

Final Report on
Identification of Model Program for Women and Youth's Economic
Empowerment Compatible with COVID 19 and Beyond



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Tej Hari Ghimire, PhD

Paribartan

Executive summary

This report presents the diagnostic findings to identify Model Program for Women and Youth's Economic Empowerment. Save the Children International (SCI) contracted Paribartan, a research consultant, for this assessment. The overall objective of the study is to identify and recommend the most profitable livelihood enterprise for women and youths which are compatible with the COVID context and beyond. The specific objectives of the diagnostic are to; conduct desktop research to identify different enterprises being adopted by youths in Nepal and adjoining countries, carry out field research in different parts of the country (strategic regional and district markets) to observe enterprises, and collect relevant information, assess technical and economic viability for replication of those enterprises targeting Nepalese youths and women, suggest the most profitable and promising enterprises for immediate replication.

The consultant has applied an interactive approach with mixed methods, qualitative diagnostic of enterprise competitiveness, and quantitative confirmation of the economic viability of the diagnosed enterprises for this assessment. This approach includes the following methods: Systemic competitiveness and market attractiveness diagnostic through five mini-workshops among key successful youth enterprises in selected locations (Nepalgunj, Dhangadhi, Surkhet, Janakpur, and Kathmandu) at meta, macro, meso, and micro levels; sub-sector competitiveness diagnostics through mini-workshops in selected locations using Porter's diamond tool; key enterprise interviews (KEI) among promising enterprises that are identified through the systemic and sub-sector diagnostic process using Porter's five forces model; key informants interviews (KII) among local stakeholders; and technical and economic viability confirmation diagnostic among youth (boys and girls) owned enterprises that are selected through the above methods.

Key findings

The diagnostic team finds and confirms that meta-level systemic diagnostic shows a few positive thinking of the society and people towards youth engagement in the enterprise management and governance in Nepal is gradually evolving. However, the societal wisdom and household level perception indicate that the youth should develop their career as a worker abroad, and in general, the girls should not get involved in the businesses. Most of the participants reflected the self-centric mentality of politicians and policy-makers hindering to focus on producing and retaining 'production and technology' related skilled human resources in the country. In most cases, youth themselves lack an entrepreneurial mindset. Profits from businesses are used to purchase land and houses rather than reinvest in the business expansion itself.

The **systemic complexities** such as youth self-employment facility, certificate collateral, agriculture concessional loan, and women entrepreneurship loan policies at the macro level are not implemented at both meso and micro level to reach out to real youth enterprises (private) and entrepreneurs; uncoordinated efforts of meso level support agencies and service providers; a limited link between metalevel thinking, policy implementation, and support practices, and critical factors (running capital, skilled workers, quality of product and timely delivery, owner's time for management and realistic strategy, technical support, knowledge of customers, time management (staff, input and output cycle), monitoring, diverse skills working together, teamwork, and technical work efficiency) of the main business of youths **are more responsible than the youth entrepreneurs themselves to be left behind**

their competitiveness in the mainstream economic system in terms of expanding existing enterprise and starting new enterprises by youths under 40.

In this systemic complexities, competitiveness and market attractiveness analysis undertaken in five location mini-workshops revealed that *youth wears (local shoes, boutiques), and Kaalij in Nepalgunj, beauty parlor and local chicken in Dhangadhi, photography, beauty parlor, and Kaalij in Surkhet, motorcycle maintenance and meat production (Piggery, Poultry) in Janakpur, textile (baby clothes), and Kaalij in Kathmandu* markets ensure high profitability, sustained income of youth, and demand potentials. Youth wear and services (local shoes, boutiques, beauty parlor, photography), and baby wears are urban-based enterprises successfully run by both girls and boys. Local chicken, piggery, broiler poultry, Kaalij, and bike maintenance services are rural-based enterprises mostly run by boys. The Kaalij and piggery farms are owned and managed by girls as well.

The majority of the interviewed enterprise promoters provide the enterprise with full-time quality management, which yielded a significantly higher internal rate of return (IRR), benefit-cost ratio (BCR), return on equity (RoE), and low payback period (PBP).

Cost and revenue analysis of 15 youth enterprises in various sub-sector shows the ***fixed factors are mobilized more efficiently by motorcycle maintenance enterprises in Saptari and variable factors are mobilized more efficiently by the Kaalij enterprise in Surkhet (Kaalij-S)***. That is per unit of a fixed factor cost (one NPR) of motorcycle maintenance-use generates 128.78 units of annual average revenue (NPR), which is the highest among the other 15 enterprises. This is due to informal settings, which became more efficient than others. The Kaalij -S enterprise yielded the highest revenue (11.16) utilizing its variable factors of production. The ***photography enterprise has the highest efficiency¹ in mobilizing total factors of production***, which yielded 6.6 units of revenue (NPR) using 1 unit (NPR) of the factor of production in terms of monetary value.

The average size of the 15-youth enterprise investment is NPR 2,888,533. This size of average investment is financed by 16%, 54%, 13%, 13%, 2%, and 1% by banks, their savings, relatives/ friends, cooperatives, money lenders, and grants respectively. The highest investment requires for Boer goat farming (NPR 9,975,000) and the lowest for motorcycle maintenance (NPR 235,000). ***Data shows that there is very limited access to banks and finance for the existing youth enterprise. They have mobilized their savings to start and run the businesses.***

The diagnostic team has used internal rate of return (IRR), payback period (PBP), net present value (NPV), benefit-cost ratio (BCR), and an annual average return on equity (ROE) variables to confirm the economic viability of the studied 15 youth enterprises. The internal rate of return is calculated at a 12% discount rate. The studied enterprise assured IRR ranging from 19% (Boer goat) to 603% (photography). The ***photography enterprise yields the highest IRR, BCR, ROE, and lowest payback period among the 15 enterprises***. All the enterprises having more than 12% IRR and a benefit-cost ratio of more than 1, and positive NPV are economically viable under the same factors, and demand conditions. This confirms that all 15 enterprises are economically viable.

¹ Annual average revenue generated from sells of output of three years divided by annual average total factors (fixed and variable) used cost i.e., annual average input cost.

Recommendations

- Photography, textile- baby clothes, beauty parlor-unisex, local shoe, boutiques, Kaalij, piggery, and motorcycle maintenance enterprise models are recommended for its replication by both boys and girls. The investment size depends on the capacity of the entrepreneurs and rural or urban market settings. The technical and economic viability models in section 4.5 show that photography, shoes, motorcycle maintenance, and piggery enterprises can be started with small-size investment and textile-baby clothes, beauty parlor-unisex, and Kaalij with medium-size investment volume. All the enterprises have supportive factors and demand conditions (refer to sub-sections 4.3.2, and 4.3.3) in each location.
- The new entrepreneurs should get at least level II or advanced level skills training or one year of work in the same business before starting photography, textile- baby clothes, beauty parlor, and boutiques enterprises in the future. The baby clothes manufacturers should develop their capacity to network at the international and national levels. Other entrepreneurs require local-level networking capacity to be developed. These enterprises are culturally connected. Cultural festivals and events like birthdays, baby feeding, sacred thread offering, marriage, and festival events are increasing demand for baby clothes, boutiques, beauty parlors, photography, and party shoes or bridal and groom shoes. Unknowingly, all these enterprises have developed referral, networking, and complementary support system in each location, which is leading to the development of a network business cluster. The developed cluster provides the entrepreneurs with sustainability and quality improvement confidence.
- In the case of motorcycle maintenance, new entrepreneurs should have practical training and work experience of at least 4 years before starting their enterprise to get the trust of the clients.
- Entrepreneurs or support agencies should pilot Papaya farming including planting material production in Madhes province since it has market potential to grow but the sub-sector has not been developed yet. The critical factor in the success of Papaya farming is the availability of suitable land. One of the start-ups experienced that only 10% of land in Madhes province is suitable for Papaya². It requires a slight slopy high land area so that there will not be any waterlogging.
- The new entrepreneurs interested to start piggery and Kaalij farm should start with minimal investment and a small structure but a large scope of land area expansion in the same location since both the enterprise models have a high incremental capacity with minimal efforts in risk management. Both enterprise models should concentrate on utilizing local feed and developing a network with maize, wheat, millet, mustard, and grass-producing farmers. The piggery enterprise is most suitable in the east to west highway market surroundings in an isolated location.
- The new start-up should understand the raw material supply chain network of the local shoe manufacturers. Local shoes can be started with a small investment size (NPR 200,000 to 690,000) and a basic level of skills. Local shoe manufacturing is strongly complemented by large industries like hotels, and education industries. This is a strategic value proposition in this subsector to expand the existing business.

²According to agriculture statistics (2020), only 155 hectares of land are used to produce Papaya in Madhesh Pradesh. 82,727 hectares of land is used to produce vegetables, which land is potentially a limited waterlogging area. This land area accounts 21% of the total agricultural land (393,582 hectares) in Madhesh Pradesh. Generally, the vegetable farming area is upland but all the land is not sloppy and sandy. There is a chance of waterlogging during monsoon season on flatty upland. The cited statistic supports the respondent's observation and experience. There is no land specification data available for Papaya farming in Madhesh Pradesh.

- All the recommended existing enterprise models must improve their productivity, variable factor efficiency, networking including financial services, and assure the quality of support industries and suppliers before it expands business.
- The market penetration rate of each enterprise is very low. This shows future demand potential, but the successful enterprise should target to penetrate at least 12.5% of the demand as the peer standard set by the diagnosed photography enterprise.
- Local chamber, commodity, or sub-sector associations, youth entrepreneurs should collaborate for learning and sharing, conduct training on successful business models, and allow youths to observe business prototypes. This will help them to run their business effectively,
- Youth entrepreneurs should form their sub-sector association and develop successors after the age of 40 to raise systemic issues and overcome systemic complexities professionally and apolitically,
- All the support agencies and programs should coordinate and develop a common program to create a business-friendly environment for youths as a large number of youths are leaving the country and pursuing agriculture in a foreign land.
- Mostly subsidies and concessional loans are in the access of people with high political influence. Government should develop strong interventions to make these provisions easily accessible to real youth entrepreneurs.
- The local government should offer youth-focused programs after thorough market analysis. Furthermore, local government should carry out supportive programs to motivate youth's involvement in the business.
- Sub-sector associations should conduct refresher training or workshops regularly to teach the trendy market designs and fashion, and provide market-related information and advice on time.
- Develop a quick technical support mechanism to resolve business-specific technical problems faced by youth enterprises at the local level designs, emergency treatment, market information for diversification and link support, and factory learning lab facilities.
- National Youth Council should be able to advocate on behalf of youth entrepreneurs on the issues of certificate collateral, women entrepreneurship loan, and concessional loan policy are not being appropriately implemented by concerned agencies and banks. There is no access to such incentive mechanisms by real youth entrepreneurs. Each bank should have youth enterprise loan delivery departments at the national and branch level with dedicated staff to facilitate and implement such policies.
- Youth Self-Employment Fund is almost restricted to private youth enterprises. Most of the fund is directed through cooperatives and groups at local levels. It should develop mechanisms to deliver loans directly to real youth enterprises (private), those are not in groups and cooperatives.
- Government and international organizations should be fair, transparent, and neutral in cases of awarding contracts to purchase local products and services.

