778	2.09	11	2	0	2	15	4	17	36
त्रिवेणी गाउँपालिका	4,375	359,022,067.00	20,466	2.09	11	2	0	2	15	4	17	36
छत्रेश्वरी गाउँपालिका	5,135	321,959,069.83	21,368	2.09	11	2	0	2	15	4	17	36
दार्मा गाउँपालिका	4,270	285,943,199.00	19,998	2.09	11	2	0	2	15	4	17	36
सिद्ध कुमाख गाउँपालिका	2,892	224,292,786.22	13,135	2.09	11	2	0	2	15	4	17	36
कालिमाटी गाउँपालिका	4,994	295,080,344.00	22,498	2.09	11	2	0	2	15	4	17	36
कपुरकोट गाउँपालिका	3,978	245,461,173.00	17,548	2.09	11	2	0	2	15	4	17	36
कुमाख गाउँपालिका	5,582	322,032,379.90	24,858	2.09	11	2	0	2	15	4	17	36
त्रिवेणी गाउँपालिका	4,125	260,039,279.19	16,768	2.09	11	2	0	2	15	4	17	36
बराहताल गाउँपालिका	6,240	369,839,365.03	25,562	2.09	11	2	0	2	15	4	17	36

चौकुने गाउँपालिका	5,358	303,140,095.81	27,006	2.09	11	2	0	2	15	4	17	36
चिङ्गाड गाउँपालिका	3,240	248,181,214.25	15,752	2.09	11	2	0	2	15	4	17	36
सिम्ता गाउँपालिका	6,121	378,422,601.70	24,298	2.09	11	2	0	2	15	4	17	36
भगवतीमाई गाउँपालिका	3,627	306,920,051.00	18,366	2.09	11	2	0	2	15	4	17	36
भैरवी गाउँपालिका	4,198	304,811,164.00	17,981	2.09	11	2	0	2	15	4	17	36
डुङ्गेश्वर गाउँपालिका	3,436	266,711,805.45	14,597	2.09	11	2	0	2	15	4	17	36
गुराँस गाउँपालिका	4,562	307,558,735.78	21,284	2.09	11	2	0	2	15	4	17	36
महाबु गाउँपालिका	4,021	299,251,210.00	18,037	2.09	11	2	0	2	15	4	17	36
नौमुले गाउँपालिका	4,517	378,730,804.41	20,589	2.09	11	2	0	2	15	4	17	36
ठाँटीकाँध गाउँपालिका	4,033	239,166,368.50	18,666	2.09	11	2	0	2	15	4	17	36
बारेकोट गाउँपालिका	3,901	283,369,700.80	22,038	2.09	11	2	0	2	15	4	17	36
जुनीचाँदे गाउँपालिका	4,356	327,460,357.00	23,823	2.09	11	2	0	2	15	4	17	36
कुसे गाउँपालिका	4,520	NA	23,529	2.09	11	2	0	2	15	4	17	36
शिवालय गाउँपालिका	2,820	64,965,910.00	14,720	2.09	11	2	0	2	15	4	17	36
छार्का ताडसोड गाउँपालिका	320	149,993,452.31	1,713	2.09	11	2	0	2	15	4	17	36
डोल्पो बुद्ध गाउँपालिका	543	111,954,069.99	2,462	2.09	11	2	0	2	15	4	17	36
जगदुल्ला गाउँपालिका	600	199,336,263.51	2,581	2.09	11	2	0	2	15	4	17	36
काईके गाउँपालिका	926	186,669,557.25	4,124	2.09	11	2	0	2	15	4	17	36
मुङ्केचुला गाउँपालिका	1,206	196,514,737.00	5,875	2.09	11	2	0	2	15	4	17	36
शे फोक्सुण्डो गाउँपालिका	818	169,953,943.80	3,717	2.09	11	2	0	2	15	4	17	36

गुठिचौर गाउँपालिका	2,451	199,156,278.00	10,891	2.09	11	2	0	2	15	4	17	36
हिमा गाउँपालिका	2,104	243,674,058.50	12,804	2.09	11	2	0	2	15	4	17	36
कनकासुन्दरी गाउँपालिका	2,786	258,411,073.91	13,687	2.09	11	2	0	2	15	4	17	36
पातारासी गाउँपालिका	3,374	251,859,631.00	16,881	2.09	11	2	0	2	15	4	17	36
सिंजा गाउँपालिका	2,427	221,654,030.10	12,744	2.09	11	2	0	2	15	4	17	36
तातोपानी गाउँपालिका	3,321	332,933,384.00	15,721	2.09	11	2	0	2	15	4	17	36
तिला गाउँपालिका	2,666	350,535,227.24	14,692	2.09	11	2	0	2	15	4	17	36
शुभ कालिका गाउँपालिका	2,769	263,806,683.00	13,900	2.09	11	2	0	2	15	4	17	36
महावै गाउँपालिका	1,666	188,865,598.80	8,334	2.09	11	2	0	2	15	4	17	36
नरहरिनाथ गाउँपालिका	4,422	372,151,378.65	22,414	2.09	11	2	0	2	15	4	17	36
पचालझरना गाउँपालिका	2,509	263,122,463.60	13,683	2.09	11	2	0	2	15	4	17	36
पलाता गाउँपालिका	2,895	310,494,915.01	17,658	2.09	11	2	0	2	15	4	17	36
सान्नी त्रिवेणी गाउँपालिका	2,352	303,253,248.00	12,864	2.09	11	2	0	2	15	4	17	36
खत्याड गाउँपालिका	3,567	181,080,779.00	19,301	2.09	11	2	0	2	15	4	17	36
मुगुम कार्मारोङ गाउँपालिका	1,399	389,132,823.09	7,301	2.09	11	2	0	2	15	4	17	36
सोरु गाउँपालिका	2,652	282,193,670.00	14,364	2.09	11	2	0	2	15	4	17	36
अदानचुली गाउँपालिका	1,481	186,885,728.00	8,110	2.09	11	2	0	2	15	4	17	36
चंखेली गाउँपालिका	1,196	233,926,475.08	6,625	2.09	11	2	0	2	15	4	17	36
खार्पुनाथ गाउँपालिका	1,545	285,489,488.31	6,975	2.09	11	2	0	2	15	4	17	36

नाम्खा गाउँपालिका	868	219,417,251.24	4,506	2.09	11	2	0	2	15	4	17	36
सर्केगाड गाउँपालिका	2,211	315,387,692.02	11,040	2.09	11	2	0	2	15	4	17	36
सिमकोट गाउँपालिका	3,007	337,748,941.64	12,130	2.09	11	2	0	2	15	4	17	36
ताँजाकोट गाउँपालिका	1,176	199,530,554.46	6,110	2.09	11	2	0	2	15	4	17	36
खसड छेडेदह गाउँपालिका	3,627	283,584,686.73	19,274	3.12	11	2	0	2	15	4	17	36
गौमुल गाउँपालिका	1,731	278,509,537.00	8,765	3.12	11	2	0	2	15	4	17	36
हिमाली गाउँपालिका	2,092	273,617,624.65	10,503	3.12	11	2	0	2	15	4	17	36
जगन्नाथ गाउँपालिका	1,965	203,317,301.76	10,205	3.12	11	2	0	2	15	4	17	36
स्वामीकार्तिक खापर गाउँपालिका	2,392	421,345,674.25	13,013	3.12	11	2	0	2	15	4	17	36
बित्थडचिर गाउँपालिका	3,273	341,755,599.08	16,854	3.12	11	2	0	2	15	4	17	36
छबिस पाथिभेरा गाउँपालिका	3,125	418,769,340.12	14,515	3.12	11	2	0	2	15	4	17	36
दुर्गाथली गाउँपालिका	2,606	253,239,154.33	11,414	3.12	11	2	0	2	15	4	17	36
साइपाल गाउँपालिका	456	191,954,478.11	2,681	3.12	11	2	0	2	15	4	17	36
केदारस्युँ गाउँपालिका	4,389	414,600,159.41	21,697	3.12	11	2	0	2	15	4	17	36
खसडछान्ना गाउँपालिका	3,100	353,733,167.27	13,751	3.12	11	2	0	2	15	4	17	36
मष्टा गाउँपालिका	2,608	319,338,550.48	13,584	3.12	11	2	0	2	15	4	17	36
सूर्मा गाउँपालिका	1,835	211,464,747.95	11,248	3.12	11	2	0	2	15	4	17	36
तलकोट गाउँपालिका	2,238	292,897,344.33	11,858	3.12	11	2	0	2	15	4	17	36
थलारा गाउँपालिका	3,462	377,225,849.31	15,961	3.12	11	2	0	2	15	4	17	36

बान्नीगढी जयगढ गाउँपालिका	3,144	238,351,582.35	13,639	3.12	11	2	0	2	15	4	17	36
चौरपाटी गाउँपालिका	4,822	393,064,422.14	22,407	3.12	11	2	0	2	15	4	17	36
ढकारी गाउँपालिका	4,373	304,784,467.73	22,553	3.12	11	2	0	2	15	4	17	36
मेल्लेख गाउँपालिका	4,752	311,003,209.30	23,096	3.12	11	2	0	2	15	4	17	36
रामारोशन गाउँपालिका	4,959	397,858,272.90	22,676	3.12	11	2	0	2	15	4	17	36
तुर्माखाँद गाउँपालिका	5,277	372,423,730.28	24,440	3.12	11	2	0	2	15	4	17	36
आदर्श गाउँपालिका	5,449	268,637,497.91	24,911	3.12	11	2	0	2	15	4	17	36
बडीकेदार गाउँपालिका	2,984	279,491,200.00	15,078	3.12	11	2	0	2	15	4	17	36
बोगटान फुङ्सिल गाउँपालिका	3,198	324,066,803.80	15,912	3.12	11	2	0	2	15	4	17	36
जोरायल गाउँपालिका	4,432	414,958,404.98	20,364	3.12	11	2	0	2	15	4	17	36
के.आई.सि. गाउँपालिका	4,731	269,553,705.71	20,830	3.12	11	2	0	2	15	4	17	36
पूर्वीचौकी गाउँपालिका	5,305	309,547,482.07	21,263	3.12	11	2	0	2	15	4	17	36
सायल गाउँपालिका	4,311	263,629,584.80	20,125	3.12	11	2	0	2	15	4	17	36
बर्दगोरिया गाउँपालिका	8,639	282,006,282.13	37,714	3.12	11	2	0	2	15	4	17	36
चुरे गाउँपालिका	4,272	342,393,116.29	21,437	3.12	11	2	0	2	15	4	17	36
जानकी गाउँपालिका	11,180	446,503,529.19	49,835	3.12	11	2	0	2	15	4	17	36
जोशीपुर गाउँपालिका	7,775	264,430,933.31	37,167	3.12	11	2	0	2	15	4	17	36
कैलारी गाउँपालिका	10,793	460,091,133.68	50,457	3.12	11	2	0	2	15	4	17	36
मोहन्याल गाउँपालिका	4,450	366,059,977.33	21,285	3.12	11	2	0	2	15	4	17	36

बेलडाँडी गाउँपालिका	4,727	218,098,247.45	22,041	3.12	11	2	0	2	15	4	17	36
लालझाडी गाउँपालिका	4,822	241,888,488.36	25,271	3.12	11	2	0	2	15	4	17	36
आलिताल गाउँपालिका	3,743	345,568,395.15	18,125	3.12	11	2	0	2	15	4	17	36
अजयमेरु गाउँपालिका	3,479	357,877,209.18	15,243	3.12	11	2	0	2	15	4	17	36
भागेश्वर गाउँपालिका	2,812	356,396,953.46	13,112	3.12	11	2	0	2	15	4	17	36
गन्यापधुरा गाउँपालिका	3,360	272,610,314.71	13,655	3.12	11	2	0	2	15	4	17	36
नवदुर्गा गाउँपालिका	4,335	343,587,875.28	18,745	3.12	11	2	0	2	15	4	17	36
डीलासैनी गाउँपालिका	4,925	359,579,260.66	23,233	3.12	11	2	0	2	15	4	17	36
दोगडाकेदार गाउँपालिका	4,774	408,644,404.92	23,619	3.12	11	2	0	2	15	4	17	36
पञ्चेश्वर गाउँपालिका	3,617	339,479,262.00	17,780	3.12	11	2	0	2	15	4	17	36
शिवनाथ गाउँपालिका	3,435	239,641,924.67	18,247	3.12	11	2	0	2	15	4	17	36
सिगास गाउँपालिका	4,367	344,420,412.91	23,479	3.12	11	2	0	2	15	4	17	36
सुर्नया गाउँपालिका	3,877	330,216,210.03	18,230	3.12	11	2	0	2	15	4	17	36
अपिहिमाल गाउँपालिका	1,363	232,303,143.41	7,023	3.12	11	2	0	2	15	4	17	36
व्याँस गाउँपालिका	2,361	355,587,713.16	10,205	3.12	11	2	0	2	15	4	17	36
दुहुँ गाउँपालिका	2,293	259,330,869.24	9,912	3.12	11	2	0	2	15	4	17	36
लेकम गाउँपालिका	3,045	276,184,314.23	13,638	3.12	11	2	0	2	15	4	17	36
मालिकार्जुन गाउँपालिका	3,241	310,689,718.00	15,754	3.12	11	2	0	2	15	4	17	36
मार्मा गाउँपालिका	3,086	372,430,460.20	15,586	3.12	11	2	0	2	15	4	17	36
नौगाड गाउँपालिका	3,156	343,359,725.07	16,434	3.12	11	2	0	2	15	4	17	36

फिदिम नगरपालिका	12,433	658,565,878.60	48,713	5.67	19	3	0	3	25	6	30	61
सूर्योदय नगरपालिका	14,149	677,483,052.59	55,457	5.67	19	3	0	3	25	6	30	61
अर्जुनधारा नगरपालिका	20,978	571,477,425.97	84,429	5.67	19	3	0	3	25	6	30	61
भद्रपुर नगरपालिका	17,385	616,302,667.58	70,823	5.67	19	3	0	3	25	6	30	61
बिर्तामोड नगरपालिका	29,861	894,687,849.36	117,355	5.67	19	3	0	3	25	6	30	61
दमक नगरपालिका	27,725	1,002,199,621.51	107,410	5.67	19	3	0	3	25	6	30	61
गौरादह नगरपालिका	14,845	589,704,970.54	60,598	5.67	19	3	0	3	25	6	30	61
मेचीनगर नगरपालिका	32,710	965,069,320.74	131,520	5.67	19	3	0	3	25	6	30	61
शिवसताक्षी नगरपालिका	18,036	644,320,725.16	73,460	5.67	19	3	0	3	25	6	30	61
बेलवारी नगरपालिका	20,662	669,138,639.96	81,837	5.67	19	3	0	3	25	6	30	61
पथरी शनिश्चरे नगरपालिका	18,191	559,547,654.05	72,689	5.67	19	3	0	3	25	6	30	61
रंगेली नगरपालिका	13,339	534,491,372.62	57,814	5.67	19	3	0	3	25	6	30	61
रतुवामाई नगरपालिका	14,624	530,321,903.10	61,355	5.67	19	3	0	3	25	6	30	61
सुन्दरहरैचा नगरपालिका	30,219	807,088,052.61	121,305	5.67	19	3	0	3	25	6	30	61
सुनवर्षी नगरपालिका	12,889	504,188,584.60	56,169	5.67	19	3	0	3	25	6	30	61
उर्लावारी नगरपालिका	17,818	506,002,892.35	71,562	5.67	19	3	0	3	25	6	30	61
बराहक्षेत्र नगरपालिका	21,961	780,867,339.37	91,891	5.67	19	3	0	3	25	6	30	61
दुहवी नगरपालिका	15,415	614,324,401.26	67,051	5.67	19	3	0	3	25	6	30	61
इनरुवा नगरपालिका	16,931	720,074,970.22	75,920	5.67	19	3	0	3	25	6	30	61
रामधुनी नगरपालिका	15,969	552,875,626.45	63,378	5.67	19	3	0	3	25	6	30	61