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Acronyms

AATFC	Annual Average Total Fixed Cost
AATVC	Annual Average Total Variable Cost
AATC	Annual average Total Cost
AARevenue	Annual Average Revenue
AAR	AARevenue
RoE	Annual Average Return on Equity
BCR	Benefit Cost Ratio
IRR	Internal Rate of Return
ICT	Information and Communication Technology
KEI	Key Enterprise Interview
KII	Key Informant Interview
PBP	Pay Back Period
SC	Save the Children
SCI	Save the Children International
TTT	Tro-Tro Tractor Ltd
TFC	Total Fixed Cost
TVC	Total Variable Cost
TC	Total Cost
NPV	Net Present Value

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1 Introduction

Save the Children supports the most deprived families (mostly landless and daily wage earners) to increase their income. They generate their incomes through varieties of farm-based and off-farm enterprises. These enterprises are leasehold vegetable farming, grocery, vending tea and snacks shops, and other skill-based income-generating activities. The income-generating activities are tailoring, mobile repairing, motorcycle repairing, group-based microenterprises such as poultry feeds, small processing enterprises such as turmeric plants, herbal tea, super flour, etc. Some promising results from these enterprises are being witnessed in the form of increased income, food security, and self-employment among the beneficiaries.

Several livelihood program models are widely adopted by a larger number of youths across the country either in support of the government of Nepal, I/NGOs, private sectors, or on their own. Bio-flock fish farming, dragon fruit farming, rainbow trout fish farming, vegetable farming in polyhouse, Boer goat farming, peasant farming, franchised garments, noodle, restaurants, etc. are some of the promising businesses that are instantly attracting the young generation, specifically the migrant returnees. However, their replication is not on a scale as anticipated by the stakeholders. It may be due to a lack of adequate information on the successful interventions, lack of investment capital, limited access to financing, limited knowledge/ intelligence, lack of courage and technical skills required to initiate the business, etc. COVID might have further adversely affected the profitability and replicability of the enterprise model. It requires a new set of technologies and skills.

In this context, Save the Children International (SCI) conducted this research to identify a model program for youths' (boys and girls) economic empowerment compatible with Covid 19 and beyond. SCI intends to identify the most profitable enterprise for women and youth and develop a knowledge bank of such programs so that the interested can promptly explore them and use them as a part of the decision-making process. For this, SCI contracted Paribartan to carry out the study. A preliminary reviewed data also shows the importance of this kind of study, which encourages youth towards economic performance.

Youths and their population in Nepal

Figure 1 shows the 15-24 age group population is the highest among other groups in the country in 2021.

Figure 1: Male and female population by age group

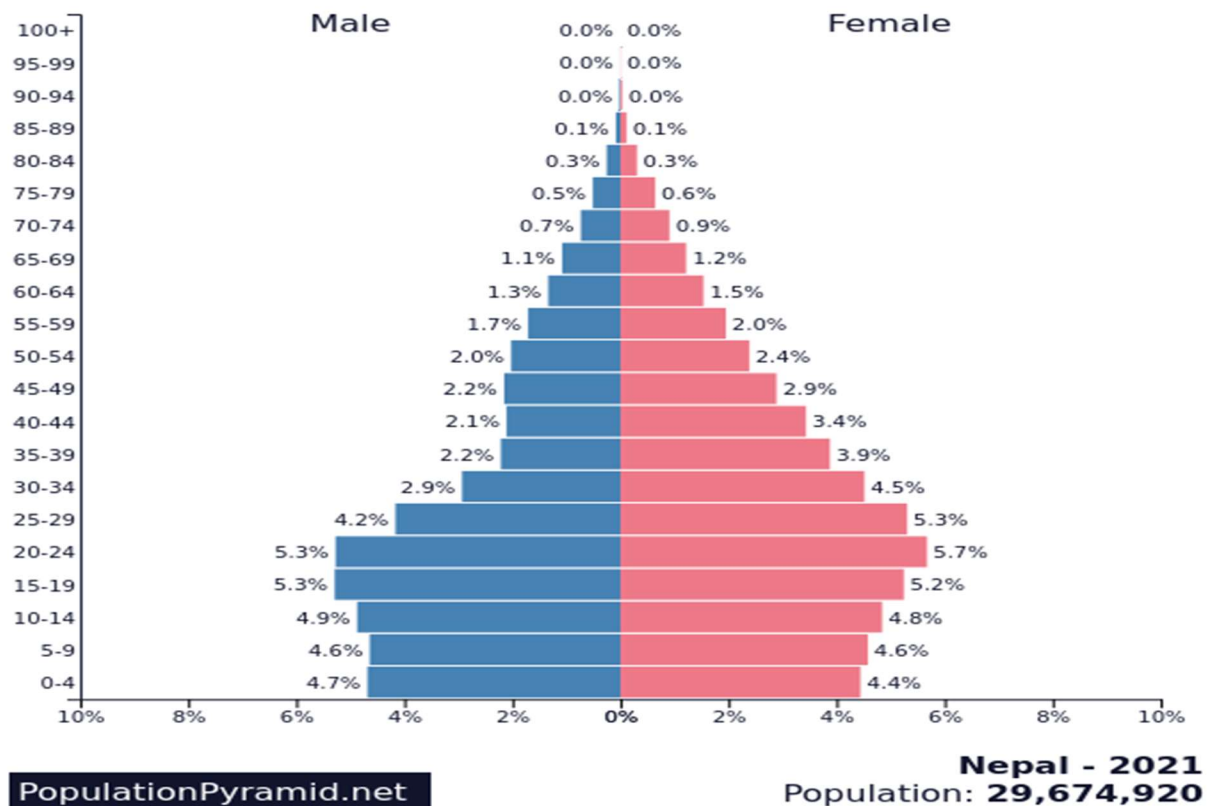


Table 1 shows that the age 15-39 group shares 44% of the total population. It is a significant number of the country's population. The age 20-39 group represents 34% of the total population. Some of the selected enterprises managed from this age group are the target audience of this study, particularly in Kathmandu, Janakpur, Nepalgunj, Dhangadi, and Surkhet.

Table 1: Youth population

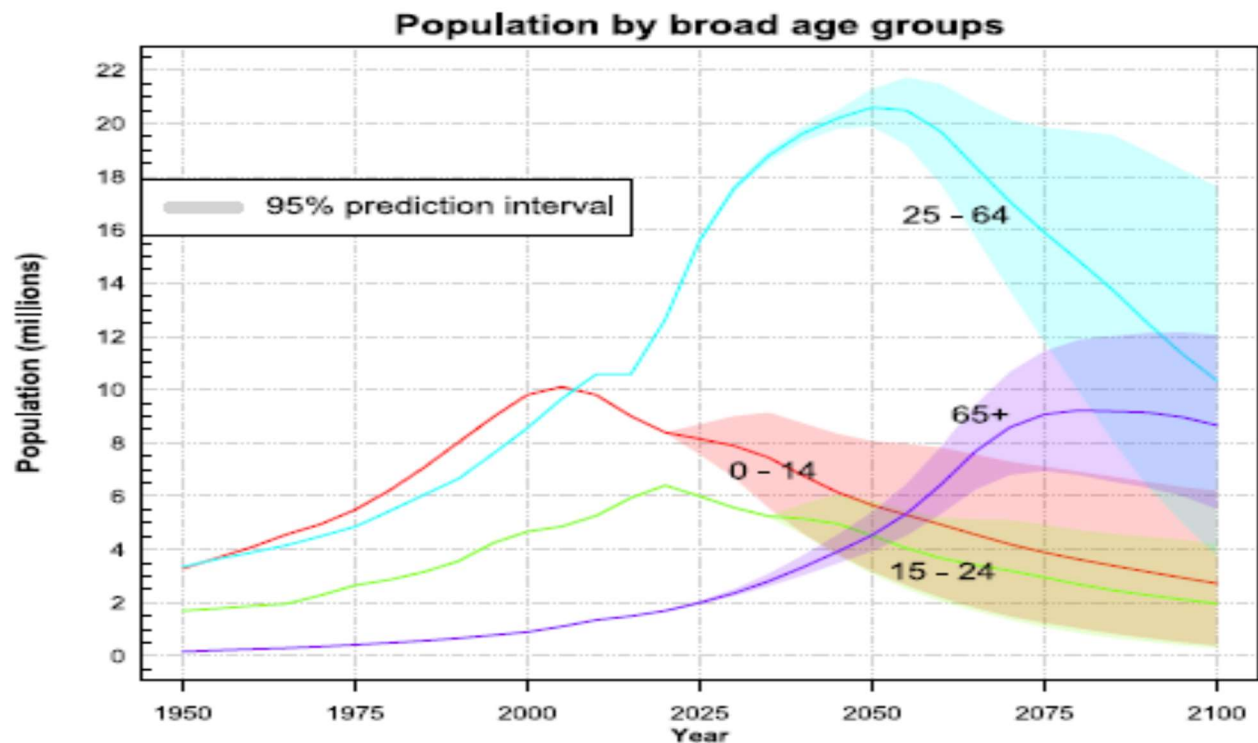
Age	Male	Female	Total	Percentage of total population
15-39	5897716	7306663	13204379	44%
20-39	4328159	5749597	10077756	34%

Source: <https://www.populationpyramid.net/nepal/2021/>

Figure 2 shows that the age 15-24 population will start to decline in 2023. Likewise, the age 25-64 population will start to decline in 2050. It means any economic activities started by these groups of the

population right now shape the economic future of the country. Since the economically active population will remain high from 2022 to 2050.

Figure 2: Population by broad age groups



Source: https://population.un.org/wpp/Graphs/1_Demographic%20Profiles/Nepal.pdf

Youth definition

The United Nations, for statistical purposes, defines 'youth' as those persons between the ages 15 and 24 years, without prejudice to other definitions by the Member States³. Nepal's National Youth Policy 2015 defines 'youth' as citizens within the age bracket of 16 to 40 years. As per communication with SCI, this study defines 'youth entrepreneurs' as those persons (boys and girls) who manage enterprises between the ages of 19 and 40 years. This definition is only for this study's purpose.

Learning from neighboring countries and region

Asia-Pacific region has one of the highest young startup rates across the globe, and 40% of these startups are creating jobs. In Malaysia, Thailand, and Indonesia, micro, small and medium enterprises (MSMEs) account for more than 70% of the jobs in the private sector. Youth Co: Lab surveyed 410 young social entrepreneurs across 18 countries including India and China in the Asia-Pacific region. Nine out of 10 reported that Covid 19 had negatively impacted their business. Only 9.5% reported that their business had received a tax break, loan, grant, subsidy, or other forms of support⁴.

³ UNDESA (.....), The definition of youth.

⁴ Protecting young startups during Covid 19 pandemic, a blog article published on July 18 2020 on Youth Co:Lab site

Youth enterprise service model⁵- example

Tro-Tro Tractor Ltd (TTT) service, ventured by a group of three young entrepreneurs in Ghana, has developed a tractor service system utilizing Information and Communication Technology (ICT). This ICT-based system connects farmers and tractor operators. All the tractors and service operators are registered with the TTT system. With a Global Positioning System (GPS) device equipped with all the registered tractors, the system can update its location in five minutes. Farmers who need tractor service call TTT by mobile phone. Upon receiving a phone call, the system starts looking for nearby tractors and tractor operators available. The farmers receive a message to inform them when a tractor reaches their farm. In some cases, tractor owners work as tractor operators, while in other cases tractor owners ask tractor operators who work to go to the client's farm to provide tractor services. After calling TTT, the farmers can receive tractor service within three days. All the operators are youth but tractor owners are both youth or adults. There is high demand for this service by farmers.

Recently, Nepalese graduate youth have started this kind of service model to provide maintenance services, pulling technically skilled workers, with clients who need maintenance services at home and in business. The trained skilled workers and maintenance clients are pulled into the online platform. Fully app-based transportation technology for ride-sharing, food delivery, and free game services are in operation in Nepal. However, the sub-sector is very new and discussions are not fully open due to fear of competition in business. The openness of the sub-sector is a prerequisite to developing services clusters to gain the trust of the clients.