कटारी नगरपालिका	14,296	632,335,999.68	60,168	5.67	19	3	0	3	25	6	30	61
त्रियुगा नगरपालिका	25,928	922,387,490.39	104,375	5.67	19	3	0	3	25	6	30	61
राजविराज नगरपालिका	15,121	419,864,104.34	71,946	4.65	19	3	0	3	25	6	30	61
गोलबजार नगरपालिका	13,214	567,991,667.41	65,263	4.65	19	3	0	3	25	6	30	61
लहान नगरपालिका	21,488	761,678,579.05	102,955	4.65	19	3	0	3	25	6	30	61
मिर्चैया नगरपालिका	12,905	346,180,116.90	60,086	4.65	19	3	0	3	25	6	30	61
सिराहा नगरपालिका	19,810	694,601,428.24	96,543	4.65	19	3	0	3	25	6	30	61
बर्दिबास नगरपालिका	15,938	636,000,612.89	68,353	4.65	19	3	0	3	25	6	30	61
गौशाला नगरपालिका	16,090	402,527,980.59	73,008	4.65	19	3	0	3	25	6	30	61
जलेश्वर नगरपालिका	13,685	574,979,039.26	63,501	4.65	19	3	0	3	25	6	30	61
बरहथवा नगरपालिका	16,257	424,250,858.90	83,257	4.65	19	3	0	3	25	6	30	61
ईश्वरपुर नगरपालिका	13,776	384,720,827.87	68,626	4.65	19	3	0	3	25	6	30	61
लालबन्दी नगरपालिका	15,960	596,295,647.55	67,507	4.65	19	3	0	3	25	6	30	61
चन्द्रपुर नगरपालिका	17,237	901,348,481.34	83,350	4.65	19	3	0	3	25	6	30	61
गरुडा नगरपालिका	9,765	363,220,601.84	60,009	4.65	19	3	0	3	25	6	30	61
महागढीमाई नगरपालिका	9,952	501,532,443.86	59,744	4.65	19	3	0	3	25	6	30	61
दुधौली नगरपालिका	16,231	802,888,535.94	70,679	15.20	19	3	0	3	25	6	30	61
कमलामाई नगरपालिका	18,238	950,332,344.84	71,811	15.20	19	3	0	3	25	6	30	61
बनेपा नगरपालिका	16,973	589,220,627.11	67,629	15.20	19	3	0	3	25	6	30	61
गोदावरी नगरपालिका	24,771	540,287,655.12	100,972	15.20	19	3	0	3	25	6	30	61

महालक्ष्मी नगरपालिका	31,509	886,591,110.13	118,710	15.20	19	3	0	3	25	6	30	61
भक्तपुर नगरपालिका	18,854	1,210,579,755.22	78,854	15.20	19	3	0	3	25	6	30	61
चाँगुनारायण नगरपालिका	21,946	1,081,918,875.01	88,612	15.20	19	3	0	3	25	6	30	61
मध्यपुर थिमी नगरपालिका	31,768	809,836,616.60	119,955	15.20	19	3	0	3	25	6	30	61
सूर्यविनायक नगरपालिका	35,885	1,029,854,064.46	137,971	15.20	19	3	0	3	25	6	30	61
बुढानिलकण्ठ नगरपालिका	47,169	748,279,585.14	179,688	15.20	19	3	0	3	25	6	30	61
चन्द्रागिरी नगरपालिका	36,012	996,900,856.59	136,928	15.20	19	3	0	3	25	6	30	61
गोकर्णेश्वर नगरपालिका	40,114	670,791,140.69	151,200	15.20	19	3	0	3	25	6	30	61
कागेश्वरी मनहरा नगरपालिका	34,794	771,862,856.39	133,327	15.20	19	3	0	3	25	6	30	61
किर्तिपुर नगरपालिका	24,211	740,088,185.81	81,782	15.20	19	3	0	3	25	6	30	61
नागार्जुन नगरपालिका	31,323	767,422,943.23	115,507	15.20	19	3	0	3	25	6	30	61
तारकेश्वर नगरपालिका	41,364	745,765,270.91	151,508	15.20	19	3	0	3	25	6	30	61
टोखा नगरपालिका	37,413	709,527,110.16	135,741	15.20	19	3	0	3	25	6	30	61
विदुर नगरपालिका	15,604	500,912,642.16	60,111	15.20	19	3	0	3	25	6	30	61
नीलकण्ठ नगरपालिका	16,579	665,095,392.82	58,151	15.20	19	3	0	3	25	6	30	61
खैरहनी नगरपालिका	16,757	611,755,903.90	68,675	15.20	19	3	0	3	25	6	30	61
राप्ती नगरपालिका	15,459	721,498,363.97	66,426	15.20	19	3	0	3	25	6	30	61
रत्ननगर नगरपालिका	22,670	735,497,236.80	90,978	15.20	19	3	0	3	25	6	30	61
व्यास नगरपालिका	24,078	965,490,200.97	80,944	5.14	19	3	0	3	25	6	30	61

वालिङ नगरपालिका	13,705	731,326,027.64	50,932	5.14	19	3	0	3	25	6	30	61
बाग्लुङ नगरपालिका	16,399	871,829,963.70	57,030	5.14	19	3	0	3	25	6	30	61
गैडाकोट नगरपालिका	20,701	597,579,841.83	80,737	5.14	19	3	0	3	25	6	30	61
कावासोती नगरपालिका	22,184	762,771,786.26	87,176	5.14	19	3	0	3	25	6	30	61
मध्यविन्दु नगरपालिका	15,549	598,870,779.67	61,548	5.14	19	3	0	3	25	6	30	61
तानसेन नगरपालिका	14,865	639,110,570.45	51,470	6.26	19	3	0	3	25	6	30	61
बर्दघाट नगरपालिका	18,240	629,643,102.02	75,017	6.26	19	3	0	3	25	6	30	61
रामग्राम नगरपालिका	13,081	424,397,039.01	64,150	6.26	19	3	0	3	25	6	30	61
सुनवल नगरपालिका	17,689	641,228,434.70	72,621	6.26	19	3	0	3	25	6	30	61
देवदह नगरपालिका	17,582	550,371,877.53	71,806	6.26	19	3	0	3	25	6	30	61
लुम्बिनी साँस्कृतिक नगरपालिका	13,854	464,311,423.25	88,090	6.26	19	3	0	3	25	6	30	61
सैनामैना नगरपालिका	19,657	655,937,826.66	78,477	6.26	19	3	0	3	25	6	30	61
सिद्धार्थनगर नगरपालिका	16,011	1,015,019,469.34	76,307	6.26	19	3	0	3	25	6	30	61
तिलोत्तमा नगरपालिका	36,399	710,492,786.33	149,657	6.26	19	3	0	3	25	6	30	61
बाणगंगा नगरपालिका	23,482	800,051,469.53	97,114	6.26	19	3	0	3	25	6	30	61
बुद्धभूमि नगरपालिका	15,581	559,752,123.05	77,281	6.26	19	3	0	3	25	6	30	61
कपिलवस्तु नगरपालिका	15,555	492,718,163.43	89,969	6.26	19	3	0	3	25	6	30	61
कृष्णनगर नगरपालिका	10,889	341,213,876.16	70,969	6.26	19	3	0	3	25	6	30	61
महाराजगञ्ज नगरपालिका	9,945	440,166,305.66	65,668	6.26	19	3	0	3	25	6	30	61
शिवराज नगरपालिका	16,072	650,470,500.19	84,454	6.26	19	3	0	3	25	6	30	61

कोहलपुर नगरपालिका	24,346	755,747,733.09	100,289	6.26	19	3	0	3	25	6	30	61
बाँसगढी नगरपालिका	15,149	575,485,383.63	63,400	6.26	19	3	0	3	25	6	30	61
बारबर्दिया नगरपालिका	16,950	639,808,967.89	72,892	6.26	19	3	0	3	25	6	30	61
गुलरिया नगरपालिका	16,141	565,033,027.44	74,868	6.26	19	3	0	3	25	6	30	61
राजापुर नगरपालिका	13,711	479,929,656.23	61,431	6.26	19	3	0	3	25	6	30	61
वीरेन्द्रनगर नगरपालिका	39,391	1,143,783,270.72	154,886	2.61	19	3	0	3	25	6	30	61
भजनी नगरपालिका	11,143	501,511,734.71	53,795	3.90	19	3	0	3	25	6	30	61
गौरीगंगा नगरपालिका	13,693	524,272,986.75	64,327	3.90	19	3	0	3	25	6	30	61
घोडाघोडी नगरपालिका	18,636	660,955,376.08	85,982	3.90	19	3	0	3	25	6	30	61
गोदावरी नगरपालिका	21,508	800,688,793.91	99,973	3.90	19	3	0	3	25	6	30	61
लम्कीचुहा नगरपालिका	20,801	742,255,540.63	90,941	3.90	19	3	0	3	25	6	30	61
टिकापुर नगरपालिका	20,953	523,103,574.48	90,115	3.90	19	3	0	3	25	6	30	61
बेलौरी नगरपालिका	11,154	450,633,346.20	53,918	3.90	19	3	0	3	25	6	30	61
भीमदत्त नगरपालिका	27,691	995,865,255.20	123,316	3.90	19	3	0	3	25	6	30	61
कृष्णपुर नगरपालिका	15,272	497,762,470.12	72,501	3.90	19	3	0	3	25	6	30	61
पुनर्वास नगरपालिका	13,676	346,037,957.27	61,628	3.90	19	3	0	3	25	6	30	61
फुडलिङ नगरपालिका	7,306	508,604,332.02	28,786	4.67	16	3	0	3	22	6	26	54
देउमाई नगरपालिका	7,907	503,247,551.51	31,531	4.67	16	3	0	3	22	6	26	54
ईलाम नगरपालिका	13,395	754,965,557.69	50,455	4.67	16	3	0	3	22	6	26	54
माई नगरपालिका	7,966	441,808,973.40	30,988	4.67	16	3	0	3	22	6	26	54

कन्काई नगरपालिका	13,553	484,003,780.94	53,088	4.67	16	3	0	3	22	6	26	54
लेटाड नगरपालिका	9,304	407,723,596.61	38,675	4.67	16	3	0	3	22	6	26	54
धनकुटा नगरपालिका	9,803	623,417,421.75	36,156	4.67	16	3	0	3	22	6	26	54
महालक्ष्मी नगरपालिका	5,434	493,281,968.78	22,196	4.67	16	3	0	3	22	6	26	54
पाख्रिवास नगरपालिका	4,881	346,294,336.59	19,256	4.67	16	3	0	3	22	6	26	54
लालीगुराँस नगरपालिका	3,773	339,213,848.42	15,418	4.67	16	3	0	3	22	6	26	54
म्याङलुङ नगरपालिका	4,934	358,534,066.98	19,078	4.67	16	3	0	3	22	6	26	54
चैनपुर नगरपालिका	6,690	521,363,334.99	27,078	4.67	16	3	0	3	22	6	26	54
धर्मदेवी नगरपालिका	4,071	340,621,088.66	16,300	4.67	16	3	0	3	22	6	26	54
खाँदवारी नगरपालिका	9,333	544,166,715.00	36,102	4.67	16	3	0	3	22	6	26	54
मादी नगरपालिका	3,288	321,720,478.17	13,428	4.67	16	3	0	3	22	6	26	54
पाँचखपन नगरपालिका	4,010	380,773,729.10	16,391	4.67	16	3	0	3	22	6	26	54
भोजपुर नगरपालिका	6,775	434,915,158.37	26,126	4.67	16	3	0	3	22	6	26	54
षडानन्द नगरपालिका	7,450	476,858,537.11	29,777	4.67	16	3	0	3	22	6	26	54
सोलुदुधकुण्ड नगरपालिका	6,830	565,013,158.27	27,013	4.67	16	3	0	3	22	6	26	54
सिद्धिचरण नगरपालिका	7,173	435,464,324.63	27,977	4.67	16	3	0	3	22	6	26	54
हलेसी तुवाचुङ नगरपालिका	6,149	466,429,715.30	27,274	4.67	16	3	0	3	22	6	26	54
दिक्तेल रुपाकोट मझुवागढी नगरपालिका	10,719	681,392,084.20	43,295	4.67	16	3	0	3	22	6	26	54
बेलका नगरपालिका	12,170	566,978,106.53	51,458	4.67	16	3	0	3	22	6	26	54

चौदण्डीगढी नगरपालिका	12,857	554,407,742.39	53,537	4.67	16	3	0	3	22	6	26	54
बोदेबरसाईन नगरपालिका	9,854	513,814,914.88	46,343	4.19	16	3	0	3	22	6	26	54
डाक्नेश्वरी नगरपालिका	10,094	376,574,540.04	48,314	4.19	16	3	0	3	22	6	26	54
हनुमाननगर कङ्कालिनी नगरपालिका	11,130	402,564,570.79	51,926	4.19	16	3	0	3	22	6	26	54
कञ्चनरुप नगरपालिका	12,662	478,354,064.04	58,882	4.19	16	3	0	3	22	6	26	54
खडक नगरपालिका	11,355	504,092,310.03	54,193	4.19	16	3	0	3	22	6	26	54
सप्तकोशी नगरपालिका	5,305	338,325,651.11	23,891	4.19	16	3	0	3	22	6	26	54
शम्भुनाथ नगरपालिका	8,824	432,728,399.36	39,423	4.19	16	3	0	3	22	6	26	54
सुरुङ्गा नगरपालिका	10,611	297,105,033.01	49,668	4.19	16	3	0	3	22	6	26	54
धनगढीमाई नगरपालिका	11,133	453,333,578.72	54,244	4.19	16	3	0	3	22	6	26	54
कल्याणपुर नगरपालिका	12,491	244,733,036.00	59,986	4.19	16	3	0	3	22	6	26	54
कर्जन्हा नगरपालिका	8,440	214,184,986.06	38,940	4.19	16	3	0	3	22	6	26	54
सुखीपुर नगरपालिका	8,912	410,477,925.70	42,547	4.19	16	3	0	3	22	6	26	54
विदेह नगरपालिका	7,764	403,410,587.88	37,881	4.19	16	3	0	3	22	6	26	54
क्षिरेश्वरनाथ नगरपालिका	10,826	385,319,698.31	53,031	4.19	16	3	0	3	22	6	26	54
धनुषाधाम नगरपालिका	10,959	433,361,712.51	53,035	4.19	16	3	0	3	22	6	26	54
गणेशमान चारनाथ नगरपालिका	9,400	396,968,653.00	44,900	4.19	16	3	0	3	22	6	26	54
हंसपुर नगरपालिका	8,958	149,572,828.26	44,929	4.19	16	3	0	3	22	6	26	54
कमला नगरपालिका	9,160	277,312,599.00	45,477	4.19	16	3	0	3	22	6	26	54