The successful youth entrepreneur's engagement sub-sector in India

Most of the successful 10 young entrepreneurs in India who started their business when they were 16 - 19 aged are mostly leaders and pioneers in online hotel rooms like OYO, digital courier – one-day parcel service with a lower cost proposition, e-design, cyber security solutions, business branding and marketing, celebrity and social media management including online influence service, fresh paper-spice infused fresh paper which helps in keeping food fresh by preventing bacterial and fungal growth, fitness and talent management service, and online trade platform like Dukan⁶. As per their learning experiences, the key factor of success is appreciating the failure and passion for work what you are doing now.

The successful youth entrepreneur's engagement sub-sector in China

Most of the successful 10 young entrepreneurs in China started their business when they were aged 21 to 27. Their engaged successful businesses are mobile games, personal transporter (single-wheeled robotic vehicles), entertainment and social networking platform, affordable workspace for young people, e-commerce discounted online sales, wearables, cat table furniture, image and face recognition technology, and house renting reservation platform, and online financial platform (internet finance)⁷. The key success factor of these businesses is business thinking ahead of others and being different than other businesses.

⁵ FAO, 2018

⁶ <https://businessconnectindia.in>

⁷ <https://www.chinadaily.com.cn>

2 Objectives of the assignment

The overall **objective** of the assignment was to identify and recommend the most profitable livelihood enterprise for women and youths which are compatible with the COVID context and beyond.

The **specific objectives** of the assignment were to:

- Conduct desktop research to identify different enterprises being adopted by youths in Nepal and adjoining countries,
- Carry out field research in different parts of the country (strategic regional and district markets⁸) to observe enterprises and collect relevant information,
- Assess technical and economic viability for replication of those enterprises targeting Nepalese youths and women,
- Suggest the most profitable and promising enterprises for immediate replication.

3 Methodologies

The consultant applied a competitiveness analysis of successful enterprises run by youth at different levels. The consultant collected qualitative and quantitative information from mini-workshops, and Key Enterprise Interview (KEI) with youths and stakeholders at the location, sub-sector, and enterprise levels. It used the following methodology, and approaches, to accomplish the given tasks.

3.1 Preparatory phase

3.1.1 Document review

The research team searched for literature related to youth enterprise at the country and neighboring country levels. It finds only youth policy-related documents and very limited learning documents on youth enterprise best practices. The research team has analyzed and documented the available learning from the neighboring countries. The research team reviewed the trade and industrial information available at the local level that shows the competitiveness of the province or selected locations.

3.1.2 Coordination with the SC team

The research team had been in contact with Child Poverty Advisor, SCI. It has met virtually, communicated, and discussed with the SC team and its partners in the field and identified successful enterprises list, together with conducting mini-workshops on systemic competitiveness and market attractiveness in each city. The SCI field partner and its field office helped in arranging logistics support that was needed for the research team like audience invitation and time management for mini-workshop, and personal interviews.

3.1.3 Inception phase

This inception report was prepared and submitted after discussing with the Child Poverty Advisor particularly elaborating methodologies, and action plan. The inception report includes; the research design, final methodology, diagnostic tools including key research questions, timeline, and field plan for the assignment, which guided to make the study a success.

⁸ Major strategic markets for Save the Children's beneficiaries: Kathmandu, Janakpur, Nepalgunj, Dhangadhi, and Surkhet. This change is made as per discussion with the SCI team. The location may also be changed after review but the number of locations remains the same.

3.2 Fieldwork phase

3.2.1 Systemic competitiveness diagnostic

The consultant team, together with the SCI team, conducted mini-workshops in Kathmandu, Janakpur, Nepalgunj, Dhangadhi, and Surkhet to diagnose the systemic competitiveness of the identified locations. The systemic competitiveness diagnostics were done at four levels; **meta, macro, meso, and micro** levels. This diagnostic helped to indicate successful enterprises at the micro level run by the youths and women, and also identified support agencies that are supporting the initiatives taken by the youth-led enterprises. It also analyzed macro-level policy and support program initiatives' competitiveness that enables the micro-level enterprises and actions of the meso-level institutions. The meta-level diagnostic was done beyond traditional thinking. It encompasses societal thinking and individual wisdom of the people who influence the successes or failures of youth-run enterprises. The systemic competitiveness is complemented by sector/sub-sector attractiveness tools. Please refer to **Annex 1** regarding the systemic competitiveness framework and sub-sector attractiveness tool that was used in the mini-workshop moderation.

3.2.2 Sub-sector competitiveness diagnostic

The consultant team has conducted a sub-sector competitiveness diagnostic analysis among the most promising two-three (2-3) sub-sectors as identified by systemic competitiveness analysis. The consultant team conducted two-three (2-3) sub-sector competitiveness diagnostics through mini-workshops in each selected location. There was a total of ten (11) sub-sector-related mini-workshops. The successful youths and women-led entrepreneurs, support service providers, supporting industries, key policies, and supporting institutions were invited to the mini-workshops. Porter's diamond tool was used to analyze the competitiveness of the sub-sector. Each diamond was discussed with the mini-workshop participants and their answers were noted on the given meta cards and pinned the meta cards on the pinboard. After completing all the diamond exercises, the plenary was asked what could be done together to improve your firms' and new youth entrepreneurs' competitiveness in the future? The workshops were conducted in Nepali.

Figure 3: Porter's diamond model



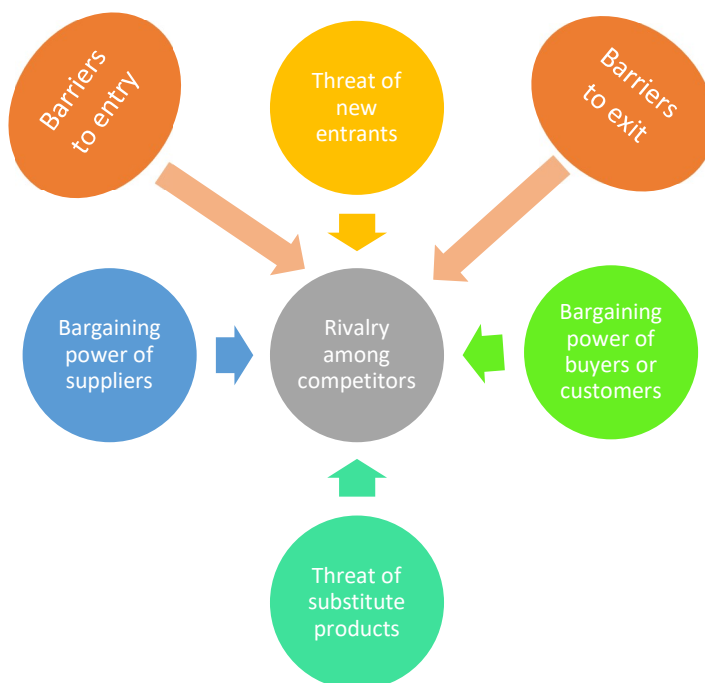
The government policy and facilitation behavior influence the four determinants of sector competitiveness. The chance events can't be predictable but they also influence the competitiveness of the identified sector. The chances include all of a sudden change in fundamental technology or unpredictable incidences like COVID 19 or political events that influences competitiveness. The strong point of the government policy related to the sector/sub-sector and chances were also discussed during an individual interview with stakeholders.

3.2.3 Key enterprise interview

The consultant team conducted key enterprise interviews among promising enterprises that were identified through the systemic and sub-sector diagnostic process. The consultant team interviewed 7-11 promising enterprises run by youth in each location. The field team interviewed a total of 43

enterprises. Please refer to the list of the interviewed enterprises and participants in **Annex-2**. The consultant used Porter's five forces model to understand the competitiveness of the enterprise run by youths. This process also answered the key question on how attractive was the market and what were the key driving forces enhancing the competitiveness of the enterprise selected for the interview?

Figure 4: Porter's five forces including barriers to entry and exit



Please refer to **Annex -3** for a detail of the KEI tool.

3.2.4 Key informant interview

The consultant team has conducted key informant interviews among 15 key stakeholders of the project like DCCI, Agriculture Knowledge Center, National Youth Council, Youth Self-Employment Center, Veterinary Hospital and Service Center, Municipality, Agriculture Development Directorate, Nepalese Young Entrepreneurs Forum, and relevant stakeholders that are directly related to the proposed activities. The consultant team used the same tool that is used for KEI including strong points and weak points of the government policy in the respective sector and events that influence the sector competitiveness that occurred in the past and is likely in the future. Please refer to **Annex – 4** for the stakeholders' KEI tool.

3.2.5 Technical and economic viability confirmation

The consultant team assessed the existing technical and economic viability including **equitability, profitability (viability), and resiliency (bearable)** of the most promising enterprises. Based on the existing practices, the consultant conducted technical and economic viability confirmation analysis among the most promising 15 enterprises run by youths and women (at least 2 in each study location) for their replication and economic modeling. This method was used after the completion of the above four-step process. Please refer to **Annex -5** for checklists of technical and economic viability.

3.3 Data collection, analysis, and report writing

A rigor in getting answers to main questions from the audience and giving sufficient time for the 'free to fall answers' approach was used to listen to the audience to capture factual and quality information. The given answers were noted in a notebook or meta card for both mini-workshop and KEI/KII and photos of the observation sites.

The research team triangulated information received from mini-workshops, KEI, KII, and desk reviews. Most of the information received from mini-workshops was validated from KEI and KII and vice versa during the interview and discussion process. The qualitative diagnostic documentation and secondary data were reviewed and analysed during the process. Internal and external stakeholders' consultation was conducted in the field, which allowed cross-validation of field information as per needs.

The research team analyzed and interpreted both primary qualitative and secondary quantitative data and this comprehensive report was prepared.

3.4 Limitation of methodology

The research team faced difficulty while using the proposed methodology in the field and desk research.

- There were limited numbers of resources documents regarding youth enterprise successful learning in the context of Nepal and neighboring countries.
- Due to COVID cases escalation, the field movement of the researcher was halted for about 3 weeks.
- The accuracy of data depends on sources and true responses to questions by the audience. It is assumed that the responses given by the audiences are true and unbiased.
- The SCI partner and support team were able to invite quality participants particularly youth entrepreneurs to the mini-workshops.
- Some of the sub-sectors and successful youth-owned enterprises declined to give their enterprise-related technical and economic and sub-sector competitiveness information

3.5 Ethical consideration

The research team had a good understanding of and commitment to the child safeguarding protocol of Save the Children throughout the process and respected local culture, values, and practices while conducting fieldwork.

Paribartan and the research team are committed to the firm's values published on its website: <http://www.paribartanconsulting.com/our-company-values/>. Verbal consent was obtained from all the respondents and in the case of children, verbal consent was also taken from parents. The respondents were allowed to withdraw their participation at any time during the interview process. All the personal identifiers were kept confidential and no real names were disclosed during the study without taking consent from the respondents. The consultant did not disclose any data to a third party, and the research report will not be shared with the third party without SCI's consent. Data will not be reused or reproduced for other purposes. Verbal consent was taken from the mini-workshop participants to use their photographs.

4 Key findings

4.1 Systemic competitiveness

The systemic competitiveness diagnostic was done at four levels; **meta, macro, meso, and micro** levels. This diagnostic process helped to identify successful enterprises clusters at the micro-level run by the youths and women and the support agencies that are supporting the initiatives taken by the youth-led enterprises. It also analyzed macro-level policy and support program's competitiveness that enables the micro-level enterprises and actions of the meso-level institutions. The meta-level diagnostic was beyond traditional thinking. It encompasses societal thinking and individual wisdom of the people who influence the successes or failures of youth-run enterprises. The systemic competitiveness was also complemented by by-products /sub-sector attractiveness analysis. Please refer to **Figure 5** regarding the systemic competitiveness situation identified from the mini-workshops in the studied market centers.