मिथिला बिहारी नगरपालिका	7,651	187,707,933.54	38,008	4.19	16	3	0	3	22	6	26	54
मिथिला नगरपालिका	10,522	209,799,061.38	47,408	4.19	16	3	0	3	22	6	26	54
नगराइन नगरपालिका	7,962	468,914,722.00	37,949	4.19	16	3	0	3	22	6	26	54
सबैला नगरपालिका	12,279	401,760,096.00	62,510	4.19	16	3	0	3	22	6	26	54
शहीदनगर नगरपालिका	11,288	375,925,686.00	53,546	4.19	16	3	0	3	22	6	26	54
औरही नगरपालिका	7,841	321,385,801.80	40,834	4.19	16	3	0	3	22	6	26	54
बलवा नगरपालिका	10,052	310,890,805.68	50,031	4.19	16	3	0	3	22	6	26	54
भँगाहा नगरपालिका	11,336	451,802,221.06	56,570	4.19	16	3	0	3	22	6	26	54
लोहरपट्टी नगरपालिका	9,627	310,542,127.63	46,336	4.19	16	3	0	3	22	6	26	54
मनरा शिसवा नगरपालिका	9,343	529,261,550.97	49,126	4.19	16	3	0	3	22	6	26	54
मटिहानी नगरपालिका	7,356	281,003,115.00	36,063	4.19	16	3	0	3	22	6	26	54
राम गोपालपुर नगरपालिका	6,921	284,778,089.24	36,594	4.19	16	3	0	3	22	6	26	54
बागमती नगरपालिका	10,785	419,636,763.05	45,459	4.19	16	3	0	3	22	6	26	54
बलरा नगरपालिका	9,118	416,685,958.19	47,602	4.19	16	3	0	3	22	6	26	54
गोडैटा नगरपालिका	9,510	395,929,244.83	54,346	4.19	16	3	0	3	22	6	26	54
हरिपुर नगरपालिका	8,445	665,631,624.76	43,609	4.19	16	3	0	3	22	6	26	54
हरिपुर्वा नगरपालिका	6,854	184,614,546.04	36,523	4.19	16	3	0	3	22	6	26	54
हरिवन नगरपालिका	11,120	406,987,297.05	51,333	4.19	16	3	0	3	22	6	26	54
कविलासी नगरपालिका	8,150	593,282,249.91	44,688	4.19	16	3	0	3	22	6	26	54

मलंगवा नगरपालिका	10,305	431,123,149.12	53,204	4.19	16	3	0	3	22	6	26	54
बौधीमाई नगरपालिका	6,091	247,056,448.52	39,348	4.19	16	3	0	3	22	6	26	54
वृन्दावन नगरपालिका	8,237	402,351,797.68	50,144	4.19	16	3	0	3	22	6	26	54
देवाही गोनाही नगरपालिका	6,340	359,859,388.52	38,808	4.19	16	3	0	3	22	6	26	54
गढीमाई नगरपालिका	7,850	415,111,899.07	49,642	4.19	16	3	0	3	22	6	26	54
गौर नगरपालिका	7,743	432,885,706.37	40,368	4.19	16	3	0	3	22	6	26	54
गुजरा नगरपालिका	9,682	376,210,875.70	54,089	4.19	16	3	0	3	22	6	26	54
ईशनाथ नगरपालिका	8,084	333,259,496.05	53,402	4.19	16	3	0	3	22	6	26	54
कटहरिया नगरपालिका	7,789	356,285,919.54	47,455	4.19	16	3	0	3	22	6	26	54
माधव नारायण नगरपालिका	7,081	394,670,135.34	40,974	4.19	16	3	0	3	22	6	26	54
मौलापुर नगरपालिका	5,428	353,433,681.83	32,468	4.19	16	3	0	3	22	6	26	54
परोहा नगरपालिका	7,214	361,978,791.03	46,749	4.19	16	3	0	3	22	6	26	54
फतुवा बिजयपुर नगरपालिका	7,777	264,504,668.07	44,358	4.19	16	3	0	3	22	6	26	54
राजदेवी नगरपालिका	5,919	377,235,569.00	33,836	4.19	16	3	0	3	22	6	26	54
राजपुर नगरपालिका	8,254	357,016,728.54	54,372	4.19	16	3	0	3	22	6	26	54
कोल्हवी नगरपालिका	9,952	418,209,721.85	46,200	4.19	16	3	0	3	22	6	26	54
निजगढ नगरपालिका	8,455	513,496,433.39	36,591	4.19	16	3	0	3	22	6	26	54
पचरौता नगरपालिका	6,402	369,005,971.65	40,252	4.19	16	3	0	3	22	6	26	54
सिम्रौनगढ नगरपालिका	9,064	466,514,999.00	53,103	4.19	16	3	0	3	22	6	26	54

बहुदरमाई नगरपालिका	7,058	247,714,872.10	43,780	4.19	16	3	0	3	22	6	26	54
पर्सगढी नगरपालिका	8,002	196,332,786.71	41,477	4.19	16	3	0	3	22	6	26	54
पोखरिया नगरपालिका	6,614	335,641,665.82	38,985	4.19	16	3	0	3	22	6	26	54
मन्थली नगरपालिका	11,105	696,728,112.33	40,230	13.68	16	3	0	3	22	6	26	54
रामेछाप नगरपालिका	6,663	557,193,750.29	25,117	13.68	16	3	0	3	22	6	26	54
भिमेश्वर नगरपालिका	10,265	666,635,548.00	35,122	13.68	16	3	0	3	22	6	26	54
जिरी नगरपालिका	4,102	383,093,827.53	15,500	13.68	16	3	0	3	22	6	26	54
बाह्रविसे नगरपालिका	6,994	545,244,004.62	24,158	13.68	16	3	0	3	22	6	26	54
चौतारा साँगाचोकगढी नगरपालिका	11,936	924,987,503.00	42,962	13.68	16	3	0	3	22	6	26	54
मेलम्ची नगरपालिका	11,349	968,542,443.75	41,170	13.68	16	3	0	3	22	6	26	54
धुलिखेल नगरपालिका	8,808	678,582,173.35	36,183	13.68	16	3	0	3	22	6	26	54
मण्डनदेउपुर नगरपालिका	8,220	565,385,643.62	31,261	13.68	16	3	0	3	22	6	26	54
नमोबुद्ध नगरपालिका	7,406	512,425,017.94	26,280	13.68	16	3	0	3	22	6	26	54
पनौती नगरपालिका	12,986	797,042,969.00	52,078	13.68	16	3	0	3	22	6	26	54
पाँचखाल नगरपालिका	9,295	522,930,034.53	35,992	13.68	16	3	0	3	22	6	26	54
दक्षिणकाली नगरपालिका	6,527	405,801,851.77	26,744	13.68	16	3	0	3	22	6	26	54
शंखरापुर नगरपालिका	7,275	548,298,870.89	30,414	13.68	16	3	0	3	22	6	26	54
बेलकोटगढी नगरपालिका	9,464	811,039,070.24	35,200	13.68	16	3	0	3	22	6	26	54
धुनीबेंशी नगरपालिका	7,235	556,302,901.89	29,126	13.68	16	3	0	3	22	6	26	54
थाहा नगरपालिका	9,842	685,624,811.94	39,163	13.68	16	3	0	3	22	6	26	54

कालिका नगरपालिका	12,466	626,671,793.96	52,779	13.68	16	3	0	3	22	6	26	54
माडी नगरपालिका	10,227	517,338,408.14	38,550	13.68	16	3	0	3	22	6	26	54
गोरखा नगरपालिका	15,298	628,999,397.00	53,285	4.62	16	3	0	3	22	6	26	54
पालुङटार नगरपालिका	11,317	493,518,280.00	37,274	4.62	16	3	0	3	22	6	26	54
बेसीशहर नगरपालिका	11,308	490,570,657.59	38,562	4.62	16	3	0	3	22	6	26	54
मध्यनेपाल नगरपालिका	6,528	421,246,353.17	21,373	4.62	16	3	0	3	22	6	26	54
राईनास नगरपालिका	5,009	386,865,899.50	17,207	4.62	16	3	0	3	22	6	26	54
सुन्दरबजार नगरपालिका	8,034	378,207,902.89	26,866	4.62	16	3	0	3	22	6	26	54
भानु नगरपालिका	13,064	530,436,575.49	43,255	4.62	16	3	0	3	22	6	26	54
भिमाद नगरपालिका	8,964	409,366,590.50	33,077	4.62	16	3	0	3	22	6	26	54
शुक्लागण्डकी नगरपालिका	15,479	590,598,376.49	55,749	4.62	16	3	0	3	22	6	26	54
भीरकोट नगरपालिका	6,226	406,091,846.52	22,617	4.62	16	3	0	3	22	6	26	54
चापाकोट नगरपालिका	6,389	455,487,174.27	22,787	4.62	16	3	0	3	22	6	26	54
गल्याङ नगरपालिका	7,971	532,082,262.44	31,125	4.62	16	3	0	3	22	6	26	54
पुतलीबजार नगरपालिका	12,152	700,431,679.72	42,079	4.62	16	3	0	3	22	6	26	54
बेनी नगरपालिका	9,465	489,114,203.20	33,062	4.62	16	3	0	3	22	6	26	54
कुश्मा नगरपालिका	11,906	604,884,042.44	38,774	4.62	16	3	0	3	22	6	26	54
फलेवास नगरपालिका	5,875	488,973,575.10	20,726	4.62	16	3	0	3	22	6	26	54
ढोरपाटन नगरपालिका	7,661	424,268,622.28	30,779	4.62	16	3	0	3	22	6	26	54
गल्कोट नगरपालिका	7,912	515,685,239.06	30,503	4.62	16	3	0	3	22	6	26	54

जैमिनी नगरपालिका	6,912	525,440,996.20	24,784	4.62	16	3	0	3	22	6	26	54
देवचुली नगरपालिका	14,836	579,867,980.54	59,400	4.62	16	3	0	3	22	6	26	54
मुसिकोट नगरपालिका	7,135	462,846,845.35	28,761	5.63	16	3	0	3	22	6	26	54
रेसुङ्गा नगरपालिका	9,129	488,355,839.18	31,677	5.63	16	3	0	3	22	6	26	54
रामपुर नगरपालिका	10,821	540,860,292.53	39,190	5.63	16	3	0	3	22	6	26	54
भूमिकास्थान नगरपालिका	7,891	438,628,302.28	28,317	5.63	16	3	0	3	22	6	26	54
सन्धिखर्क नगरपालिका	12,322	544,419,959.41	42,528	5.63	16	3	0	3	22	6	26	54
शितगंगा नगरपालिका	9,541	585,880,962.33	37,888	5.63	16	3	0	3	22	6	26	54
प्यूठान नगरपालिका	11,500	594,428,398.00	42,094	5.63	16	3	0	3	22	6	26	54
स्वर्गद्वारी नगरपालिका	8,400	396,472,100.10	32,127	5.63	16	3	0	3	22	6	26	54
रोल्पा नगरपालिका	8,836	505,785,734.72	35,644	5.63	16	3	0	3	22	6	26	54
लमही नगरपालिका	13,862	422,719,955.83	58,884	5.63	16	3	0	3	22	6	26	54
मधुवन नगरपालिका	12,474	722,471,870.33	51,173	5.63	16	3	0	3	22	6	26	54
ठाकुरबाबा नगरपालिका	11,480	517,619,307.93	49,360	5.63	16	3	0	3	22	6	26	54
आठबिसकोट नगरपालिका	7,603	496,963,409.22	35,929	2.35	16	3	0	3	22	6	26	54
चौरजहारी नगरपालिका	6,791	361,491,265.80	29,255	2.35	16	3	0	3	22	6	26	54
मुसिकोट नगरपालिका	8,793	516,523,731.90	33,871	2.35	16	3	0	3	22	6	26	54
बागचौर नगरपालिका	7,539	412,404,433.70	34,053	2.35	16	3	0	3	22	6	26	54
बनगाड कुपिण्डे नगरपालिका	7,893	387,402,334.00	33,758	2.35	16	3	0	3	22	6	26	54

शारदा नगरपालिका	8,992	469,660,500.68	34,684	2.35	16	3	0	3	22	6	26	54
भेरीगंगा नगरपालिका	11,599	316,389,970.96	48,581	2.35	16	3	0	3	22	6	26	54
गुर्भाकोट नगरपालिका	11,923	467,434,042.12	49,394	2.35	16	3	0	3	22	6	26	54
लेकवेशी नगरपालिका	7,475	385,401,360.50	31,791	2.35	16	3	0	3	22	6	26	54
पञ्चपुरी नगरपालिका	7,979	404,685,369.00	36,062	2.35	16	3	0	3	22	6	26	54
आठबीस नगरपालिका	6,246	331,318,801.03	31,839	2.35	16	3	0	3	22	6	26	54
चामुण्डा विन्द्रासैनी नगरपालिका	5,192	327,716,527.52	26,575	2.35	16	3	0	3	22	6	26	54
दुल्लु नगरपालिका	9,208	498,440,288.24	39,582	2.35	16	3	0	3	22	6	26	54
नारायण नगरपालिका	6,668	403,339,744.84	25,803	2.35	16	3	0	3	22	6	26	54
भेरी नगरपालिका	8,962	484,753,561.19	38,370	2.35	16	3	0	3	22	6	26	54
छेडागाड नगरपालिका	7,431	450,763,634.11	38,027	2.35	16	3	0	3	22	6	26	54
नलगाड नगरपालिका	6,064	299,046,602.00	28,858	2.35	16	3	0	3	22	6	26	54
ठुली भेरी नगरपालिका	2,380	314,476,230.89	10,187	2.35	16	3	0	3	22	6	26	54
त्रिपुरासुन्दरी नगरपालिका	2,636	342,816,529.58	12,300	2.35	16	3	0	3	22	6	26	54
चन्दननाथ नगरपालिका	5,367	320,708,712.61	20,973	2.35	16	3	0	3	22	6	26	54
खाँडाचक्र नगरपालिका	4,132	379,465,411.65	23,336	2.35	16	3	0	3	22	6	26	54
रास्कोट नगरपालिका	3,076	358,702,523.00	16,469	2.35	16	3	0	3	22	6	26	54
तिलागुफा नगरपालिका	3,135	350,535,227.24	16,259	2.35	16	3	0	3	22	6	26	54
छार्यौनाथ रारा नगरपालिका	4,917	390,639,662.10	25,692	2.35	16	3	0	3	22	6	26	54

बडिमालिका नगरपालिका	4,082	350,985,706.20	18,432	3.51	16	3	0	3	22	6	26	54
बुढीगंगा नगरपालिका	4,680	323,824,108.21	20,072	3.51	16	3	0	3	22	6	26	54
बुढीनन्दा नगरपालिका	4,317	363,175,360.31	20,745	3.51	16	3	0	3	22	6	26	54
त्रिवेणी नगरपालिका	4,036	346,151,672.00	17,989	3.51	16	3	0	3	22	6	26	54
बुंगल नगरपालिका	6,242	627,975,467.72	33,487	3.51	16	3	0	3	22	6	26	54
जयपृथ्वी नगरपालिका	5,034	494,843,735.74	21,973	3.51	16	3	0	3	22	6	26	54
कमलबजार नगरपालिका	4,590	394,751,821.82	20,947	3.51	16	3	0	3	22	6	26	54
मंगलसेन नगरपालिका	6,231	488,362,718.52	26,843	3.51	16	3	0	3	22	6	26	54
पन्चदेवल विनायक नगरपालिका	5,432	407,323,612.11	26,316	3.51	16	3	0	3	22	6	26	54
साँफेबगर नगरपालिका	6,382	607,946,033.24	25,990	3.51	16	3	0	3	22	6	26	54
दिपायल सिलगढी नगरपालिका	8,601	372,336,947.46	36,906	3.51	16	3	0	3	22	6	26	54
शिखर नगरपालिका	7,089	431,053,644.90	30,294	3.51	16	3	0	3	22	6	26	54
बेदकोट नगरपालिका	12,780	377,597,831.37	58,250	3.51	16	3	0	3	22	6	26	54
दोधारा चाँदनी नगरपालिका	9,657	NA	43,486	3.51	16	3	0	3	22	6	26	54
शुक्लाफाँटा नगरपालिका	12,120	450,219,239.28	54,379	3.51	16	3	0	3	22	6	26	54
अमरगढी नगरपालिका	6,385	363,787,439.47	24,792	3.51	16	3	0	3	22	6	26	54
परशुराम नगरपालिका	7,494	532,707,217.18	35,748	3.51	16	3	0	3	22	6	26	54
दशरथचन्द्र नगरपालिका	7,339	498,469,789.52	31,786	3.51	16	3	0	3	22	6	26	54
मेलौली नगरपालिका	4,626	346,233,557.59	21,000	3.51	16	3	0	3	22	6	26	54

पाटन नगरपालिका	6,276	453,681,723.30	28,360	3.51	16	3	0	3	22	6	26	54
पुर्चौडी नगरपालिका	7,236	459,761,329.99	38,666	3.51	16	3	0	3	22	6	26	54
महाकाली नगरपालिका	6,080	439,570,568.61	24,572	3.51	16	3	0	3	22	6	26	54
शैल्यशिखर नगरपालिका	4,561	438,305,633.99	21,932	3.51	16	3	0	3	22	6	26	54
धरान उपमहानगरपालिका	43,815	1,297,387,746.27	173,096	8.50	98	5	0	2	105	22	120	247
ईटहरी उपमहानगरपालिका	50,743	1,135,154,966.64	198,098	8.50	98	5	0	2	105	22	120	247
जनकपुरधाम उपमहानगरपालिका	41,941	875,011,769.63	195,438	6.98	98	5	0	2	105	22	120	247
जीतपुर सिमरा उपमहानगरपालिका	23,677	702,695,416.91	119,148	6.98	98	5	0	2	105	22	120	247
कलैया उपमहानगरपालिका	23,760	835,580,505.27	141,179	6.98	98	5	0	2	105	22	120	247
हेटौंडा उपमहानगरपालिका	47,027	1,329,715,840.37	195,951	22.80	98	5	0	2	105	22	120	247
बुटवल उपमहानगरपालिका	51,099	1,481,167,009.98	195,054	9.39	98	5	0	2	105	22	120	247
घोराही उपमहानगरपालिका	51,619	1,293,289,391.33	201,079	9.39	98	5	0	2	105	22	120	247
तुल्सीपुर उपमहानगरपालिका	46,699	1,227,026,576.67	180,734	9.39	98	5	0	2	105	22	120	247
नेपालगञ्ज उपमहानगरपालिका	35,517	1,650,942,182.54	166,258	9.39	98	5	0	2	105	22	120	247
धनगढी उपमहानगरपालिका	46,670	1,283,160,993.36	204,788	5.84	98	5	0	2	105	22	120	247

विराटनगर महानगरपालिका	57,383	2,190,124,627.66	244,750	11.33	134	7	0	2	143	28	176	347
वीरगञ्ज महानगरपालिका	47,218	1,950,868,358.78	268,273	9.30	134	7	0	2	143	28	176	347
ललितपुर महानगरपालिका	77,872	2,561,148,165.92	299,843	30.40	134	7	0	2	143	28	176	347
काठमाण्डौ महानगरपालिका	231,714	6,758,724,439.07	845,767	30.40	134	7	0	2	143	28	176	347
भरतपुर महानगरपालिका	98,288	2,686,187,995.75	369,377	30.40	134	7	0	2	143	28	176	347
पोखरा महानगरपालिका	143,137	3,295,000,050.00	518,452	10.28	134	7	0	2	143	28	176	347

Annex D: Demand Sector Survey Questionnaire



अर्थशास्त्र केन्द्रीय विभाग

त्रिभुवन विश्वविद्यालय, कीर्तिपुर, काठमाडौं



श्रम विश्लेषण र प्राविधिक मानव संसाधन प्रक्षेपण अध्ययन

२०७८

रोजगार दाता निकाय सँगको सर्वेक्षण प्रश्नावली/लगत

नमस्कार !

मेरो नाम हो, म यहाँ अर्थशास्त्र केन्द्रीय विभाग, त्रिभुवन विश्वविद्यालय, कीर्तिपुर काठमाडौंबाट आएको हुँ । विभागले शिक्षा विज्ञान तथा प्रविधि मन्त्रालय, प्राविधिक शिक्षा तथा व्यावसायिक तालिम परिषद्, सानोठिमी भक्तपुर सँगको सहकार्यमा देशका विभिन्न उत्पादनमुलक र सेवा व्यवसायका गतिविधिमा सम्लग्न प्राविधिक शिक्षा र व्यावसायिक तालिम पाएका श्रम शक्तिको रोजगारको अवस्थाको विश्लेषण र त्यस्ता जनशक्तिको अगामी सन् २०२५ र २०३० सम्ममा माग कति हुन सक्छ र आपूर्तिको अवस्था कस्तो हुने छ भनेर विश्लेषण र प्रक्षेपणको अध्ययन गर्दै छ । यसै सन्दर्भमा म यहाँ सँग यस उद्योग व्यवसाय वा निकायमा सम्लग्न प्राविधिक जनशक्तिको हालको अवस्था र आगामी दिनमा हुने मागको बारेमा केहि जानकारी गराई दिन अनुरोध गर्दछु । यहाँ सोधिएका सबै विवरण नेपाल तथ्याङ्क ऐन २०१५ अनुसार गोप्य राखिने छ र अनुसन्धानात्मक प्रयोजनका लागि मात्र प्रयोग गरिने छ ।

यस शैक्षिक र अनुसन्धानात्मक उद्देश्य प्राप्तिका लागि गरिएको सर्वेक्षणमा सहभागी हुन हजुर सहमत/तयार हुनुहुन्छ ? हामी अर्न्तवार्ता सुरु गरौं ?

हुन्छ? हुँदैन? (धन्यवाद भनेर अर्न्तवार्ता सकाउने)

Are you agree? Shall we start the interview? Yes1

No.....2→End interview

Unique ID:

खण्ड क: परिचयात्मक विवरण

१०१. नाम र सर्भे गर्ने जिल्लाको कोड _____

101. Name and code of survey district:

१०२. नाम र प्रदेशको कोड: _____

102. Name and code of Province:

१०३. स्थानीय पालिकाको नाम : _____

103. Name and code of local Municipality:

१०४. स्थानीय सरकारको प्रकार:

गाउँ पालिका

१

नगरपालिका	२
उप-महानगरपालिका.....	३
महानगरपालिका	४

104. Type of local government: Gaupalika1
 Nagarpalika 2
 Upamahanagerpalika...3
 Mahanagarpalika..... 4

१०५. निकाय वा प्रतिष्ठानको नाम: _____

105. Name of the enterprise or agency : _____

१०६. उद्योग/व्यवसाय/ रोजगारदाता प्रतिष्ठान वा एजेन्सीको कामको क्षेत्र

कृषि र वन	१
निर्माण र इन्जिनियरिङ	२
होटल/पर्यटन/आतिथ्य.....	३
स्वास्थ्य	४
अन्य _____	

106. Sector of the enterprise's/agency's work/business

Agriculture & Forestry	1
Construction/Engineering	2
Tourism/Hospitality	3
Health	4
Others (Specify) _____	

१०७. प्रतिष्ठान / निकायको स्वामित्वको प्रकार:

निजी एकल	1
सरकारी	2
निजि साझेदारी	3
सहकारी	4
सार्वजनिक निजि साझेदारी	5
अन्य _____	

107. Type of enterprise/agency ownership

Private single	1
Public/Government	2
Private Partnership	3
Cooperative.....	4
Public/Private partnership	5
Others (Specify) _____	

खण्ड ख: उद्योग/व्यवसाय/ निकायको विवरण

२०१. यो उद्योग, प्रतिष्ठान एजेन्सी कहिले स्थापना भएको हो?

साल: _____ महिना: _____

201. When this industry, enterprise or agency was established?

Year; Month

२०२. यो उद्योग/प्रतिष्ठान औद्योगिक व्यवसाय ऐन २०७६ ले परिभाषित गरे अनुसार कुन वर्गमा पर्दछ ?

- उत्पादन मूलक उद्योग..... १
उर्जामूलक उद्योग..... २
कृषि तथा वन पैदावारमा आधारित उद्योग.....३
खनिज उद्योग..... ४
पूर्वाधार उद्योग५
पर्यटन उद्योग..... ६
सूचना प्रविधि, सञ्चार प्रविधि, तथा सूचना प्रसारण प्रविधीमा आधारित उद्योग ७
सेवामूलक उद्योग.....८
थोक विक्रेता..... ९
खुद्रा विक्रेता १०

202. According to the industrial enterprise act 2076, in which category this industry/ enterprise/service, falls? (Please check the definition provided according to the Industrial Enterprise Act 2076)

- Manufacturing industries1
Energy-based industries2
Argo and forest-based industries3
Mineral industries.....4
Construction Industry5
Tourism Industries6
Information and communication technology based ..7
Service Industries.....8
Wholesaler9
Retailers10

२०३. यो उद्योग व्यवसाय वा निकायको हालको सञ्चालनको अवस्था कस्तो छ ?

- राम्रो१
ठिकै२
नराम्रो.....३

203. How is the operation status of this industry/enterprise?

- Good1
Satisfactory2
Not well.....3

२०४. औद्योगिक व्यवसाय ऐन २०७६ ले परिभाषित गरे अनुसार यो उद्योग, प्रतिष्ठान कुन प्रकारको उद्योगमा पर्दछ ?

- लघु उद्योग (चालु पुँजी २० लाख सम्म).....१
घरेलु उद्योग.२
साना उद्योग (चालु पुँजी १५ करोड सम्म).....३

मझौला उद्योग (चालु पुँजी १५ देखि ५० करोड सम्म).....	४
ठूला उद्योग (चालु पुँजी ५० करोड भन्दा माथि).....	५
लागू नहुने (सरकारी स्वामित्व/सार्वजनिक निकाय).....	६
अन्य _____	

204. According to the industrial enterprise act 2076, in which category/size the enterprise/business firm falls to?

Micro industry (Running capital < Rs. 2 million)	1
Cottage Industry.....	2
Small Industry (Running capital up to 150 million)	3
Medium sized industry (Running capital 150 to 500 million)	4
Large Industries (Running capital 500 million and more)	5
Others and not applicable (government office and public enterprises)	6

२०५. यो उद्योग/व्यवसाय/प्रतिष्ठान वा निकाय रहेको घर जग्गाको स्वामित्व कस्तो हो वा कसरी सञ्चालन गर्नु भएको छ?

आफ्नै स्वामित्वको घर जग्गा	1
अरु व्यक्तिको घर जग्गा भाडा वा लिजमा.....	2
सरकारी स्वामित्वमा रहेको	3
सरकारी जग्गा लिजमा.....	4

205. How is the ownership of the land in which this industry/enterprise is operated or how this is being operated?

At land/home of own ownership	1
Other's land/home in rent or lease	2
Government/public ownership.....	3
Government owned land/house in lease	4

२०६. तपाईंको उद्योग, फर्म/एजेन्सी वा निकायमा कार्यरत प्राविधिक वा अप्राविधिक मानव संसाधन / कर्मचारीहरूको बिगत सात ७ बर्षको संख्यात्मक विवरण उपलब्ध हुन सक्ला (गणक: हरेक अर्थिक बर्ष पछिको महलमा सङ्ख्या उपलब्ध हुन नसक्ने केहि कारण भए कैफियतमा उल्लेख गर्नुहोस्)

206. Is it possible to get the number of technical and non-technical employees working in the industry/enterprises of the last seven years? (Enumerators: (Please mention the reason in remarks column of each row if impossible to get information of the fiscal year).

वर्ष (Fiscal Year)	प्राविधिक (Technical)		अप्राविधिक		कैफियत (Remarks)
	पुरुष (Male)	महिला (Female)	पुरुष (Male)	महिला (Female)	
२०७७/०७८					
२०७६/०७७					
२०७६/०७६					
२०७५/०७४					
२०७४/०७३					
२०७३/०७२					
२०७२/०७३					

२०७. तपाइको उद्योग, प्रतिष्ठान वा निकायलाई चाहिने सबैखाले प्राविधिक जनशक्तिको आवश्यकता अनुसारका पदहरू पूरा भएका छन् ?