Meta: The meta-level systemic diagnostic results show a few positive thinking of the society and people towards youth engagement in the enterprise management and governance. The societal wisdom and household level perception indicate that the youth should develop their career as a worker abroad, and most girls should not get involved in the business. There is disrespect for people in their profession, low respect of society toward farm enterprises including pig farming and production. Most of the participants reflected that the self-centric mentality of politicians and policy-makers hinders focusing on the production and retention of skilled human resources (HR with skills in production and technology) in the country. In most cases, youth themselves lack an entrepreneurial mindset. Profits from businesses are used to purchase land and houses rather than reinvest in the business expansion itself.

Macro: Nepal has various positive policies that provisions to promote youth-led enterprises. These policies include design and patent policy, 1% duty on agricultural equipment import, innovation policy, agricultural loan at 6%, provision of loan keeping certificate as collateral, youth business policy, loan policy focused on women entrepreneurship (provision of a loan without collateral), and youth self-employment policy. Most of the people near power centers and access to support facilities have enjoyed the benefit of these policies but those youth who have the enthusiasm to promote and expand their businesses, but are far from the power centers have limited access to these provisions, facilities, and services. Figure 5 at macro level systemic diagram shows the various weakness of these policies at the implementation and practice level. One of the critical examples is: Cooperatives or groups can have access to youth self-employment fund loans but private enterprises run by youth have no access to it.

Meso: There are limited institutions that support and provide youth-led enterprises with training and promotional services. The respective municipality, Agriculture Knowledge Center (AKC), CTEVT, and youth self-employment program provide the youths with skill training in limited numbers and frequencies. There are banks available but less interested to provide the youth-led enterprises with facilitation and loan services keeping an academic certificate as collateral. There is no youth-led enterprise association in each study location.

Micro: Most of the youths are engaged in organic and green products, goat, Kaalij, local chicken, and pig farms, boutique- youth wear, beauty parlor, brush, baby clothes, medicinal herbs, shoe production, restaurants, and fit food, cake and bakery, ICT, repair and maintenance services, spices, fiber and

textiles, Nepali fabric, mushroom, and papaya business. These businesses are self-initiated within a complex systemic situation as presented in figure 5. The figure below shows that the youth enterprises are successful due to their strengths in the areas of utilizing local resources, export-oriented product focuses, increase in youth's awareness about the negative health impact of inorganically produced foods, high quality of organic products, strong relationship with customers, technical expertise in veterinary, use of high-quality raw material (pure leather and strong fiber) for shoes production, self-skilled for cutting, stitching, and designing, fewer competitors, ICT use, indigenous breed and seed focus, supply of quality products in reasonable price, direct service to the customers in a simple and friendly manners, careful management of small issues, strong networking and marketing, home delivery, scale of production, transparent and continuous services, predefined revenue and value structures, working together in versatile team, technically sound promoters, good brand images, high priority to quality, fulfillment of customer's demand (showing the designs available in social media), innovative new technology with the ease of adoption, high demand, and timely production of outputs, and provide services as per the demand of the customers.

Figure 5: Situation of systemic competitiveness of enterprises led by youths in Nepal⁹



⁹ Green and yellow card represents situation and positive aspects, and orange cards represent points to be improved

Meso

Agriculture Knowledge Centers, Veterinary Hospital, Municipalities, CTEVT, D-MEGA, USAID CIMMYT, SEWAK Nepal, NRB, UNDP, Associations and Chambers, UNDP Youth Collab Asia Pacific, ADBL, Kathmandu University Idea Studio, Venture Capitals, FMAN, mentorship and networking organizations, research and consultancies, SCL, BHAKARI, Kopla Valley, RBB

Agriculture Knowledge Center invests in infrastructure and capital assets, CTEVT provides the youth with skill training, Saudharyakala Sangh supports the beautician during the time of difficulty and loans from the group. Some of the associations organize meetings and establishes direct communication among the members. ADBL provides youths with concessional agriculture loan, Kathmandu idea studio promotes youth innovation and enterprises, research consultancies help aware people and emerging businesses, D-MEGA provides regular training and networking, province government and municipality provides 50% subsidies in agribusiness, Kopla provides weaving machines and loan with no interest, RBB provides loan with a low-interest rate

- Troublesome procedure to enroll in training, and heavy political influence among government support agencies, limited facilitation to women-led business, lack of coordination among support programs
- Limited coordination among members and associations, limited use of technology by associations, youth entrepreneurs have no their association, limited youth-focused program by Chambers, limited sharing right information, municipality subsidizes technology without skills,
- Very few trainings event provisions and the training fail to motivate youth
- Banks focus only on urban based enterprises and financially strong shareholders which is the weak part of the youth entrepreneurs, delay in loan processing, access to banks only by influential people, a limited link between low-interest rate bank and youths, the Insurance company has limited interest in doing insurance of Pig farms
- limited contacts and communication with real youth entrepreneurs by support agencies
- Only unhealthy competitors and large corporates have access to data and resources
- Mentoring and networking providers are operated in elementary form
- Limited business knowledge support providers

Micro

Organic and green products, goat, Kaali, local chicken, and pig farms, boutique- youth wear, beauty parlor, brush, baby clothes, medicinal herbs, shoes production, restaurants and fit food, cake and bakery, ICT, repair and maintenance services, spices, fiber and textiles, Nepali fabric, mushroom,

Benefited due to utilization of local resources, export-oriented product focus, increase in youth's awareness about the negative health impact of inorganically produced foods, high quality of organic fertilizer, strong relationship with customers, technical expertise in veterinary, use of high-quality raw material (pure leather and strong fiber) for shoe production, Self-skilled for cutting, stitching, and designing, fewer competitors, utilizes local resources, ICT self-employment for the skilled, indigenous breed and seed focus

Supply of products at a reasonable price with good quality, direct service provided to the customers in a simple and friendly manner, micromanagement, strong networking and marketing, home delivery, the scale of production, transparent and continuous customer-focused services, predefined revenue, and value structure, working together in versatility team, technically sound promoters, good brand images, high priority to quality, fulfillment of customer's demand (showing the designs available in social media), innovative new technology with the ease of adoption, teamwork, high demand for herbal products, and timely production of outputs, and provides services as per the demand of the customers

Difficulties in bringing new design and high-quality products (youth wear) in the market, maintaining regular supply chain in case of goat due to high demand, brand value in case of ICT products and services, good finishing of products like handmade shoes, knitted cloths, limited capital investment and market penetration including delivery outlets, providing the youth customers with new beauty services, and lifting chemical fertilizer traders' control in the fertilizer market, use of modern technology, availability of advanced equipment, competing with low-cost Indian products, access to capital, regular supply, and quality after-sales services, economies of scale, unhealthy food producers, trusted quality and brand image requires long-standing of business which is a limitation of young enterprises, high-cost raw materials, and limited skilled upgrading process within the enterprise, limitation in networking and relationship building

4.2 Sub-sector market attractiveness

The mini-workshops with the youth (aged 19-40) owned enterprises on systemic competitiveness (at micro, meso, macro, and meta-level) and market attractiveness assessment conducted in five different locations from January 2022 to March 2022, and an analysis of the findings of the workshop revealed that *youth wears (local shoes, boutiques), and Kaalij* in **Nepalgunj**; *beauty parlor and local chicken* in **Dhangadhi**; *photography, beauty parlor, and Kaalij* in **Surkhet**; *bike maintenance and meat production (Piggery, Poultry)* in **Janakpur**; *textile (baby clothes), and Kaalij* in **Kathmandu** ensure high profitability, sustained income, and demand potentials. Youth wear and services (local shoes, boutiques, beauty parlor, photography), and baby wears are urban-based enterprises successfully run by both girls and boys. Local chicken, piggery, broiler poultry, Kaalij, and bike maintenance services are rural-based enterprises mostly run by boys. The Kaalij and piggery farms are owned and managed by girls as well. According to the mini-workshops and stakeholders' validation, these sub-sectors/products attract high demand potential, enterprise profitability, and sustained incomes. The table below shows the market attractiveness map of the youth engaged sub-sectors in the five studied cities. The top right corner (yellow box) sub-sectors in the table show high-performance potential as per their past profitability, market demand trend, and future scenario as expected by the youth entrepreneurs who attended the five mini-workshops in different cities. They are further analyzed in terms of four determining factors and five driving forces to ensure the expected demand and profitability potentials in sections 4.3 and 4.4 respectively. Please refer to the city-wise market attractiveness map in **Annex -6**.

Table 2: Market attractiveness map of youth-run enterprises/sub-sectors in Nepalgunj, Dhangadhi, Surkhet, Janakpur, and Kathmandu

Potential to increase youth' income and enterprise profitability	High	<ul style="list-style-type: none">Organic vegetablesShoes (Police, army, and security guards)Agriculture drone, smart dustbinLocal chicken eggsLocal seeds of rice, wheat, maize, and vegetablesFishery feedsAI technology	<ul style="list-style-type: none">Hybrid seeds of rice and wheatOil trade	<ul style="list-style-type: none">Website designing, development, and domain hostingSocial media marketingApple and Samsung wearables tradeHybrid seeds of maize and riceChat-pateBrinjal (farming)Khaja: saadeko momo and ChowmeinNoodles tradeBike sales	<ul style="list-style-type: none">Textile- baby clothingLocal shoes (Party and office wear)Make-up (beauty parlor)BoutiqueLocal chickenWedding photographyPig farming – PigletsGoat farming (Boer)Bike maintenance servicePapaya	
	Medium	Leafy plates- start-ups	<ul style="list-style-type: none">FishShoes (school/ college)Game bird (Kaalij)N.J.A.W WatchReadymade wearsBeauty serviceBroiler poultryMushroom seedsLeafy platesHybrid seeds tradePig farmingOrganic vegetablesVegetable production and seedlingsBanana farmingPrinting press color/black-whiteTailoringSchool softwareAccounting softwareTea (kanchi chiya, matka chiya and paan chiya)MarigoldBoth cauliflower and cabbage productionEgg productionSpare partsIndigenous Agri-products- tradeOrganic food products-tradeRestaurant	<ul style="list-style-type: none">Kaalij meatRepairing and maintenance serviceAsparagusFacial service onlyFootwear and accessoriesMushroomFlower seedlingsProduction healthy foodsGreen products- serviceGranulated organic fertilizerTooth brush manufacturingBroiler chicken (is it farming or fresh house?)Agro-machinery and equipment tradeOnly cauliflower productionSoap tradeAkbare ChillyRice tradeFisheriesMilk and dairy		
	Low	<ul style="list-style-type: none">Textile – hand-knitted clothingLentil and mustard seedsDhaka and cotton items such as a shawl, khada, and choliCarrot	<ul style="list-style-type: none">Maize seedsTurkey meat and eggsMushroomAndroid applicationVegetable seasonal farmingSchoolhouse dresses and T-shirts	<ul style="list-style-type: none">Hair cutMushroom productionMilkChemical fertilizersTomatoMotorcycle tradeOil tradeChemical fertilizer trade	<ul style="list-style-type: none">Timur tradeVegetable productionFeed production (broiler)Fiber bagKalij chicksProducts -cakes and giftsHybrid seeds of vegetables (production)Buffalo farming	
		Low	Medium	High		
	Potential market demand					

4.3 Youth engaged in sub-sector characteristics and structure

The youth engaged sub-sectors, as analyzed in section 4.2, were further evaluated by thoroughly discussing the competitive strategy and structure, strength, and weakness of the main business. It also analyzed the strengths and weaknesses of the demand conditions, factors conditions, and supporting industries in each sub-sector in respective cities. The findings are presented in sections below.