छ, पूरा भएका छन्१

छैन, पूरा भएका छैनन्२→२०९

207. Are all vacancies of technical human resources fulfilled in your firm/agency?

Yes, fulfilled 1

No, it is not fulfilled 2→209

२०८. छ भने ती जनशक्ति कसरी पाउनु भएको छ ? (बहु उत्तर सम्भव छ)

स्वदेशमै प्राविधिक शिक्षा र तालिम पाएका१

भारतबाट प्राविधिक शिक्षा, तालिम र सिप सिकेका२

भारत बाहेक अन्य मुलुकबाट शिक्षा, तालिम र सिप सिकेका...३

अन्य खुलाउने _____

208. If all seats of technical human resource are fulfilled, where they come from? (Multiple choice possible)

Graduates of technical education and vocational training in country1

Graduates of Technical education and vocational training from India2

Trained and educated from countries other than India3

Others (Specify) _____

२०९. छैन भने त्यस्ता जनशक्ति आवश्यकता अनुसार किन नपाईएको होला ? (बहु उत्तर सम्भव छ)

माग अनुसार उत्पादन नभएको१

खोजेजस्तो सिपयुक्त नपाईएको२

देशमा उत्पादन नभएको३

अन्य भए खुलाउने _____

209. If not fulfilled all seats of technical human resources in your Industry/enterprise, why are not available as per need?

Less production of such human resources than the demand 1

Difficult to find skilful person as per need2

No production of such human resource in the country3

Others (specify) if any _____

२१०. निकट भविश्यमा तपाईंको उद्योग/व्यावसाय वा कार्यालयको बस्तु तथा सेवा उत्पादनको क्षमता बढाउने वा शाखा बिस्तार गर्ने योजना छ ?

छ१

छैन२→२१४

210. Does this industry/enterprise or agency has any planning to extend production and supply capacity of the goods and services or branches of operation?

Yes 1

No2→214

२१० (क) छ भने कति वर्ष सम्ममा क्षमता बढाउने वा शाखा बिस्तार गर्ने योजना छ ?

210a. By when (years) it has planned to extend production capacity or enlarge new branches? Years: _____

२११. छ भने कस्तो प्रकारको ? (बहु उत्तर सम्भव छ)

क्षमता बढाउने१

शाखा बिस्तार गर्ने२

अन्य _____

211. What forms of extension is planned?

Capacity extension 1

Branch extension2

Others (Specify) _____

२१२. अहिलेको अवस्थामै वा क्षमता/शाखा बिस्तार गरे पछि तपाइको उद्योग व्यवसायलाई कुन प्रकार र तहको प्राविधिक र व्यावसायिक सीप भएका मानव संसाधन थप गर्नु पर्ला ?

212. After capacity or branch extension, how many of the human resources with the technical education and vocational training by level?

[Please make sure that multiple options should be chosen first and then the field will have to be completed]

कुन तहको वा श्रेणी Level or Ranking of Human Resource	न्यूनतम शैक्षिक वा प्राविधिक योग्यता Minimum qualification or technical skill	सङ्ख्या Required number
मेनेजर (Manager)		
सुपरभाईजर (Supervisor)		
प्राविधिक/टेक्निसियन (Technicians)		
प्राविधिक सहयोग हेल्पर (Technical helpers)		

न्यूनतम शैक्षिक वा प्राविधिक योग्यताको कोड: डिप्लोमा ...1; प्रि-डिप्लोमा ...2; तालिम वा सिप परीक्षण तह १... 3; तालिम वा सिप परीक्षण तह २.... 4; तालिम वा सिप परीक्षण तह ३ 5

Code for technical educational and vocational training: Diploma1; Pre-diploma2; Training and skill test level -1 3; Training and skill test level -2 4; Training and skill test level -3 5;

२१३क. तपाइँको उद्योग प्रतिष्ठान वा निकायलाई आवश्यक तर पाउन निकै कठिन हुने प्राविधिक जनशक्तिको पद अनुसारको विवरण पाउन सकिन्छ होला ?

२१३क. तपाइँको उद्योग प्रतिष्ठान वा निकायलाई आवश्यक तर पाउन निकै कठिन हुने प्राविधिक जनशक्तिको पद अनुसारको विवरण पाउन सकिन्छ होला ?

1. जनशक्तिको आवश्यक छैन → 213 (kha)

2. जनशक्तिको आवश्यक छ

213a. Details of hard to fill in human resources by position with technical education and vocational training in the industry/enterprise or agency.

पदको नाम Name of position	न्यूनतम शैक्षिक योग्यता Minimum qualification	चाहिने आवश्यक संख्या (Required number of the position)

२१३ख. तपाइँको उद्योग प्रतिष्ठान वा निकायमा हाल आवश्यक प्राविधिक जनशक्ति बाहेक भविष्यमा तह र श्रेणि अनुसार के कस्ता प्राविधिक जनशक्ति आवश्यक पर्ने सम्भावना देख्नु भएको छ ?

213b. In addition to present level of required human resource with technical education and vocational training, what types of such human resources would be required in your industry/enterprise in the future (minimum qualification and number).

कुन तहको वा श्रेणी Level of Technical HR	न्यूनतम शैक्षिक वा प्राविधिक योग्यता (Minimum qualification)	सङ्ख्या (Number)
मेनेजर (Manager)		
सुपरभाइजर (Supervisor)		
प्राविधिक/टेक्निसियन (Technician)		
प्राविधिक सहयोग हेल्पर (Technical helper)		

न्यूनतम शैक्षिक वा प्राविधिक योग्यताको कोड: डिप्लोमा ...1; प्रि-डिप्लोमा ...2; तालिम वा सिप परीक्षण तह १... 3; तालिम वा सिप परीक्षण तह २.... 4; तालिम वा सिप परीक्षण तह ३ 5

Code for technical educational and vocational training: Diploma1; Pre-diploma2; Training and skill test level -1 3; Training and skill test level -2 4; Training and skill test level -3 5;

२१४. रिक्त प्राविधिक जनशक्तिको पदपूर्ति वा भर्ना गर्ने यस उद्योग, प्रतिष्ठान वा निकायले के उपाय अपनाउने गरेको छ ? (बहु उत्तर सम्भव छ)

आफै बिज्ञापन गर्ने र भर्ना गर्ने१

शिक्षण संस्थामा सम्पर्क गरी पठाउन अनुरोध गर्ने२

शिक्षण संस्थामै गएर छनौट गर्ने३

अर्को पदपूर्ति कम्पनीलाई जिम्मा दिई आउटसोर्सिङ गर्ने४

चिनजानको माध्यमबाट ५

अन्य भए खुलाउने _____

214. What strategy this industry/enterprise, agency is adopting to fulfil the vacant position of the human resources/workers with technical education and vocational training?

Publication of vacancy notice self and recruit own self1

Request to send qualified one from the educational/training institutes2

Selection visiting to the educational/training institute3

Outsourcing to recruitment agencies4
 Hiring based on personal contact5
 Others (Specify) _____

२१५. यस उद्यम, प्रतिष्ठान वा निकायको विगत सात वर्षको प्राविधिक कर्मचारीको अवकाश वा स्वैच्छिक जागिर/पेशा परिवर्तनको विवरण पाउन सकिएला ? (जागिर छाडेका मात्र पेशा परिवर्तनमा राख्ने)

215. Possibility to get information of the retirement of human resources with technical and vocational skills and voluntary change of job during last seven years from this industry/enterprise or agency (job change include job left only).

वर्ष Fiscal year	अवकाश (Retired)		काम परिवर्तन (Voluntary change of job)	
	पुरुष (Male)	महिला (Female)	पुरुष (Male)	महिला (Female)
२०७७/०७८				
२०७६/०७७				
२०७५/०७६				
२०७४/०७५				
२०७३/०७४				
२०७२/०७३				
२०७१/०७२				

२१६क. यो निकायमा कार्यरत प्राविधिक/व्यावसायिक सिप भएका मानव संसाधनको अवस्था कस्तो छ?

216a. Number of technical/vocational human resources in the industry/enterprise/agency by level of qualification and sex. [make multiple choice; [based on this, the question should be directed to question 217]

प्राविधिक मानव संसाधनको तालिमको तह Level of qualification/training	महिला Female	पुरुष Male
डिप्लोमा Diploma		
प्री डिप्लोमा Pre-diploma		
छोटो तालिम वा सिप परिक्षण Short training or skill test		
अन्य Others		

२१६ख. यस उद्योग, प्रतिष्ठान वा निकायमा कार्यरत प्राविधिक जनशक्तिहरूले प्राविधिक शिक्षा वा सिप बिकासको तालिम कुन कुन स्रोतबाट पाउनु भएको छ ? (बहु उत्तर सम्भव)

216b. Source of the technical education and vocational training of the technical human resources working in the industry/enterprise or agency (Multiple choice possible)

[based on the selection in this question, the options in question 218 should appear]

CTEVT अन्तर्गतका शिक्षण संस्थाहरूबाट१

सीप परिक्षणबाट.....	२
प्रतिष्ठान आफैले तयार गरेर	३
विदेशमा पढेर वा तालिम प्राप्त.....	४
विश्व बिध्यालयबाट	५
अन्य _____	

216b. Source of the technical education and vocational training of the technical human resources working in the industry/enterprise or agency (Multiple choice possible)

Technical schools and training centers of CTEVT	1
Based on skill test	2
Self-prepared by the enterprise	3
Educated and trained in abroad	4
University educated	5
Others (Specify) _____	

२१७. यो निकायमा कार्यरत प्राविधिक/व्यावसायिक सिप भएका मानव संसाधनको कार्य दक्षतालाई उनीहरूको शिक्षा वा तालिमको तहका आधारमा कसरी मूल्याङ्कन गर्नु हुन्छ?

217. Rating of work performance and efficiency of the human resources with technical/vocational skills employed in the agency

प्राविधिक मानव संसाधनको तालिमको तह Level of education/training	उत्कृष्ट Excellent	राम्रो Good	सन्तोषजनक Satisfactory	कमसल Poor	अति कमसल Very poor
डिप्लोमा Diploma					
प्री डिप्लोमा Pre-diploma					
छोटो तालिम वा सिप परिक्षण Short term training or skill test					
अन्य Others					

२१८. तपाइको उद्योग प्रतिष्ठानमा कार्यरत प्राविधिक शिक्षा तथा व्यावसायिक तालिम /सीप लिएका कर्मचारीको तालिमको स्रोत अनुसार काम प्रतिको झुकाव र प्रब्रिति लाई कसरी लिनु हुन्छ?

218. Rating of attitude of the workers toward work motivation and dedication by source of technical education/vocational training

तालिम /सीपको स्रोत Source of education/training	उत्कृष्ट Very good	राम्रो Good	सन्तोषजनक Satisfactory	कमसल Poor	अति कमसल Very poor
CTEVT अन्तर्गतका शिक्षण संस्थाहरूबाट पढेर आएका Trained under CTEVT's school/training centres					
सीप परीक्षण पास गरेका Skill test pass					
प्रतिष्ठान आफैले तयार गरेका					

Produced by the enterprise itself					
विदेशमा पढेका वा तालिम लिएका Educated /trained in abroad					
विश्व विद्यालय शिक्षा लिएका University educated					
अन्य Others					

२१९. प्राविधिक/व्यावसायिक मानव संसाधनको आवश्यक पदहरू पूरा गर्न के कस्ता बाधाहरू छन् ?
[बहुउत्तर सम्भव]

219. Hurdles faced to fulfill the required position of human resources with technical/vocational skills.
[multiple options possible]

खोजेको जस्तो नपाउनु१

Difficult to get persons with the searched skill

भनसुन वा दबाबका कारण राम्रो मान्छे राख्न नपाउने२

Problem to select capable persons due to personal approaches/pressure

तलव सुविधा कम हुनु ३

Low level of salary, facility and benefits

कुनै समस्या नभएको ४

No problem at all

अन्य भए खुलाउने _____

Others (Specify if any)

२२०. यो उद्योग व्यवसाय वा निकाय आफैले पनि प्राविधिक सिप र तालिम युक्त जनशक्ति उत्पादन गर्ने गरेको छ ? (१ महिना भन्दा बढि मात्रै)

220. Status of industry/enterprise/agency producing human resources with technical education and vocational training (Training of one month or more duration)

छ Yes१

छैन No२→२२२

२२१. यदि भएमा कुन कुन तहको प्राविधिक र व्यावसायिक सिपको जनशक्ति बिगत पाँच बर्षमा बार्षिक कति सङ्ख्यामा निस्किए होलान् ?

221. Details of produced trained human resources with technical/vocational skill in the last five fiscal years.

वर्ष Fiscal Years	तालिमको विषय वा समय अवधि Subject and duration of training	वार्षिक सङ्ख्या Number trained in the year
२०७६/०७७		
२०७६/०७६		
२०७५/०७४		
२०७४/०७३		

२०७३/०७२		
----------	--	--

२२२. सामान्यतया प्राविधिक /व्यावसायिक मानव संसाधनको कार्यदक्षताको अवस्था कस्तो छ ?
222. General work efficiency of employed human resources with technical education/vocational training in the enterprise
- राम्रो/Good१→२२४
- ठिकै/Satisfactory२
- कमजोर/weak or poor३
२२३. कार्य दक्षताको अवस्था ठिकै वा कमजोर भए प्राविधिक /व्यावसायिक मानव संसाधनको कार्यदक्षता बढाउन के गर्नु पर्ला ? (बहु उत्तर सम्भव छ)
223. If work efficiency is only satisfactory or poor of the technical/vocational human resources, what measures to be taken to improve work efficiency?
- सेवा सुविधामा बृद्धि 1
Increase in facility/benefits
- थप अध्ययन वा तालिममा पठाउने2
Need to send in additional refresher training
- मौद्रिक उत्प्रेरणा3
Increase in monetary incentives
- गैर मौद्रिक उत्प्रेरणा4
Provision of non-monetary incentives
- पुरस्कार र सजायको व्यवस्था कडाइका साथ गर्ने5
Strict provision of performance-based reward and punishment
- नयाँ प्रविधिमा अभ्यस्त गर्नु पर्ने6
Need to make familiar in new technology
- अन्य _____
- Others (Specify)
२२४. यो उद्योग व्यवसायलाई वातावरणीय परिवर्तनले कुनै असर पारेको छ ?
224. Effect of climate change on the operation of the enterprise
- छ, नकारात्मक, Yes, Negative१ → writing field
- छ, सकारात्मक, Yes, Positive२ → writing field → 226
- कुनै पनि छैन, No, not at all३ → 226
२२५. नकारात्मक असरलाई कम गर्न के कस्ता उपाय अवलम्बन गर्नु भएको छ ?
225. Measures adopted to minimise the negative effect of the climate change in the operation of the enterprise
- मेसिन र औजार परिवर्तन१
Change of machine/equipment
- प्रदूषण न्युनिकरण उपकरणको प्रयोग२
Use of pollution minimising equipment
- हरित प्रविधि अपनाउने३
Application of green technology
- संरक्षित उत्पादन प्रविधि (protected farming systems)..... ४

अन्य भए खुलाउने _____
Others (if any)

२२६ हरित प्रविधि सम्बन्धी कस्ता कस्ता पेसा वा व्यवसाय सिर्जना हुन सक्छन् होला ?

226. Possibility of creation of work/employment to promote green technology

इलेक्ट्रिक भेहिकल चार्जिङ् स्टेशन1

Charging station of electric vehicles

मेटल ग्लास बोटलिङ् प्लान्ट2

Metal glass bottling plant

जुट ब्याग उत्पादन3

Jute bag production

प्लास्टिक ब्याग नियन्त्रण4

Control/ban in plastic bag

पुनः प्रयोग Recycling plant)

अन्य भए खुलाउने _____

Others (Specify)

मुख्य उत्तरदाताको नाम: _____ पद _____

सम्पर्क नं

Name of main respondent _____; Position: _____

Contact Number: _____

यहाँको अमूल्य सहयोगको लागि धेरै धेरै धन्यवाद ।

Thank you for your valuable Information and help

ANNEX E: Supply Side Survey Questionnaire



अर्थशास्त्र केन्द्रीय बिभाग
त्रिभुवन विश्वविद्यालय, कीर्तिपुर, काठमाडौं



श्रम विश्लेषण र प्राविधिक मानव संसाधन प्रक्षेपण अध्ययन
२०७८

प्राविधिक शिक्षालय र व्यवसायिक तालिम केन्द्रको सर्वेक्षण प्रश्नावली/लगत

नमस्कार !

मेरो नाम हो, म यहाँ अर्थशास्त्र केन्द्रीय बिभाग, त्रिभुवन विश्वविद्यालय, कीर्तिपुर काठमाडौंबाट आएको हुँ । बिभागले प्राविधिक शिक्षा तथा व्यवसायिक तालिम परिषद, सानोठिमी भक्तपुर संगको सहकार्यमा देशका बिभिन्न उत्पादनमुलक र सेवा व्यवसायका गतिविधिमा सम्लग्न प्राविधिक शिक्षा र व्यवसायिक तालिम पाएका श्रम शक्तिको रोजगारको अवस्थाको विश्लेषण र त्यस्ता जनशक्तिको अगामी सन् २०२५ र २०३० सम्ममा माग कति हुन सक्छ र आपुर्तिको अवस्था कस्तो हुने छ भनेर विश्लेषण र प्रक्षेपणको अध्ययन गर्दै छ । यसै सन्दर्भमा म यहाँ संग यस शिक्षालय वा प्राविधिक तालिम केन्द्रले के कस्ता बिधामा कुन कुन तहका प्राविधिक र व्यवसायिक सिप भएका जनशक्ति उत्पादन गर्दछ र तीनको बजारमा रोजगारीको अवस्था कस्तो छ, जस्ता बिषयमा केहि जानकारी दिन अनुरोध गर्दछु । यहाँ सोधिएका सबै विवरण नेपाल तथ्याङ्क ऐन २०१५ अनुसार गोप्य राखिने छ र अनुसन्धानात्मक प्रयोजनका लागि मात्र प्रयोग गरिने छ ।

यस शैक्षिक र अनुसन्धानात्मक उद्देश्य प्राप्तिका लागि गरिएको सर्वेक्षणमा सहभागि हुन हजुर सहमत/तयार हुनुहुन्छ भन्ने बिश्वास छ । हामी अर्न्तवार्ता सुरु गरौं ?

हुन्छ? हुँदैन२ (धन्यवाद भनेर अर्न्तवार्ता टुङ्ग्याउने)

Are you ready to participate in the survey? Shall we start?

Yes..... 1

No.....2 (End the interview process)

फारम नं.
Form No.

खण्ड क: परिचयात्मक विवरण

१०१. नाम र सर्भे गर्ने जिल्लाको कोड Name and code of Survey district
१०२. नाम र प्रदेशको कोड: Name and code of province
१०३. नाम र स्थानीय पालिकाको कोड: Name and code of *Palika*
१०४. स्थानीय सरकारको प्रकार: Type of local *Palika*
- गाउँ पालिका Village १
- नगरपालिका Municipality२
- उप-महानगरपालिका Sub-metropolis३

१०६. यस प्राविधिक विद्यालय वा व्यावसायिक तालिम केन्द्रले कुन कुन विधाका विषयको कक्षा सञ्चालन गरेको छ ? (बहुउत्तर आउन सक्छ त्यसर्थ एउटै शिक्षण संस्थामा एक भन्दा बढी विषयका बारेमा अन्तर्वार्ता लिनु पर्ने भएमा अलग अलग अन्तर्वार्ता लिनु पर्ने छ)

106. Streams of courses offered in the technical school/vocational training centre (Multiple choice possible)

कृषि र वन Agriculture	१
निर्माण र इन्जिनियरिङ Construction/Engineering	२
पर्यटन / आतिथ्य Tourism and Hospitality	३
स्वास्थ्य Health	४
अन्य Others (Specify) _____	

१०७. यस प्राविधिक विद्यालय वा व्यावसायिक तालिम केन्द्रको स्वमित्व कस्तो हो ?

107. Type of ownership of the school/training centre of technical education and vocational training

नीजि एकल स्वमित्व Private sole proprietorship	१
नीजि साझेदारी Private partnership	२
सामुदायिक Community	३
सहकारी Cooperative	४
सार्वजनिक नीजि साझेदारी Public/private partnership	५
सरकारी CTEVT को अङ्गिक Public/CTEVT constituent	६
अन्य Others Specify _____	

खण्ड ख : प्राविधिक शिक्षालय वा तालिम केन्द्रको परिचय

२०१. शिक्षालय वा तालिम प्रतिष्ठानको नाम : _____

201. Name of technical/vocational School/training centre

२०२. स्कूल वा तालिम प्रतिष्ठान स्थापना भएको वर्ष _____ महिना _____

202. Year and month the school/training centre was established/incorporated

Year -----; Month: ----

२०३. कुन वर्ष र महिनाबाट यो विद्यालय वा तालिम केन्द्रले प्राविधिक शिक्षा तथा व्यावसायिक तालिमका कक्षा सञ्चालन सुरु गरेको हो ?

वर्ष _____ महिना _____

203. Year and month the school/training centre started to run classes

Year -----; Month: ----

२०४. यो विद्यालय वा तालिम केन्द्रले कुन तहका प्राविधिक शिक्षा र व्यावसायिक तालिमका पाठ्यक्रमहरू सञ्चालन गरिरहेको छ ? (बहु उत्तर सम्भव)

204. Level of courses being run/offered in the school/training centre (Multiple answers possible)

डिप्लोमा/प्रमाणपत्र (३ वर्ष)१

प्रि-डिप्लोमा (प्राविधिक एसएलसी) १५ महिने, १८ महिने वा २४ महिने)२

छोटो अवधिका तालिम (१ बर्षभन्दा मुनिका).....३

अन्य _____

204. Level of courses being run/offered in the school/training centre (Multiple answers possible)

Diploma/certificate1

Pre-diploma (Technical SLC/SEE) or 15, 18 or 24 months training2

Short period training (less than 12 months)3

Others (Specify) _____

२०५. तपाईंको शिक्षण संस्थाले कुन विधा वा क्षेत्रको कार्यक्रम, तालिम संचालन गरिरहेको छ ?

(बहुउत्तर आउन सक्छ त्यसर्थ एउटै शिक्षण संस्थामा एक भन्दा बढी बिषयका बारेमा अन्तर्वार्ता लिनु पर्ने भएमा अलग अलग अन्तर्वार्ता लिनु पर्ने छ)

कृषि र बन१

निर्माण र इन्जिनियरिङ.....२

पर्यटन र आतिथ्य.....३

स्वास्थ्य विज्ञान.....४

अन्य _____

205. Sector/areas of courses offered in the technical/vocational school or training centre (Multiple answers possible)

Agriculture and forestry1

Construction/Engineering2

Tourism and Hospitality.....3

Health4

Others (Specify) _____

२०६. यो शिक्षालय वा तालिम केन्द्रले तह अनुसार निम्न अनुसारका कुन कुन बिषयमा पढाइ वा तालिम सञ्चालन गरेको छ ?

206. Specific courses of technical education/vocational training offered in the school/training centre

बिधा अनुसार बिषयहरू Subjects by sector of study	बिषयको कोड Subject code	डिप्लोमा वा प्रि डिप्लोमा Diploma/pre-diploma
1. Construction/Engineering		Yes.... 1; No...2
Diploma/TSLC in Civil Engineering		101
Diploma/TSLC in Mechanical Engineering		102
Diploma/TSLC in Electronics Engineering		103
Diploma/TSLC in Electrical Engineering		104
Diploma/TSLC in Information Technology		105
Diploma/TSLC in Geometrics/Survey Engineering		106
Diploma/TSLC in Computer Engineering		107
Diploma/TSLC in Automobile Engineering		108
Diploma/TSLC in Architecture Engineering		109
Diploma in Biomedical Equipment Engineering		110

Diploma in Electrical & Electronics Engineering	111
Diploma/TSLC in Refrigeration & Air Conditioning	112
Diploma in Hydropower Engineering	113
Diploma in Mechatronics Engineering	114
2. Agriculture	
Diploma/TSLC in Agriculture (Plant Science)	201
Diploma in Agriculture (Animal Science)	202
Diploma in Food and Dairy Technology	203
Technician Level Course in Plant Science (JT)	204
Technician Level Course in Livestock (JT)	205
TSLC in Livestock Production /Animal Health	206
TSLC in Veterinary Science	207
Textile and Sericulture (JTA)	208
3. Tourism	
Diploma/TSLC in Hotel management	301
TSLC in Culinary Arts	302
4. Health/Nursing	
PCL in General Medicine	401
Diploma in Pharmacy	402
PCL in Medical Lab Technology	403
PCL in Diagnostic Radiography	404
PCL in Ophthalmic Science	405
PCL in Health Science (Ayurveda)	406
PCL in Dental Science (Dental Hygiene)	407
PCL in Acupuncture, Acupressure & Moxibustion	408
PCL in Medical Science (Physiotherapy)	409
PCL in Homeopathy	410
PCL in Nursing	411
Conversion Course for Dental Hygienist to Dental Science	412
Diploma in Dental Laboratory Technology	413
TSLC in Ayurveda	414
TSLC in Auxiliary Nursing Midwifery (ANM)	415
TSLC in Community Medicine Assistant (CMA)	416
TSLC in Medical Lab Technology	417
TSLC in Community Amchi Assistant (Kangjan-pa)	418
8. Others specify.....	
	801
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	810	
	811	
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	814	

२०७. प्राविधिक तथा व्यावसायिक सिप सम्बन्धि छोटो समयका आधारभूत तालिमका कक्षा सञ्चालन गरेको छ ?

207. Status of running short training courses by the school/training centre on technical and vocational skills

छ Yes

छैन No२→209

२०८. छन् भने सञ्चालन गरीएका तालिमको नाम उल्लेख गर्ने

208. If yes, name of the training in operation

-
-
-
-
-

२०९. पाठ्यक्रमहरूको तह र संकाय अनुसार प्राविधिक प्रशिक्षकहरूको (instructors) उपलब्धताको स्थिति कस्तो रहेको छ ?

१, प्रयाप्त छ २, प्रयाप्त छैन (पुरुष र महिलाको सङ्ख्या लेख्ने)

209. Availability of teachers/instructors of technical education and vocational training as per the level and subject of courses offered in the school/training centre

Available sufficiently1

Not available in sufficient number2

२०९(क) पाठ्यक्रमहरूको तह र संकाय अनुसार प्राविधिक प्रशिक्षकहरूको (instructors) उपलब्धताको स्थिति (पुरुष र महिलाको सङ्ख्या रिक्त पदहरूको सङ्ख्या लेख्ने)

209a. Status of teachers/instructors' availability by subject and level of courses offered in the school/training centre by sex and vacant positions

पाठ्यक्रम / तालिमको तह Level of curriculum	कार्यक्रम वा बिषयको नाम Name of programme/subject	उपलब्ध प्रशिक्षकको सङ्ख्या		
		पुरुष Male	महिला Female	रिक्त पदहरू Vacant position
डिप्लोमा/प्रमाणपत्र Diploma/Certificate	१. कृषी र बन (सबै बिधाका) Agriculture/forestry (all streams)			
	२. निर्माण र इन्जिनियरिङ् (सबै बिधाका) Construction/engineering (all streams)			
	३. पर्यटन तथा अतिथ्यता (सबै बिधाका) Tourism/Hospitality (All streams)			

	४. स्वस्थ्य (सबै विधाका) Health			
	५.अन्य १ Others-1			
	६.अन्य २ Others-2			
प्री-डिप्लोमा Pre-diploma	१. कृषी र बन (सबै विधाका) Agriculture/forestry (all streams)			
	२. निर्माण र इन्जिनियरिङ्ग (सबै विधाका) Construction/engineering (all streams)			
	३. पर्यटन तथा अतिथ्यता (सबै विधाका) Tourism/Hospitality (All streams)			
	४. स्वस्थ्य (सबै विधाका) Health			
	५.अन्य १ Others-1			
	६.अन्य २ Others-2			
छोटो अवधिका तालिम (सो शिक्षालय वा तालिम केन्द्रले चलाउने तालिमको नाम लेख्ने) Short term training	१.			
	२.			
	३.			
	४.			
	५.			
	६.			

२१०. पाठ्यक्रम तह अनुसार विद्यार्थीको व्यावहारिक दक्षता अभिवृद्धिका लागि मापदण्ड अनुसार भौतिक पूर्वाधारको अवस्था कस्तो छ?

210. Situation of physical infrastructure according to technical and vocational school/trainings operation standard in the school/training centre by level of programme and course stream

पाठ्यक्रम/तालिमको तह Level of curriculum	कार्यक्रमको नाम Name of Programme	भौतिक पूर्वाधारको अवस्था Situation of physical infrastructure				
		धेरै राम्रो Very good	राम्रो good	ठिकै satisfactory	कमसल Poor	अति कमसल very poor
डिप्लोमा / प्रमाणपत्र Diploma/Certificate	१.					
	२.					
	३.					
	४.					
प्री-डिप्लोमा Pre-diploma	१.					
	२.					
	३.					
छोटो अवधिका तालिम Short term training	१.					
	२.					
	३.					

नोट: कमसलमा भौतिक पूर्वाधार अपुग र कमजोर संरचना हुन्छ भने अति कमसलमा भौतिक संरचना अति कम र साह्रै कमजोरलाई बुझ्नु पर्दछ ।

२११. पाठ्यक्रम तह अनुसार विद्यार्थीको व्यावहारिक दक्षता अभिवृद्धिकालागि प्रयोगशालाको अवस्था कस्तो छ?

211. Situation of laboratory facility according to technical and vocational school/trainings operation standard in the school/training centre by level of programme and course stream

पाठ्यक्रम / तालिमको तह Level of curriculum	कार्यक्रमको नाम Name of Programme	प्रयोगशालाको अवस्था Situation of Laboratory				
		धेरै राम्रो Very good	राम्रो Good	ठिकै Satisfactory	कमसल (अपुग) Poor	अति कमसल (केही नभएको) Very poor
डिप्लोमा / प्रमाणपत्र Diploma/Certificate	१.					
	२.					
	३.					
	४.					
प्री-डिप्लोमा Pre-diploma	१.					
	२.					
	३.					
छोटो अवधिका तालिम Short term training	१.					
	२.					
	३.					