Figure 6: Summary of youth enterprise competitiveness of studied 11 sub-sectors



4.3.1 Strategy and structure

Goat farming: Nepalgunj

Goat farming is a leading and dynamic subsector due to the strategic choices of entrepreneurs using an integrated and linked farming model. Goat sub-sector and related farms have the main business strategy to apply field level technical testing and verification of fertilizer use on grassland by organic fertilizer producers, focus on applicable and useful solutions to business problems, work with honesty and healthy competition assurance, supply of goats for meat at an affordable price in the market with the ultimate goal of reducing import from the border, produce high-quality goats and breed and transfer the experiences and learning to new farmers, and regularly supply of goat meat and breed in the market.

The sub-sector has a strong market and business structure due to strong customer relationships and in-house technical experiences. The farm promoters have a high level of knowledge of goat farming including feeding management. There is a presence of innovative and affordable market information support providers (ICT providers like agriculture drones, social media marketing) in the city. The entrepreneurs discuss with buyers and undertake studies beforehand to provide high-quality meat and animal products. Most of the goat growers produce feed on the farm itself and minimize expenditure on the grass production by collecting grass from the nearby forest area. There is a high level of family support in the management of the farm, which is also supported by the farming environment of open grazing areas, easy availability of field-level agricultural human resources like trainee JTA, and the subsidy structure of the government. There is easy access to the market and high demand for Boer goats (breed) at the farm gate.

However, the goat sub-sector has **weakness** of breaking regular supply chain due to limited and seasonal supply of goats, operational difficulty due to mechanism of self-controlled staff, lack of fund for investment as well as limited access to financial market compared to other entrepreneurs, lack of access to specialized veterinary services and medicine, lack of commercial grass farming, and exclusion by the local government in the provision of its services.

Youth wear - Shoes and Boutiques (Bridal and groom dress): Nepalgunj and Dhangadhi

Boutiques and local shoes are the key products in the youth wear sub-sector, which is also combined with beauty parlor services to youth. The enterprises have a strategy to focus on both bridal and groom wear including shoes, and parlor services in one place using network business among three different products and services; boutique, local shoes, and beauty service. The strategy also includes finishing quality and new design products offered for each bridal and groom as per their paying capacity, timely presence for service, simple and clear behavior with customers, and free maintenance services for each product for six months. The products are also delivered home. Boutique produces 200-500 bridal and groom dresses each year depending on the capacity and size of the enterprise. Some of the boutiques produce level I, and level II skilled human resources that are needed for the market.

The youth wear sub-sector has the following **strong** points. The boutique enterprise promotor itself designs, cuts, and stitches Daura Surwal, and makes embroidery in case of bridal and groom sets. There is a strong relationship between customers and the enterprises due to network and friendship. The beauty service providers to bridal and grooms use herbal products which have a high demand. The shoe producers use high-quality raw materials like pure leather and strong fiber and deliver products at the ordered date and time.

The sub-sector has the **weaknesses** of limited utilization of social media marketing, limited advertisement, the inability of supplying the products as per the market demand and set time by the customers, unable to fully operate the business due to the financial crisis caused by Covid 19, unavailability of required materials to run the business more efficiently, low-quality finishing as compared to other branded shoes in the market, lack of qualified technical human resources, machines, and new technology. Some of the boutiques open offices irregularly, which makes angry clients.

Kaalij farming: Nepalgunj, Surkhet, and Kathmandu

The main business of Kaalij farm is to produce cocks (male birds) for meat and hens are kept to lay eggs and produce chicks for new business expansion. This sub-sector has been emerging rapidly since 2019. Most exotic breeds are brought either from Italy, France, or Belgium. There is limited rivalry in the studied locations. They are learning from each other and supporting as resource providers to each other. Each farm produces chicks annually a minimum of 2000 to 30,000, and birds for meat ranging from 700 to 5000. The key strategy of a successful Kaalij entrepreneur is to develop brand value by producing high-quality products naturally and export to an international market. The key strength of the business is only Kaalij focused (not mixed with poultry), business approval taken from the quality division¹⁰, coordination with other districts' farms, and minimum operational costs in comparison to another sub-sector. There is a high demand for Kaalij by hotels which is not yet met by the producers. Some of the enterprises face difficulties in accessing hatching services, and technical know-how on the brooding process, feeding, and disease management. Some enterprises face difficulty in access to finance for their expansion. **Beauty parlor- Dhangadhi and Surkhet:** The **successful** parlor enterprise offers unisex services (boys/men or girls/women) including make-ups, nail arts, skincare, facial, color, threading, hair straight, hairstyle, and salon at a reasonable price and with polite and friendly behavior with clients. It maintains the confidentiality of the customers. It always tries to give sufficient time with perseverance to customers and makes them happy and satisfied. The beauty parlor serves 5,000 to 20,000 clients each year depending on its capacity, size, maturity, location, and capital investment. The entrepreneurs get support from their family members and relatives.

Beauty parlors are **unable** to allocate sufficient time to customers and deliver home services due to limited staff as per the need of the clients. It also has a weakness of limited capacity of investment for expansion and limited stocks of the cream as per the needs of the customers.

Local chicken: Dhangadhi

According to sub-sector mini-workshop and interviews, there are more than 107 local chicken producers in Dhangadhi. Most of the farms rear 500 to 4,500 birds depending on their size, capacity, and maturity. The key business strategy of the local chicken producers is rearing chicken in a natural environment to produce quality meat, focusing on a high volume of production reducing the cost and supply of chicks at a low price and fixing market prices, and selling products by analyzing market conditions. The successful producers have their hatching, grassland, and fresh house business and technical know-how on local chicken rearing and coordinate with other competitors to strengthen the supply chain of local chicken.

¹⁰ Veterinary Standards and Drug Regulatory Laboratory, Nepal

There is a slight **weakness** in feed production, effective shed, fencing, grassland management, and overall farm management among the local chicken producers. There is also high trust with other businesses like meat shops and marts and marketing cooperatives, that is why the producers give high quantities in a credit. Most producers are unable to provide high-quality feed to chickens due to a lack of feed processing and blending equipment. In some cases, farms are unable to supply meat as per the demand of the customers. In this condition, some of the enterprises were negatively impacted by price due to the illegal import of chicken by a competitor from India.

Photography: Surkhet

The successful photography enterprise offers photography, videography, lamination, online service, and framing, photo, and identity card printing services. It competes with more than 25 photography service providers among them 5-10 are youth entrepreneurs in the Surkhet market. It services more than 15,000 customers each year. The key strategy to compete with rivalry is to function in a network offering value-added services that link with photography and videography. The photography enterprise has the **strengths** to use high-quality equipment, prompt services deploying high-skilled technicians, and high-quality photography and videography with editing facilities. The use of camera and mobile by the customer compelled to deliver prompt and quality services. The sub-sector has a key **weakness** of machine maintenance on time, and limited skilled human resources, which leads to a shortage of services against customer demand.

Meat production (Piggery and poultry): Janakpur

The discussed piggery and poultry farms produce piglets, pigs, and poultry birds for meat. Both the businesses are culturally and ethnically divided into two different zones. Along with the east-west highway, most of the Tharu, and Janajati community youths are engaged in pigs and piglets production. The market for pigs and piglets is also on the periphery of the east-west highway. Below the east-west highway and alongside the north-south roads, youths from the Madheshi community are engaged in poultry production. The key business strategy of both types of meat-producing farms is to reduce the cost of production with the use of quality breeds and family labours, quality farm management, and sanitation practices, using local materials like using grass as an alternative to external feed and operate in a strong distribution network. The family is involved in poultry farming and works hard to produce quality products which help in reducing the costs of production. The poultries are easy to sell in the local market. However, the poultry farms are unable to manage the mortality of chicks due to disease. There is no rivalry among piggery farms. Every farm is complementing each other. In the case of poultry, there is high competition with low-quality management. Most of the meat-producing farms (both poultry and piggery) started without training and lacks skills among the promoters and staff and were unable to replace pellet feed with green grass.

Motorcycle maintenance: Janakpur (Saptari area)

There are more than 300 bike maintenance service providers in the Saptari area. Most of the enterprises are informal and provide services to 20- 200 bike riders per month. Though not registered with any entities, they are trusted by customers due to their quality services and polite behaviors. They often use quality Mobil and spare parts. Most of the enterprise owners had started their business about 4 years after the training and apprenticeships. They were mentioning that at least 4 years of learning and working apprentice are required to be able to repair the engine. There is no rivalry among the service

providers, the customer themselves chose the maintenance services providers based on their previous experiences. The **weaknesses** associated with this business are; service centers do not open on time, poor investment capacity of entrepreneurs to expand their business, limited space for services, genuine parts (original) are not easily available in the market, and entrepreneurs have limited updates on changing technologies in the bike. According to the stakeholders, few enterprises still use child labor in their workshops.

Textile- Baby clothes: Kathmandu

There are 50 key textile–baby clothes producers in Kathmandu. The competitors have no rivalry among them. The key strategies of the baby cloth production business are to focus on niche products and markets, empowerment and engagement of women in production, natural processing of fabrics at the local level, and branding as a local product. The key strong points of the sub-sector are hand-made clothes, branding of products, and local design. The weak points are only handmade raw materials and local design-fabric allow limited expansion. The producers can't export products to the international market due to large quantity demand, limited supply, and tedious international compliance procedures to be fulfilled in the importing countries. The international buyers buy in Nepal and bring with them, particularly from USA, UK, Belgium, and Switzerland.

4.3.2 Factor conditions

The common factors conditions that determine the competitiveness of the sub-sector and expansion or contraction of the enterprises include attraction or detraction for new investors since the enabling factor conditions attract the investors to reduce initial investment cost and support the expectation of increasing productivity during the operation of a business. The basic factor conditions are the availability of training facilities, support from the development organizations, associations, or government institutions, skilled human resources availability, technology, access to finance, land, infrastructures, utilities like electricity, water supply, enabling business environment, specialized technical support, availability of raw materials, and research and development institutions. The factor conditions under each enterprise are explained below:

Goat: Nepalgunj

Livestock hospital and veterinary service center, municipality, and agriculture campuses are the key institutions that provide workshops and training support to the goat sub-sector in Nepalgunj.

There is a **strong** housing, shed management, and stall feeding system among all the goat farms. There is a high interest of the provincial agriculture development ministry in the organic farming sector, which helps positively to foster goat farming. Strong motivation from the national innovation center, high level of family support, sufficiently available natural grass, self-management of the entire farm, availability of PPR vaccine at veterinary hospital, sufficient grazing area, agriculture loan facility (interest rate range from 2% to 5%), availability of online social marketing services a high price in the market, provision of subsidy by the government are the key factor conditions which help to trigger the growth of the sub-sector in current years and years to come.



Natural feed for Boer goat in Nepalgunj on the farm land by goat grower, 2022

However, these factor conditions are ***not sufficient*** to promote the sub-sector. Certain factor conditions need to be improved. They are; the lack of knowledge and practice among the farmers about grass storage (silage, hay etc.) for dry season (especially for spring, rainy and winter), specialized technical support facility, high burden of tax (Boer breed, raw materials like maize import), limited cooperation from livestock office and training, unavailability of raw materials when needed, imbalanced import and export relation which helps illegal trade of goat from India (the farmers could not export goats to India when there is high demand, they don't know when and how traders imports goat from India), troublesome legal process for importing exotic breed, limited control over goat market network by the farmers¹¹, unavailability of investment fund for expansion business (both loan and grants) due to lack of collateral and access to power, unable to ensure the proper management of the goat sub-sector in Nepal due to weakness in the implementation of the sub-sector policy¹², limited expertise among the actors in the breed and climatic condition management, limited supply of water and electricity in the farm area, which is increasing the cost of production. The insurance company does not provide the insurance claim of goats in time due to which youth farmers have to bear the huge loss.