नोट: कमसलमा प्रयोगशाला अपुग भएको र अति कमसलमा प्रयोगशाला हुदै नभएकोलाई बुझ्नु पर्दछ ।

खण्ड ग भर्ना क्षमता र पास आउट अनुपात

३०१. यस शिक्षालय वा तालिम केन्द्रको बिगत ५ बर्षको सञ्चालित बिषय अनुसार भर्ना क्षमता र विद्यार्थी/प्रशिक्षार्थी को वास्तविक भर्नाको अवस्था कस्तो रहेको छ ?

301. Admission capacity and actual student enrolment status of the school/training institution according to level of curriculum and subject in operation during last five years

पाठ्यक्रम / तालिमको तह Level of curriculum	सञ्चालित कार्यक्रमको नाम लेख्ने Name of programme	भर्ना क्षमता Enrollment capacity					वास्तविक भर्ना Actual enrolled				
		२०७७	२०७६	२०७५	२०७४	२०७३	२०७७	२०७६	२०७५	२०७४	२०७३
डिप्लोमा / प्रमाणपत्र	१.										
	२.										
	३.										

Diploma/Certificate	४.												
	५.												
प्रि-डिप्लोमा Pre-diploma	१.												
	२.												
	३.												
	४.												
	५.												
छोटो अवधिका तालिम Short term training	१.												
	२.												
	३.												
	४.												
	५.												

३०२. भर्ना क्षमता र वास्तविक भर्नाको अवस्थाका बीचको अन्तरलाई कसरी हेर्नु भएको छ ?

क्षमता अनुसार पुरा भएको

क्षमता भन्दा बढी माग भएको

क्षमता अनुसार भर्ना गर्न नसकिएको

302. How the institution has taken the difference between enrollment capacity and actual enrollment rate?

Quota is fulfilled as per capacity1

Demand is more than the capacity2

Enrollment is less than capacity to enroll3

३०३. यदि भर्ना क्षमता अनुसार भर्ना गर्न नसकिएको हो भने किन होला?

कोटा भन्दा कम संख्यामा आवेदन प्राप्त१

प्रवेश परीक्षामा अनुत्तीर्ण.....२

रोजगारीको न्यून सम्भावना.....३

उच्च शिक्षाको न्यून सम्भावना.....४

प्राविधिक शिक्षाको बारेमा जन चेतनाको अभाव ५

अन्य कारण _____

303. Reasons for less enrollment than the enrollment capacity

Less application of enrollment than quota1

Fail in entrance exam2

Less possibility of employment of the subject graduates.....3

Less possibility to go for higher education4

Lack of public awareness on technical/vocational education ..5

Others (Specify) _____

३०४. विगत ४ वर्षमा शिक्षा र तालिमको तह र सञ्चालित बिषय अनुसार विद्यार्थी वा तालिमका प्रशिक्षार्थीको भर्ना दरमा लैङ्गिक संरचना कस्तो छ?

304. Sex composition of the students/trainees enrolled in the institution during last four years in different levels and courses being operated in the school/training centre

पाठ्यक्रम / तालिमको तह Level of curriculum	कार्यक्रम को नाम Name of programme	पुरुष Male				महिला Female			
		२०७७	२०७६	२०७५	२०७४	२०७७	२०७६	२०७५	२०७४
डिप्लोमा / प्रमाणपत्र Diploma/Certificate	१.								
	२.								
	३.								
	४.								
प्री-डिप्लोमा Pre-Diploma	१.								
	२.								
	३.								
छोटो अवधिका तालिम Short term training	१.								
	२.								
	३.								

३०५. के यस विद्यालय वा तालिम केन्द्रबाट विगत चार वर्षमा पढाई वा तालिम सकि पास भएर गएका विद्यार्थी/प्रशिक्षार्थीहरूको लिङ्ग अनुसारको निम्न आँकडा पाउन सम्भव छ ?

305. Details of students graduated from the institution during last four years by sex by level of course

पाठ्यक्रम / तालिमको तह Level of course	कार्यक्रमको नाम Name of programme	पास भएर जाने पुरुष Graduated male				पास भएर जाने महिला Graduated female			
		पुरुष				महिला			
		२०७७	२०७६	२०७५	२०७४	२०७७	२०७६	२०७५	२०७४
डिप्लोमा / प्रमाणपत्र Diploma/Certificate	१.								
	२.								
	३.								
	४.								
प्री-डिप्लोमा Pre-Diploma	१.								
	२.								
	३.								
छोटो अवधिका तालिम Short term training	१.								
	२.								
	३.								

३०६. यस विद्यालय वा तालिम केन्द्रबाट पढाई वा तालिममा सामेल विद्यार्थी/प्रशिक्षार्थीहरूको उतिर्ण हुने दरलाई कसरी मापन गर्नु हुन्छ ?

306. Rating/judgement of pass rate of students/trainees enrolled in the school/training centre by level and type of courses

पाठ्यक्रम / तालिमको तह Level of course	कार्यक्रमको नाम Name of programme	पास- आउट / उत्तीर्ण दरको मापन Pass out rate				
		धेरै राम्रो ९०% माथि Very good	राम्रो ७० देखि ८९% Good	ठिकै ५० देखि ६९% Satisfactory	न्यून ४० देखि ४९% Poor	अति न्यून ४०% भन्दा कम Very poor
डिप्लोमा / प्रमाणपत्र Diploma/certificate	१.					
	२.					
	३.					
	४.					
प्री-डिप्लोमा Pre-diploma	१.					
	२.					
	३.					
छोटो अवधिका तालिम लिएक र सीप परिक्षण उत्तीर्ण Short term training	१.					
	२.					
	३.					

३०७. यहाँबाट उत्तिर्ण भएर श्रम बजारमा गएका विद्यार्थी वा प्रशिक्षार्थीले आफ्नो जिम्माको काममा देखाएको दक्षता वा क्षमतालाई कसरी मूल्याङ्कन गर्नुहुन्छ ?

307. Judgement of the work performance of the course graduated students/trainees in the job market by level of courses and stream of courses

पाठ्यक्रम / तालिमको तह Level of course	पाठ्यक्रम विशेषको नाम Name of programme	उत्तिर्णहरूले श्रम बजारमा देखाएको दक्षता Work efficiency of graduates					
		धेरै राम्रो ९०% माथि Very good	राम्रो ७० देखि ८९% Good	ठिकै ५० देखि ६९% Satisfactory	नराम्रो ४० देखि ४९% Poor	धेरै नराम्रो (<४०%) Very poor	थाहा छैन Don't know
डिप्लोमा / प्रमाणपत्र Diploma/Certificate	१.						
	२.						
	३.						
	४.						
प्री-डिप्लोमा Pre-Diploma	१.						
	२.						
	३.						
	१.						
	२.						

छोटो अवधिका तालिम लिएका र सीप परिक्षण उत्तीर्ण Short term training	३.						
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३०८. यहाँबाट उत्तिर्ण विद्यार्थी वा प्रशिक्षार्थीको उपल्लो तहको (स्नातक वा स्नातकोत्तर) शिक्षाका पाठ्यक्रममा प्रतिस्पर्धाबाट भर्ना हुने दरलाई कसरी हेर्नु भएको छ?

308. Prospect of getting opportunity to pursue higher level education (University education) of the students/trainees graduated from this school/training centre by level of curriculum

पाठ्यक्रम / तालिमको तह Level of course	उपल्लो तहको शिक्षाको सम्भावना					
	धेरै राम्रो Very good	राम्रो Good	ठिकै Satisfactory	नराम्रो Poor	धेरै नराम्रो Very poor	थाहा छैन Don't know
डिप्लोमा / प्रमाणपत्र Diploma/certificate						
प्री-डिप्लोमा Pre-diploma						
अधारभुत छोटो तालिम Short term basic training						

३०९. यहाँबाट उत्तिर्ण विद्यार्थी वा प्रशिक्षार्थीको काम वा रोजगारीमा लागे पछि उपल्लो तहमा वा (अधिकृत तहमा वा सो भन्दा माथिल्लो) बढुवा हुने सम्भावना कस्तो पाउनु भएको छ ?

309. Prospect of promotion to the higher position (Professional position) of the students/trainees graduated from this school/training centre by level of curriculum

पाठ्यक्रम / तालिमको तह Level of course	उपल्लो तहमा बढुवा हुने सम्भावना					
	धेरै राम्रो Very good	राम्रो Good	ठिकै Satisfactory	नराम्रो Poor	धेरै नराम्रो Very poor	थाहा छैन Don't know
डिप्लोमा/प्रमाणपत्र Diploma/certificate						
प्री-डिप्लोमा Pre-diploma						
अधारभुत छोटो तालिम Short term basic training						

३१०. यहाँबाट उत्तिर्ण विद्यार्थी वा प्रशिक्षार्थीको रोजगारीमा सम्लग्नताका हिसाबले कुन क्षेत्रमा कति कति प्रतिशत जस्तो सम्लग्न हुनुहुन्छ होला ? (सबै जोड्दा १००% को हाराहारी हुन सक्ने)

310. Proportion of the students/trainees graduated from this school/training centre according to the nature of employment

रोजगारी वा व्यावसायका क्षेत्र Sector of Employment	रोजगारीमा रहेको प्रतिशत (%) Proportion employed in the sector		
	डिप्लोमा Diploma	प्री-डिप्लोमा Pre-diploma	छोटो अवधिका तालिम Short term basic training
स्वरोजगार Self employed			
सरकारी जागिर Government employee			
गैर सरकारी Non-government sector			
वैदेशिक रोजगार Foreign employment			
बेरोजगार Unemployed			
अन्य (उल्लेख गर्नुहोस) _____ Others (Specify)			
Tota जम्मा	१०० प्रतिशत	१०० प्रतिशत	१०० प्रतिशत

३११. यो शिक्षालय वा तालिम केन्द्रमा सञ्चालित प्राविधिक शिक्षा अथवा व्यावसायिक तालिमका कार्यक्रम स्थानिय श्रम बजारको आवश्यकता को आधारमा शुरु गरिएको छ ?

हो, रोजगारी बजारको आवश्यकताको आधारमा १

विद्यालय/संस्थाको मागका आधारमा स्वीकृत २

अन्य

311. Starting of the operation of the technical school or vocational training centre according to the need of local level demand of the human resources

Yes, according to the need of local market 1

Based on request for granting permission to start the school2

Others (Specify if any) _____

३१२. यो शिक्षालय वा तालिम केन्द्रबाट उत्तिर्ण भएका स्नातकहरूले पाईरहेको रोजगारीको अवस्थालाई कसरी मूल्याङ्कन गर्नु भएको छ ?

312. Assessment of the employment prospect of the graduates of technical education and vocational training from this institution

पाठ्यक्रम / तालिमको तह Level of course	रोजगारीको अवस्था Employment prospect					
	धेरै राम्रो Very good	राम्रो Good	ठिकै Satisfactory	नराम्रो Poor	धेरै नराम्रो Very poor	थाहा छैन Don't know
डिप्लोमा/प्रमाणपत्र Diploma/certificate						
प्री-डिप्लोमा Pre-diploma						
अधारभुत छोटो तालिम Short term basic training						

३१३. यो शिक्षालय वा तालिम केन्द्रले सञ्चालन गरिरहेका बिषयको पाठ्यक्रममा परिमार्जन गर्नुपर्ने आवश्यकता देख्नु भएको छ ? यदि छ भने कुन हदसम्म आवश्यक छ ?

313. Need of revision of curriculum in which this institution is running different programmes

पाठ्यक्रम / तालिमको तह Level of course	कार्यक्रम को नाम Name of the programme	आवश्यकता Need of revision	परिमार्जनको तह Extent of revision			
			समग्रनै Overall	बढी मात्रामा Greater extent	थोरै मात्रामा A few	कैफियत Remarks
		छ.....१ Yes...1 छैन...२→अर्को No ...2→Next थाहा छैन-३ DK 3	1	2	3	
डिप्लोमा / प्रमाणपत्र Diploma/certificate	१.					
	२.					
	३.					
	४.					
प्री-डिप्लोमा Pre-diploma	१.					
	२.					
	३.					
छोटो अवधिका तालिम Short term training	१.					
	२.					
	३.					

३१४. छ भने तपाइँको बिचारमा के कारणले यी पाठ्यक्रममा समग्रनै वा बढी मात्रामा परिमार्जन गर्नु पर्ने आवश्यकता देख्नु भएको हो ?

314. Reasons for overall or greater extent revision in the curriculum

स्थानीय बजार र उत्पादन प्रक्रियासँग जोडिने बनाउन	१
To link with local market and production process ..1	
राष्ट्रिय श्रम बजार संग जोड्न	२
Link with national labour market	2
वैदेशिक श्रम बजारको आवश्यकतासँग जोड्न	३
Link with the need of foreign labour market3	
नविन प्रविधि सँग मेल खाने बनाउन	४
To make compatible with new technology....4	
हरित प्रविधि संग तालमेल गर्न	५
To make compatible with green technology5	
अन्य (उल्लेख गर्नुहोस्) _____	
Others (Specify) _____	

३१५. प्राविधिक तथा व्यावसायिक पाठ्यक्रम तथा कार्यक्रमहरूलाई रोजगारी/रोजगार बजारको आवश्यकतासँग जोड्न के सुझाव दिन चाहनुहुन्छ ?

315. Suggestion to link curriculum of technical education and vocational training with the need of labour market

३१६. यो शिक्षालय वा तालिम केन्द्रले सञ्चालन गरेका बिषयका पाठ्यक्रममा हरित प्रविधि प्रवर्धन सम्बन्धि बिषय बस्तु कुन रूपमा समेटिएको जस्तो लाग्छ?

316. Level of the coverage of contents on green technology in the curriculum of the courses/programme being operated in this institution.

राम्रो संग समेटिएको	
Covered well	1
केही मात्रमा समेटिएको	
Covered to some extent	2
समेट्न सकिएको छैन	
Not covered at all	3
थाहा छैन	
Don't know	

३१७. हरित प्रविधि प्रवर्धन सम्बन्धि पाठ्यक्रममा के कस्ता बिषय समावेश गर्नु पर्ला ?

317. What sorts contents related to green technology to be covered in the curriculum?

३१८. हरित प्रविधि सम्बन्धी कस्ता कस्ता पेशा र तहका जनशक्ति आवश्यक पर्ला ?