Youth wear – Shoes, and Boutiques (Bridal and groom dress): Nepalgunj and Dhangadhi

The availability of electricity and water, skilled human resources, raw materials, updates of new technology and knowledge, and availability of training providers are the key factor-conditions that drive the success or failure of the youth wear and services sub-sector in both Nepalgunj and Dhangadhi. These factor conditions have strong points like a supply of electricity, availability of raw material suppliers and

¹¹ It is not a demand issue. It is network governance issue to influence market by producers themselves

¹² For example : National livestock and bird breeding policy 2078 provisions 'For artificial insemination of goats for meat production, a strategy will be adopted to produce and distribute up to 100 percent semen of ethnically pure boer and other advanced and imported breeds of goats and to produce up to 50 percent improved cross goat and fallow deer for meat production' which is not implemented on the ground. There is no goat sector association to ensure and lobby for implementation of good policies.

materials, and continuation of skilled human resources increase the efficiency of work, and production of quality clothes in time, and deliver parlor service in time.

Both boutiques, shoe producers, and parlor services were **unable** to deliver the customer's order on time due to the difficulty of operating machines and iron on time in case of load shedding (nowadays there is frequent interruption of electricity supply in Nepalgunj and Dhangadhi, use of generator destroyed costly equipment in case of parlor). In some cases, unavailability of required raw materials (fabrics, cosmetics) in stock and market compelled to decline offered services, fluctuate in rates and delay business operation, which led to losses as well. Skilled handwork Kaligarh (Craftsman) is unavailable in Nepalgunj and Dhangadhi markets in case the existing craftsman leaves the jobs.

Kaalij: Nepalgunj, Surkhet, and Kathmandu

Services of the supporting institutions like insurance and training, availability of feeding technology, electricity, water, skilled human resources, and access to finance are the key factors conditions to sustain, grow, expand existing enterprises and establish a new enterprise in the Kaalij sub-sector. There is the availability of electricity and water in the farm areas but they are not regular in supply. There are no feed and skilled human resources available dedicated to Kaalij. The available human resources are in a learning phase. Most of the Kaalij farm uses layers and turkey feed or locally available maize, millet, wheat, and mustard. The farms are unable to run hatching machines due to a lack of regular supply of electricity and run generator backup to operate machines during load shedding. The generator backup requires four-phase transmission lines. Most of the Kaalij farms are located in remote areas where there is a supply of a two-phase transmission line of electricity. Identification of diseases and their management in Kaalij is difficult due to the lack of research in the nation. Since this is a very new business, no experts are available and no research have been done in this regard. The government of Nepal is less interested in supporting insurance for Kaalij.

Local chicken: Dhangadhi

Most of the local chicken enterprises have access to good infrastructures like land, water supply, electricity, provision of training and technology for the production of healthy and quality chicken, social security, access to quality breed, and veterinary services.

Limited availability of quality feeds, grass, and skilled technical human resources political influence and power dynamics avoiding real farmers from the training and subsidy/financial opportunities are the key obstacles hindering entrepreneurs. Most of the financial institutions have not implemented and followed the policy provision to provide farmers with concessional loans, which impacted adversely the expansion of local chicken business.

Beauty parlor: Dhangadhi and Surkhet

The beauty parlor services are determined by the six key factor conditions; skilled human resources, availability of electricity and raw materials, financial access, training, and availability of supporting institutions in Dhangadhi and Surkhet. Availability of electricity and raw materials helps to provide quality service in a short duration. Few supporting institutions had provided the parlor entrepreneurs with training and facilitation for access to loans. They had provided the trainees with level I training but a successful entrepreneur requires level II and advanced level training. There are a sufficient number of

banks but they have not provided the parlors with loans yet. Most of the beauty parlors declined services particularly home services in offer due to a lack of skilled human resources.

Photography - Surkhet

Availability of quality training facilities and financial access is the key factor conditions that trigger expansion of the existing business and enable new entrants to start a business in the photography sub-sector. There are sufficient numbers of banks and other financial institutions. The loan applied by the youth entrepreneurs has not been fairly evaluated by the banks. Getting a loan requires more than sufficient collateral. There are no photography training facilities available in Surkhet. Each new staff and entrepreneur need to go outside of Surkhet for training.

Meat production (Piggery and Poultry): Janakpur

The key factors that influence the meat production farms such as electricity, and water supply are in good conditions. The availability of improved breeds, feeds, and associated accessories like feeders, water troughs and egg trays, etc. helped to increase both the quality and quantity of production. There are subsidy support mechanisms on the government side but are not accessible to the right entrepreneur. There is the presence of support organizations like banks and veterinary offices, but they are not available when services are needed by the farms.

The government of Nepal provisioned concessional agricultural loans but the banks and cooperatives are reluctant to avail loans to poultry and piggery farms. Some of the politically renowned and backed up people have accessed concessional loans from the bank but most of the real entrepreneurs have no access to bank loans. Some of the piggery farms, which have no political link and relation with bank staff, took a loan from the informal sector at the rate of 36% annual interest rate. The tedious process of documentation for loan processing especially in the banking sector limits the access of general people to loans. There is a low retention rate of skilled human resources in this sub-sector. The training institutions do not provide training in time when the farms need to recruit new technical staff. The quality of poultry and piglets can be improved if the farm staff are provided with skill training.

Motorcycle maintenance: Janakpur (Saptari area)

The expansion and contraction of bike maintenance service business largely depend on factor conditions such as technical support on advanced technology like a censor, computer scanning of an engine, internet inbuilt sophistication in new motorcycles, regularity in electricity and water supply, availability of skilled workers, training services to employed staff, and access to financial services for at least to stock the genuine spare parts. These conditions are not strong enough in the studied location. There are a sufficient number of banks in the locality but they do not provide the bike maintenance entrepreneurs with loans due to a lack of collateral and registration of the business. The principal motorbike companies never provide the maintenance staff with training and orientation on new features and technologies used in the motorbike. This is hindering the efficiency of the maintenance services.

Textile – Baby clothes: Kathmandu

The key factor conditions which determine the growth, expansion, and sustaining of the baby clothes subsector are; sufficient space and infrastructure, electricity and water supply, finance, and skilled

workers. The electricity, water suppliers, and access to finance are easily available but electricity and water are not regularly supplied. Some of the successful manufacturers have always kept backup skilled human resources giving them training and providing them with an opportunity to work at home producing some piece of clothes work so that they can call any time when workers are limited and the emergence of large orders. The discussed manufacturers have received loans ranging from NPR 20,00,000 to 80,00,000 to expand the business and maintain running capital. The interest rate was within a single digit.

4.3.3 Demand conditions

Goat sub-sector: Nepalgunj

As per the mini-workshop participants, there is high demand for goat meat in the local market as well as in Kathmandu. Most of the goats are supplied to Kathmandu to fulfill its high demand. There is high demand for goat manure, but the supply is very limited. Increased digital presence has helped buyers and sellers with ample information on technical aspects of production and management and market information. There are increased practices of buying and selling Boer goats through online mediums. Nowadays there is an increased consciousness among farmers of not signing any supply deal without properly understanding the contract contents as they were used to being cheated by the customers.

There is a certain **weakness** in demand conditions in his sub-sector. The key weaknesses are; that goat demand depends on the price of meat in the market due to the availability of alternatives to it, high preference for chemical fertilizers by the farmers, and low trust in organic fertilizers due to the high probability of fraud in the name of organic fertilizers. Despite showing a positive response, people do not have the mentality to use organic fertilizer. There is a comparatively low demand for goat meat compared to broiler and fish due to its higher price by mass consumers. About 95% market is occupied by broiler chicken and goat meat. There is a weak bargaining capacity of goat producers. Nowadays, children prefer broiler chicken rather than goat meat, however, there is high demand for Boer goat doe for expanding farms, and establishing new farms. The availability of Boer goat for meat is limited due to limited supply in the market.

Youth wears - Local shoes, boutique (Bridal and groom): Nepalgunj and Dhangadhi

The enterprises in this subsector fulfill customers' demands by showing the designs available on social media and establishing regular relationships with customers. There is a high demand for Nepalese cosmetic products used by beauty services providers than Indians. As per the mini-workshop participants, there is a high level of customer (bridal and groom dress, local shoes) satisfaction towards youth wear prepared locally. The discussed shoe producers have 5,000- 7,000 regular customers in Nepalgunj and 7-10 dealers in Surkhet and Kailali. There will be a high demand from youth students and teachers once schools are open after Covid 19 crisis. Each customer of youth wear has a **weak** bargaining capacity due to limited producers. The producers of shoes and bridal-broom dresses face problems to meet sophisticated demand for designs made by the customers due to a lack of prompt availability of raw materials. They also could not meet the demand made by outside customers in time. The customer complains about a shortage of staff during the peak business seasons (wedding, party events, cultural ceremonies). Few customers who take credits don't make a timely payment, which hampers business flow. They are obliged to offer low price, and margin products due to consumers' preference for low-price products, not quality products.

Kaalij: Nepalgunj, Surkhet, and Kathmandu

New entrepreneurs (Farmers), hotel businesses, restaurants, farm visitors, local customers, and government officials are the key customers of Kaalij farm. There is a daily demand for 10-15 male birds in each farm location. There is a high demand on Saturday and Sunday. Hotel businesses themselves visit the farm to purchase Kaalij. Most of the customers are regular and are increasing their frequency of demands.



Kaalij farm in Surkhet, 2022

According to the discussed farms, there is a daily demand for 700 – 1200 birds in Kathmandu valley, and the current supply is not meeting the market demand. Due to limited production, there is no bargaining on the price and the price for Kaalij meat is almost stable.

Beauty parlor: Dhangadhi and Surkhet

Housewives, male and female teachers, young girls, business people, students, bride, and groom are the key customers of the beauty parlor services within the city and outside. Most of the parlors have their regular customers in increased frequency of visits. At least they visit three times a month. According to the mini-workshops among the youth entrepreneurs, minimum of 1,320 youths (boys and girls) to 3600 young girls demands beauty parlor services each year from each local parlor. This is due to the increasing trend of using social media and the increasing trend of fashionable lifestyles. Each successful

parlor provides the clients with quality services as per their demands and time. But they are unable to provide the customers with all the demanded services and products due to limited human resources and poor stocks. About 100-200 home services are demanded by the brides and grooms each year but only a few of them are fulfilled by the existing beauty parlors. Most of the members of the family have started using beauty parlor services, which has increased the demand so high. Increasing pollution causes high skin damage which ultimately increases the demand for skin products and beauty services. Air pollutants exert a harmful effect on the skin by increasing oxidative stress which counters the skin's antioxidant defenses. There is a depletion of enzymatic (glutathione peroxidase, glutathione, superoxide, dismutase, and catalase) and non-enzymatic (Vitamin E, Vitamin C, and glutathione) antioxidant capacity. Free radicals and reactive oxygen species are generated that interact with the lipid-rich plasma membrane to initiate the lipid peroxidation reaction cascade¹³.

The close link between boutique and photography helped increase demand for parlor services. The boutique refers parlor for suitable make-up to match the prepared dress for a wedding or party event, and the parlor refers to or invites the photographer to take a photo of the clients after dressed and make-up completion. This connects the clients with the photographer and the clients invite the photographer to the events for videography. After the social media upload of the photo or video, the other clients search for the same boutique, parlor, and photographer for service and products. **Local chicken:** Dhangadhi

Most of the local chicken producers have their institutional customers (like hotels, and event organizers) and meat shops ranging from 4 to 50, daily individual customers 15 to 20. There is high demand in the local market as well external city market, which is increasing annually. Customers purchase chicken at the farm gate, which helps to save time. They can also stock chicken to meet external market demand, which helps to fix prices in the internal market for the producers. The individual customers do not hesitate to pay a high price as fixed by the producers, and easy to sell and market the products. There was a high demand for local chicken during COVID and after the COVID since each customer wanted healthy meat and local chicken soups.

The institutional customers particularly meat shops bargain in price without evaluating the quality of the chicken (reared using local feed including grass or imported feed) and request transactions in credit. It is very difficult to collect payment after sales in credit. The producers fetch low revenue in the external market due to transportation costs. There is a high demand for cock than hen.

Photography – Surkhhet

Most of the individual customers visit the studio to take and print photos and order videography. The institutional customers like boarding and government schools, political parties, wedding events, NGOs, and Cooperative demand services like ID cards, banners, flex, photo frame, and video shoot. The photography enterprises provide the customer with quality and fast services, which is always demanded. There are no weaknesses in the demand conditions in this sub-sector.

¹³ Puri P, Nandar SK, Kathuria S, Ramesh V (2017). Effects of air pollution on the skin: A review. *Indian Journal Dermatol Venereol Leprol*

Meat production (Piggery and poultry): Janakpur

New farmers, local meat shops in Janakpur, and meat mart in Kathmandu, and individuals are the key consumers and markets for poultry, pigs, and piglets. There is a high demand for pure and high-quality piglets at a lower price by new enterprises. There used to be a caste taboo attached to pig farming before. All ethnicity and caste people gradually increased pig meat consumption in the local market in Bardibas and surrounding areas of the east-west highway. The poultries are mostly demanded by informal and daily wage laborers in Janakpur market, and north-south road corridors and are preferred by children due to their softness. Most piggery and poultry farms are unable to collect payment from those customers who perform the business on credit.

Motorcycle maintenance: Janakpur (Saptari area)

A high number of Pulsar, Discover, Platina, Yamaha, TVS, Hero Honda, and Bajaj motorcycles inflow for maintenance services are increasing in the Lalbandi area. Customers come from Barsharak, Kathauwa, Kalyanpur, Laahan, Janakpur, Gaighat, Rajbiraj, Amaha, and Kharchuriya areas to the service centers. Most of the services providers are trusted by customers and they do not prefer to change service providers. There is approximately 15% - 140% customer inflow growth seen in different services centers depending on their size and capacity in comparison to the last year. The highest annual growth is 140% and the lowest growth is 15%. There is an increasing trend of youth customers. The maintenance enterprises also provide onsite services on a call basis. The key weakness of the bike maintenance services providers is the inability to provide outside maintenance services, on-time maintenance, unavailability of stock required quality spare parts, and unavailability of parts on time which compels to return the customers without taking service.

Textile – Baby clothes: Kathmandu

A branded manufacturer has customers from Switzerland, Belgium, the USA, and the UK (wholesalers). About 50% of the products are purchased by international customers and 50% of the products are purchased domestically by individuals. The manufacturer sells products through their 2- 3 outlets in Kathmandu and online market like Daraj. The manufacturers face sophisticated demand that includes distinct design, tight and elastic baby clothes, and high quantity. There are no other weaknesses in the demand condition in this sub-sector.

4.3.4 Supporting industries

Goat: Nepalgunj

Cooperatives, meat marts, meat processing enterprises, vet clinics, agro vets, agriculture equipment traders, grass farms, insurance companies, government resource centers, organic fertilizer companies, ICT, online marketing providers, and Facebook groups are the key supporting industries for the goat farming sub-sector. These supporting industries have the following strong points to stimulate the sub-sector: Large customer base, each industry has an image or identity at the municipal level, provision of on-the-job training to students on the farms, cooperative and traders purchase goats at the previously fixed price even during the season of low demand in the market, and promotion of marketing by supporting industries.

There are **weaknesses** of the supporting industries which hampers the quality and supply chain of the goat farms. The weaknesses are; the lack of proper services by insurance companies, creating problems during the payment and demand for commissions by the professionals (company employees), immoral trade like the supply of inorganic fertilizer in the name of organic fertilizer, unavailability of veterinary service providers on needy time, cooperatives controlling goat prices (less price of goats in compared to the market price), higher rates of service charge by the veterinary doctor as well as negligence in the full treatment, availability of subsidy only to a politician or politically affiliated persons from the government sector, a high rental price of leased land for grass production, lack of transparency in case of subsidy provided by the government sector, one-way pricing mechanism by traders due to lack of association of goat growers. Traders prefer local goat variety only during the shortage of goat supply from India due to the high margin as confirmed by the local stakeholders. In some cases, the Indian traders provide the local goat farms with commissions or fees to keep Indian goats for a month on their farms, few weak farms accept this offer.

Youth wears - local shoes, boutique (Bridal and groom): Nepalgunj and Dhangadi

Youth wears sub-sector strongly functions together with supporting industries like school cultural programs, festival and event organizers, hotels, beauty parlors, garments, slipper and fabric shoe producers, fabric and fiber suppliers, raw materials suppliers for both shoes and bridal and broom dress, training providers, cosmetic dealers, and photography. This network-led business model helps to fulfill various product and services demands made by both local and Indian customers particularly youth, school students, and bride and grooms. After the make-up by the beauty parlor, the outfit of the bride and groom dress looks perfect. Photography helps networking for dress and parlor business and quality advertisements. These relationships with different support industries also increase customers for each service and product. Both education and hotel-casino are leading industries in Nepalgunj and Dhangadhi. These lead industries also provide the youth wear and services enterprises with the long-term sustainability of business and market. The education industries are also backed by the remittance inflow in local family members. They care for their children's education. However, there is a **weakness** in supporting industries of the youth wear and services sub-sector such as during the high demand for leather shoes, and parlor services, the raw material suppliers do not deliver shoe materials and cosmetic products in time., For instance, if the suppliers do not supply standard size sole as requested, hampers the youth wear production per demanded quality and time.

Kaalij: Nepalgunj, Surkhet, and Kathmandu

Feed, hatchery, agro-vets, maize, and millet-producing farms are the supporting industries for the Kaalij farms. The key strong points of these industries are the availability of industry feed and hatchery services. The hatching industry provides the Kaalij farms with technical knowledge about chicks and also provides the first vaccine. There is no specific feed produced for Kaalij. In some cases, the supplied feeds are of low quality. The Kaalij farms have limited trust in the hatching industries since they provide the farm with a low rate of hatching, which is about only 60% of the given eggs. There is a limited link between Kaalij farms and maize, and millet producers. This indicates ample opportunities for linking farmers' cooperatives with *Kalij* farms.

Beauty parlor: Dhangadhi and Surkhet

Boutiques, photography, cosmetic products dealers, fancy shops, cooperatives, and marketing agencies are the key support industries for beauty parlors. Each supporting industry connects with new and regular customers and promotes work on social media. Boutiques send their customer to the beauty parlor for make-up. Cosmetic makes timely delivery of products and photography captures great quality images, and boutique provides quality dress. However, sometimes cosmetics deliver low-quality products to the beauty parlor and boutiques making no timely delivery of dresses.

Local chicken: Dhangadhi

Hotels, vet care centers, snacks houses, rice mills, poultry farms, meat shops, agro vets, chicks supply farms/hatchery, and feed companies are the key support industries to the local chicken farms. The agro vets and vet-cares provide the local chicken farms with medicine, vaccines, and technical support as required. Some of the broiler poultry farms also provide feed and hatching facilities. Rice and oil mills provide the farms with mustard oil cake, grass seeds, rice, and maize in one place. Due to a trustworthy relationship between the local chicken farms and support industries, the support industries provide the farms with materials in credit for some time. There is no break of supply experienced in the case of feed.

The key **weaknesses** of the support industries are; that the meat shops and snacks houses do not make timely payments to the farmers. There is limited availability of bran in a rice mill in the required time. The technical providers visit late to the farms when there is an emergency and feed producers stock raw materials (local maize) to increase the price of chicken feed. In this situation, there are no alternative feeding materials like maize and wheat available in the market due to stock by feed producers This can be improved only through frequent coordination and networking between local chicken farms and feed producers during an emergency like COVID 19.

Photography: Surkhet

Schools, beauty parlors, boutiques, event organizers, camera maintenance service providers, and print paper suppliers are the key supporting industries for Photography enterprises. Schools order photography and ID card photo and printing services regularly and provide others with contacts of the enterprise. The beauty parlor and event organizer connect and invite for video and photography of bride and grooms, and events. Each support industry referred clients are making payments timely manner. There are no weaknesses in support industries except the late delivery of photo printing and camera maintenance service providers.

Meat production (Piggery and Poultry): Janakpur

Insurance companies, feed producers, wood mills, meat shops, agro-vets, medicine companies, hatcheries, and chicks' suppliers are the key support industries for the meat production farms. The quality feed and meat shops' services boost the confidence of the poultry and piggery farms to produce quality products. There are more than 6 feed industries in Bardibas areas, which avail quality feed in the local markets. Wood mills make the timely availability of wooden dust for the brooding room to keep the room warm as required by the poultry farm. There is a good relationship between piggery farms and feed producers in Bardibas due to the availability of a large number of feed producers in the same location. In the case of poultry, there is a thin relationship between farmers and feed producers. There is a need for strengthening the institutional relationship between the poultry association, piggery

association, and feed industries association to improve and develop the meat production cluster.

Motorcycle maintenance: Janakpur (Saptari area)

Automobiles, bike showrooms, spare parts suppliers, and dealers are the key support industries for bike maintenance services. There are increasing numbers of showrooms. Most of the showrooms provide the maintenance service providers with the required parts. There are trustworthy relationships with spare parts suppliers and maintenance service providers in the locality. The spare part suppliers provide them with a credit facility and commission on the sales. A few suppliers require cash payments before the parts are delivered to the bike owner, in case the workshop requests the bike owner to purchase spare parts directly from a supplier.

Textile – Baby clothes: Kathmandu

Fabric, buttons, yarn, and machine producers and suppliers are the key support industries for textile-baby clothes manufacturers. Central prisoners produce fabrics inside the prison, which are also purchased by baby clothes manufacturers to ensure locally produced fabric. However, the prisoners also use imported yarn from India even though it is produced in Nepal – which is exported to India and again imported from there. One of the major problems faced by this industry is that the fabric providers cannot provide demanded color and design. Only left out materials from export are supplied to Nepal manufacturers from China, in the case of using imported materials by the baby clothes manufacturer. It has a long-term agreement with Central Prison to purchase fabrics. The prisoners use handloom to produce fabric under the design and quality supervision of baby clothes manufacturers. They produce stripe fabrics. The manufacturers' craftsmen use those fabrics to produce baby clothes as per standard design and size for different ages, and product types. Most of the products are produced by women workers in the factory and the enterprise outlet staff sell products locally but the buyers are from outside and inside the country.

4.4 Driving forces of key youth enterprise competitiveness

According to Michael E. Porter's theory and practices around the world, the five forces of an economy and market dynamics drive the competitiveness of the enterprises. These forces complement, tussle, and interact with each other and influence the profitability of an enterprise. These five forces are; the competitive power of rivalry or co-opetition, the bargaining power of suppliers, the bargaining power of customers, the threat of new entrants, and substitute products including technology. Each force has been analyzed in the sections below as per the mini-workshops findings



Youth boutique and beauty parlor sub-sector mini-workshop in Dhangadhi in 2022

In addition to these five forces, motivational factors of the investors are noted in this section since most investors in developing countries invest not only due to return but also due to sentiments. One can see the motivational factors of an investor in each successful sub-sector below. This will also show whether external development push motivated the investors or another factor is most important in any enterprise.

Boer goat farm. The entrepreneur was involved in the hospitality industry but he sold the hotel due to lack of profit and entered into goat farming due to his interests and foreseen profits in the long run. Some of the promoters were attracted to this business due to their technical skills with them and were inspired by the campaign launched by their technical school in Surkhet 'Padhai Kamgardai'.