318. What occupation related human resources are required of the green technology?

३१९. यो शिक्षालय वा तालिम केन्द्रमा निकट भविष्यमा तह र बिधा अनुसार कार्यक्रम थप गर्ने योजना छ छैन, भएमा कस्ता कार्यक्रम थपगर्ने योजना छ ? र ती थप हुने प्रत्येक कार्यक्रममा तह अनुसार प्रशिक्षणको लागि कति थप प्राविधिक जनशक्ति आवश्यक पर्दछ उल्लेख गर्नुहोस् ।

319. Planning of the technical school or vocational training centre to add programme of different streams. If it is planned, estimation of required technical human resources

प्राविधिक शिक्षा वा तालिमका बिधा Streams of technical education/training	शिक्षा वा तालिमका तह Level of training	थप गर्ने योजना Planning to add	थप हुन सक्ने आवश्यक प्राविधिक जनशक्ति Estimated additional technical human resource
		छ1; न.....2→अर्को Yes ...1; No...2→Next	
निर्माण तथा ईन्जिनियरिङ् Construction/Engineering	डिप्लोमा Diploma/Certificate प्री डिप्लोमा Pre-Diploma अधारभुत छोटा तालिम Basic short training		
स्वास्थ्य Health	डिप्लोमा Diploma/Certificate प्री डिप्लोमा Pre-Diploma अधारभुत छोटा तालिम Basic short training		
कृषि तथा बन Agriculture/Forestry	डिप्लोमा Diploma/Certificate प्री डिप्लोमा Pre-Diploma अधारभुत छोटा तालिम Basic short training		
पर्यटन तथा आतिथ्य सत्कार	डिप्लोमा		

Tourism & Hospitality	Diploma/Certificate प्रि डिप्लोमा Pre-Diploma अधारभुत छोटा तालिम Basic short training		
अन्य (खुलाउने) Others (Specify) _____	डिप्लोमा Diploma/Certificate प्रि डिप्लोमा Pre-Diploma अधारभुत छोटा तालिम Basic short training		

मुख्य उत्तरदाताको नाम: _____ पद _____

सम्पर्क नं. -----

Name of the main respondent _____; Position: _____

Contact Number: _____

Gio code [do not make this compulsory]

हजुरहरूको सहयोगको लागि धन्यवाद
Thank you for your cordial help

ANNEX F: Checklists of Qualitative Surveys

क. सरकारी निकाय (रोजगार दाता, माग पक्ष) का मुख्य जानकार ब्यक्ति संग प्राविधिक र व्यवसायिक सिपयुक्त मानव संसाधनको माग र अपुर्तिको अवस्था सम्बन्धमा गरिने छलफलका विषय बस्तु ।

KII checklist, guideline to interview concerned officials of government agencies

हामी त्रिभुवन विश्वविद्यालय अर्थशास्त्र केन्द्रीय विभागबाट देशका विभिन्न उत्पादन र सेवा मुलक व्यवसायका क्षेत्रमा प्राविधिक र व्यावसायिक सिप र दक्षता भएका कामदार व्यक्तिको माग र अपुर्तिको अवस्था कस्तो छ र आउदो पाँच वर्षा र १० वर्षामा सो खाले जनशक्तिको आवश्यकता कस्तो हुने छ भनेर अध्ययन गर्ने शिलशिलामा यहाँसमक्ष आएका छौ । यो अध्ययन नेपाल सरकार, शिक्षा विज्ञान तथा प्राविधि मन्त्रालय, प्राविधिक तथा व्यवसायिक तालिम परिषद (CTEVT) का लागि गर्न लागिएको हो । यहाँ यस निकायमा अवश्यक प्राविधिक र व्यवसायिक जनशक्तिको प्रकार चाहे अनुसारको दक्षता भएका कामदारको उपलब्धता, तालिम र सिपको स्रोत, माग अनुसार भर्ना गर्न मुस्किल पर्ने सिप र दक्षताभएका जनशक्ति अदिका बारेमा छलफल गरिने छ ।

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१०१. छलफल गरिएको निकाय (कार्यालयको नाम लेख्ने):

१०२. व्यावसायिक क्षेत्र, (भने अनुसार लेख्ने र नेपाल स्तरिय औद्योगिक वर्गीकरण अनुसार वर्गीकरण गर्ने) :

१०३. कार्य क्षेत्र (स्थानिय तह, जिल्ला, प्रदेश अथवा संघ खुलाउने)

१०४. यो निकाय अन्तर्गत के कस्ता प्राविधिक र व्यवसायिक सिप र दक्षता भएका (राजपत्र अनङ्कित प्राविधिक) कर्मचारीको दरबन्दी छ र कति कार्यरत हुनुहुन्छ ?

१०५. ती जनशक्तिको दरबन्दी पुरा छ ? यदि छैन भने के कारण होला ?

१०६. सो तहका प्राविधिक जनशक्तिको स्वीकृत दरबन्दी तह र आवश्यकता अनुसार पुग अपुग कस्तो छ ?

जनशक्तिको किसिम	तह	पुग अपुगको अवस्था

१०७. प्राविधिक जनशक्तिको किसिम र तह अनुसार यो निकायमा अउदो पाँच र दश वर्षमा के कति दरबन्दी थप गर्नु पर्ला

जनशक्तिको किसिम	तह	थप गर्नु पर्ने दरबन्दी

		पाँच वर्षमा	दश वर्षमा

१०८. ती कर्मचारी वा कामदारको प्राविधिक तथा व्यवसायिक तालिम वा सिप प्राय कहाँबाट पाएका हुन्छन् ?

१०९. तालिमको श्रोत अनुसार काममा निपुर्णताका बारेमा धारणा

११०. यो निकायलाई चाहिने कुन खाले सिप र दक्षता भएका कामदार वा कर्मचारी परिपुर्ति गर्न गाह्रो हुन्छ ? त्यस्ताखाले कामदार वा कर्मचारीको दरबन्दी कति छ र कति पदपूर्ति भएको छ र कति पद रिक्त छ ?

१११. त्यस्ता पदपूर्ति गर्न मुस्किल पर्ने सिप र दक्षताका कामदार वा कर्मचारीको माग यो निकायमा अउदो पाँच र दश वर्षमा कतिले बढ्ने सम्भावना होला ?

११२. यो क्षेत्रमा (निकाय) आफैले पनि प्राविधिक र व्यावसायिक तालिम सञ्चालन गर्ने गरेको छ ? छ भने कस्तो तालिम कुन समयमा सञ्चालन हुन्छ र बार्षिक कतिले सो तालिम पाउछन् ?

११३. यो निकाय ले कस्तो खाले प्राविधिक जनशक्ति उत्पादनका तालिम कार्यक्रम सञ्चालन गरिरहेको छ

११४. हरित प्रविधि सम्बन्धी कस्ता कस्ता पेशा र तहका जनशक्ति आवश्यक पर्ला ?

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ख. उत्पादन विशेष निजी क्षेत्रका रोजगारदाता संघ संगठनका (रोजगार दाता, माग पक्ष) मुख्य जानकार व्यक्ति संग प्राविधिक र व्यवसायिक सिपयुक्त मानव संसाधनको माग र आपूर्तिको अवस्था सम्बन्धमा गरिने छलफलका विषय बस्तु ।

KII checklist/guideline to interview product-based employers' associations

हामी त्रिभुवन विश्वविद्यालय अर्थशास्त्र केन्द्रीय विभागबाट देशका विभिन्न उत्पादन र सेवा मुलक व्यवसायका क्षेत्रमा प्राविधिक र व्यावसायिक सिप र दक्षता भएका कामदार व्यक्तिको माग र आपूर्तिको अवस्था कस्तो छ र आउदो पाँच बर् र १० बर्मा सो खाले जनशक्तिको आवश्यकता कस्तो हुने छ भनेर अध्ययन गर्ने शिलशिलामा यहाँसमक्ष आएका छौ । यो अध्ययन नेपाल सरकार, शिक्षा विज्ञान तथा प्रविधि मन्त्रालय, प्राविधिक तथा व्यवसायिक तालिम परिषद (CTEVT) का लागि गर्न लागिएको हो । यहाँ यस निकायमा अवश्यक प्राविधिक र व्यवसायिक जनशक्तिको प्रकार चाहे अनुसारको दक्षता भएका कामदारको उपलब्धता, तालिम र सिपको स्रोत, माग अनुसार भर्ना गर्न मुस्किल पर्ने सिप र दक्षताभएका जनशक्ति र अदिका बारेमा छलफल गिरने छ ।

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१०१. छलफल गरिएको व्यवसायिक संघ वा संगठनको नाम (भनेअनुसारको नाम लेख्ने):

१०२. व्यवसायिक क्षेत्र, (भने अनुसार लेख्ने र नेपाल स्तरिय औद्योगिक वर्गीकरण अनुसार वर्गीकरण गर्ने) :

१०३. कार्य क्षेत्र (स्थानिय तह, जिल्ला, प्रदेश अथवा संघ खुलाउने)

१०४. यो संघको अन्तर्गत उत्पादन हुने बस्तु वा सेवाको उत्पादनमा के कस्ता प्राविधिक र व्यवसायिक सिप र दक्षता भएका कामदारको आवश्यकता हुन्छ ?

S.N.	Type of Technical/vocational HR employed	Required Qualification	Size employed
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			

१०५. माग अनुसार त्यस्ता कामदारको उपलब्धतालाई कसरी लिनु हुन्छ ? पुग अपुग र कार्य दक्षताका आधारमा

१०६. प्राविधिक र व्यवसायिक सिपयुक्त जनशक्तिको किसिम अनुसार आउदो पाँच र दश वर्षामा यहाँहरूको उत्पादन वा सेवामुलक क्षेत्रमा हालको तुलनामा कामदारको माग कतिले बढ्ने अनुमान गर्नु भएको छ ?

जनशक्तिको किसिम	तह (कनिष्ठ वा बरिष्ठताका आधारमा)	माग ब्रिद्धि प्रतिशतमा	
		पाँच वर्षामा	दश वर्षामा

१०७. ती कामदारको प्राविधिक तथा व्यवसायिक तालिम वा सिप प्राय कहाँबाट पाएका हुन्छन् ?

१०८. तालिमको श्रोत अनुसार काममा निपुर्णताका बारेमा धारणा

१०९. यो निकायलाई चाहिने कुन खाले सिप र दक्षता भएका कामदार वा कर्मचारी परिपुर्ति गर्न गाह्रो हुन्छ ? त्यस्ताखाले कामदार वा कर्मचारीको दरबन्दी कति छ र कति परिपुर्त र कति अपरिपुर्त छ ?

Sn	Name of hard to fill in Position	Positions in the Enterprise	Number of unfulfilled positions	Prospect to increase in demand	
				In next five years	In next 10 years
1					
2					
3					
4					
5					
6					

११०. त्यस्ता पदपुर्ति गर्न मुस्किल पर्ने सिप र दक्षताका कामदार वा कर्मचारीको माग अउदो पाँच र दश वर्षामा कतिले बढ्ला ?

१११. यो निकायले हरित प्रविधि प्रवर्धनकालागि के कस्ता उपाय अपनाएको छ ?

११२. ती हरित प्रविधि (Green technology) प्रवर्धनका कार्यक्रम सञ्चालन गर्न के कस्ता कस्ता पेशा र तहका जनशक्ति कति सङ्ख्यामा परिचालन गरिएको छ र आगामी ५ र १० वर्षमा कति थप गर्नु पर्ने देखिन्छ ?

Sn	Type of HR to promote Green Technology	Number currently Employed	Prospect to increase demand	
			In next five years	In next 10 years
1				
2				
3				
4				

सहयोगका लागि धेरै धेरै धन्यवाद

ग. प्राविधिक र व्यवसायिक पेशागत संघ संगठनका मुख्य जानकार व्यक्ति संग प्राविधिक र व्यवसायिक सिपयुक्त मानव संसाधनको माग र अपुर्तिको अवस्था सम्बन्धमा गरिने छलफलका बिषय बस्तु ।

FGD/KII checklist/guideline to interview workers associations of specialized sectors (engineers, surveyors, overseers, plumbers,)

हामी त्रीभुवन विश्वविद्यालय अर्थशास्त्र केन्द्रीय बिभागबाट देशका बिभिन्न उत्पादन र सेवा मुलक व्यवसायका क्षेत्रमा प्राविधिक र व्यावसायिक सिप र दक्षता भएका कामदार व्यक्तिको माग र अपुर्तिको अवस्था कस्तो छ र आउदो पाँच वर्षा र १० वर्षामा सो खाले जनशक्तिको आवश्यकता कस्तो हुने छ भनेर अध्ययन गर्ने शिलशिलामा यहाँसमक्ष आएका छौ । यो अध्ययन नेपाल सरकार, शिक्षा विज्ञान तथा प्राविधि मन्त्रालय, प्राविधिक तथा व्यवसायिक तालिम परिषद (CTEVT) का लागि गर्न लागिएको हो । यहाँ यस निकायमा अवश्यक प्राविधिक र व्यवसायिक जनशक्तिको प्रकार चाहे अनुसारको दक्षता भएका कामदारको उपलब्धता, तालिम र सिपको स्रोत, माग अनुसार भर्ना गर्न मुस्किल पर्ने सिप र दक्षताभएका जनशक्ति र अदिका बारेमा छलफल गिरने छ ।

सहयोगकालागि धन्यवाद सहित

१०१. छलफल गरिएको व्यवसायिक संघ वा संगठनको नाम (भनेअनुसारको नाम लेख्ने):

१०२. व्यवसायिक क्षेत्र, (भने अनुसार लेख्ने र नेपाल स्तरिय औद्योगिक वर्गीकरण अनुसार वर्गीकरण गर्ने) :

१०३. कार्य क्षेत्र (स्थानिय तह, जिल्ला, प्रदेश अथवा संघ खुलाउने)

१०४. यो संघ वा संगठन कुन कुन प्राविधिक वा व्यवसायिक सिप र दक्षताका पेशा व्यवसायका हरूको हो ?

१०५. यो संघ वा संगठनमा कति सदश्य हुनुहुन्छ ?

१०६. ती सदश्य मध्ये कति अरूकोमा तलव वा ज्यालामा र कति जस्तो आफ्नै पेशा व्यवसाय वा स्वरोजगार हुनुहुन्छ होला ? अनि संगठित सदश्य मध्ये बेरोजगार पिन हुनुहुन्छ ? यदि हो भने के कारणले होला ?

१०७. बिगत पाँच वर्षमा यो संगठनको सदश्यतामा कुन रूपले ब्रिद्धि भएको होला ?

१०८. आउदो पाँच र दश वर्षमा यहाँहरूको संगठनको सदश्यता ब्रिद्धिदर अगाडिको पाँच वर्षकै जस्तो रहला कि सो भन्दा बढ्ला ? यदि बढेमा कतिले (प्रतिशतमा) बढ्ने अनुमान गर्नु भएको छ ?

१०९. यो संगठनमा संगठित सदश्यले प्राय कहाँ कहाँबाट पढाई गर्नु वा तालिम लिनु भएको होला ?

११०. यहाँहरूको संगठनमा आबद्ध सदश्य र रोजगारदाताका बिचको सम्बन्धलाई कसरी लिनु हुन्छ ?

१११. तालिमको श्रोत अनुसार काममा निपुर्णताका बारेमा धारणा

११२. हरित प्रविधि सम्बन्धी कस्ता कस्ता पेशा र तहका जनशक्ति आवश्यक पर्ला ?

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