Local shoe. The promotor of this enterprise is from a deprived family. He used to work with his father to prepare handmade shoes from the age of 16. Now he registered and transferred the inherited informal business in his name and took over all the responsibilities. He is self-motivated and inspired by his father's hard work in Nepalgunj.

Boutique. Inspired by her mother's involvement in the fashion world and her passion led her to choose the boutique industry. At first, she took a boutique course from a training center located at Kupondole,

Kathmandu on a daily package basis and since then she has been continuously doing her business. The promoter of a boutique in Dhangadhi, being married at a young age, following the family suggestion, gave up her passion to pursue beauty parlor and learned tailoring when her child was just three months old. Since then she has been actively involved in running the boutique business and she provides the new entrepreneurs with training as well.

Kaalij farm. A majority of the promoters are returnee migrant workers and retired from the armed forces. They had savings and looking for new ventures. They were attracted by the success story/news of the Kaalij farm in Pokhara and interested to contribute agriculture sector to build a social image of the promoters themselves.

Beauty parlor. The promotor's sister-in-law used to make eyebrows in parlor service in Dhangadi. She used to visit the parlor with her sister-in-law which made her interested in the beauty business since she was 10 years old. Another boutique promotor took 6 months diploma course in the beauty parlor before starting the business. She was interested in the parlor business due to high demand in the market and high profit in the business.

Local chicken. The interviewed promoters of the local chicken farms hold a graduate degree. One of them passed the written examination for education service and Seti project service, but he could not make it to the interview round. That is why he went to Korea for labor work. The other graduates went to Dubai for work. Both worked there for three-five years. Both the migrant returnee thought to start a business in the agriculture sector once they got back to Nepal. Both the returnee migrants who started local chicken farming in 2019 once they could not return to their previous work due to COVID 19.

Photography. The promotor worked as a photographer with a local photo studio for one year where he learned skills, saw market potential, and started the current photography business in Surkhet.

Piggery. Girl promoter was inspired by YouTube after watching lessons on pig farming. The boy shifted from poultry to piggery. Poultry had a limited market price and dealers did not collect poultry on time. In the case of piggery, he saw ample market demand with prior booking and there was no heavy fluctuation in the market price. He saw increasing market demand for pigs and being triggered by this, he started a pig farm.

Poultry. One of the poultry promoters went to Qatar and stayed one year before starting his business in Nepal. A friend advised him to start a fish and poultry farm. Being a political activist who wants to work in Nepal and not abroad followed the advice. Father-in-law motivated his daughter-in-law, a promotor of another poultry farm, to pursue poultry farming. She started poultry after receiving 17 days of training.

Motorcycle maintenance. The interviewed promotor of a bike maintenance service center in Saptari had received three months of training on motorcycle maintenance from Save the Children International. Later he went to Kathmandu and worked in a company for 1 year and 3 years in the motorcycle maintenance workshop. Once he gained four years of experience and sound technical skills, he established his motorcycle maintenance center in Saptari.

Textile- baby clothes. During her growing phase, the promotor worked as a researcher, owned an NGO, involved in social work and filmmaking. She started raising funds herself and donated bags free of cost to children from around 35 schools. One of the beneficiaries of her project said to her that it was not

easy for her to accept free donations without returning anything to the donor, then she thought that it would not be sustainable only to donate bags using her savings and collecting donations from others. So in search of sustainability and dignity, she invested her saving from filmmaking into a business that manufactured baby clothes and related items. She was motivated by a women-led business in the Philippines. To be successful, she wanted to be unique and produce everything eco-friendly, currently, she has limited information to track the sources of raw materials though she uses 90% local raw materials.

Figure 7: *Summary of competitiveness of the studied youth enterprises*



4.4.1 Competition

Goat - Nepalgunj

There is no competition among Boer goat farms/enterprises in Nepalgunj locality but has a competition with a Boer goat farm in Surkhet which claims 60% purity of breeds. The local farm claims that it has 99% pure Boer goats in the farm.

Most of the Boer goat farms have a competitive advantage of a strong relationship with customers, technical expertise developed by experience within the farm itself, and availability of pure Boer breeds at local Boer farms, and the government resource center in Banke.

The interviewed Boer goat farm has a competitive disadvantage in meeting the full demand potential for breed due to the underutilization of the infrastructure, which is capable of rearing 500 Boer goats. Currently, it rears only 125 goats.

The farm producing Khari and Jamunapari breeds mentioned that there was unhealthy competition with nearby local unregistered goat farms and Indian trader who bring goats from India to Nepal and sells them in the market. There is limited knowledge about competition among the local meat goat producers' due to a lack of sufficient information. The competitive disadvantages for the local goat farms are; the weekly developed goat supply chain, high price compared to the illegally traded goats from India, and insecurity in the farms located nearby border areas.

Youth wears and services: Local shoes, Boutiques (Bridal and broom dress) - Nepalgunj and Dhangadhi

Local shoes- Nepalgunj. There is no rivalry among local shoe producers in Nepalgunj. Only three manufacturers are competing and cooperating. They are jointly competing with imported shoes. The shoe producer has the competitive advantage of offering handmade shoes to local customers and markets, which are designed and produced as per the size, shape, and need of the users. Direct services to clients, the ancestral inherited image, and cost efficiency due to a large-scale production are the key strong points of the enterprise. The enterprise produced 750 pairs of handmade shoes in the last six months. It has a limitation in the expansion of business due to lack of access to operational capital, and technical workers' bad habit of drinking alcohol during day time. The producer started recruiting female workers to replace male workers who drink alcohol during working hours.

Boutiques - Nepalgunj and Dhangadhi. There are more than 25 active and competitive boutiques in each location. Of them, 2-6 boutiques are competing highly with each other which has helped them to enhance the quality of their products with attractive designs and this has ultimately prepared them to penetrate the international markets. The interviewed boutiques have a competitive advantage of having an adequate quantity of hand-embroidered items for the regular supply, and quality-finishing of the products as per customers' choice/desire.



Craftsman prepares boutique products as per design requested by customers in Nepalgunj, 2022

The business has a strong capacity to keep stock of raw materials (fabrics and other materials), advise the clients with appropriate designs as per their body structure, and customized products as per the budget and interest of the customers, and the business itself is newly emerging one in the area. The enterprises also offer after-sale services like re-stitching the products whenever there is a slight alteration in the measurement and fitness. The **competitive disadvantages** in comparison to the competitors are; the market image of being an expensive boutique without considering the quality of the final products.. Another disadvantage reported was a lack of friendly behavior with clients.

Kaalij: Nepalgunj, Surkhet, and Kathmandu

Kaalij is one season business. Most small farms produce eggs and chicks, and birds for meat. There is one farm in Nepalgunj and eight farms in Dang, three farms in Surkhet, and approximately 24 farms in Kathmandu valley including Dhading and Nuwakot. They are becoming competitors at the lower market end locally and equally being resources for each other to meet their market demand. There are 200 Kaalij farms in the country, which emerged in three years period. Newly established the first three Kaalij farms (Kathmandu, Pokhara, and Dang) operated as resource providers to develop at least 17 new Kaalij farmseach of them. Some of the farms are researching to know the possibility of using the larva of Black Soldier Fly (BSF) to decompose wastes like vegetables and foods. The matured larva after the decomposition of wastes can be used as feed for the Kaalij. The interviewed Kaalij farms in Dang and Surkhet have a competitive advantage of using sufficient land to produce grass and local feed, which

helps to improve the taste of Kaalij meat and the image of the farm products. There are no disadvantages associated with Kaalij farming.

Beauty parlor: Dhangadhi and Surkhet

Both the beauty parlors in Dhangadhi and Surkhet have 3-4 key competitors. According to them, there are more than 200 beauty parlors in Dhangadhi and about 25 parlors in Surkhet. The interviewed parlors have competitive advantages of providing quality service on time as per the clients' needs and interests. They also provide home services and they do behave friendly with their clients. However, parlors have limited operational capital to launch new products, have limited network and links at the end of the competitors, and have weak media promotion.

Local chicken: Dhangadhi

Two of the interviewed local chicken farms, which rear 1,000 -1,500 poultry, compete with the new local farms which used to purchase chicks from their farms before. Now, the tough competitor has 4,500 chickens on his farm. There are altogether 107 local chicken farms in the Dhangadhi market. Most of the households in the area rear 8-10 local chickens in their house for household consumption. The interviewed farms have a **competitive advantage** of networking and marketing capacity, they have strong physical infrastructure along with hatchery machines, and also own restaurants within their farms themselves in comparison to competitors. The farms also provide the individual farmers/small entrepreneurs with technical advice, which enables them to ensure supplies during high-demand times. The **competitive disadvantages** of the interviewed farms are self-negligence, limited capacity to prioritize important business tasks, and lack of timely communication with team members. For example: due to negligence, one of the firms lost 300 poultry birds recently when the promotor was in Kathmandu and he did not inform his staff about the scheduled vaccination plan.

Photography: Surkhet

There are 20 photography studios in Surkhet. The studied photography enterprises compete with one to three photography studios in Surkhet. It can be said that they have limited rivalry in the market. Photo and video quality service embedded with the online form, public service application, bank transfer, passport, and EDV online support to the customers are the key the competitive advantage of the enterprises to retain customers regularly. A limited videography human resources and banner printing facilities are the disadvantages of the enterprise in comparison to its competitor.

Meat production (Piggery): Janakpur

There are 8 farms in the research areas. There is rivalry among the competitors. The interviewed farm supplies pure breed piglets to competitors. Once the competitor starts producing piglets, they sell piglets at a low price, which reduces the overall market price. Most of the competitors depend on staff who are responsible for farm management and the owners give less time. But the interviewed farm owner gives full time in farm management and business deals which has contributed to the quality production and reliability. The key weak point of the pig farm is to rely only on self-knowledge and experience. She has not taken any external training as of now.



Cage system piggery farm in Janakpur area, 2022

Poultry meat production: Janakpur

There are about 200 poultry farms and 10 dealers, which produce and supply poultry meat in the Janakpur and north-south road corridor markets. The key competitive advantage of the interviewed farm is the good image among value chain actors, and political networks, and can provide credits to retailers. The owner himself manages the farm, collects money, and delivers the products to the market. The key competitive disadvantage of the farm is a delay in credit recovery due to which the farm has limited running/operating capital.

Motorcycle maintenance: Saptari- Bishanpur area

There are 100-150 motorcycle workshops in Rajbiraj and around 300 in the Saptari district. The interviewed workshop faces competition from two maintenance centers in its location particularly in Bishnupur. The interviewed workshops have a competitive advantage of being forward in repairing and maintenance work and delivering quality service to the customer than their competitors. If the customers complain about the work, the workshops re-do the work until the customer is satisfied. The weak points of the interviewed workshops are limited space for parking and low investment capital for stocking spare parts. Due to the unavailability of spare parts on time, customers go to another workshop for the service.

Textile - Baby clothes: Kathmandu

The interviewed manufacturer has no competition as of now. However, there are some manufacturers of baby clothes in Kathmandu. A mindset of people that Nepali product is inferior creates a good business opportunity for imported products. Therefore, the local clothes have to compete a lot with imported textiles. The competitive advantages of the business are unique striped design, 100% cotton

fabric, and woven by prisoners (from central prison). The key competitive disadvantages are high price, limited expansion potential, and less flexibility in design and colors.

4.4.2 The bargaining power of suppliers

Goat - Nepalgunj

The research revealed that one firm has more than three suppliers for feed, machinery, and breeding in the Nepalgunj area. Options are available for the entrepreneurs to choose suppliers. Even they have access to the suppliers out of Nepalgunj. For example, Nepalgunj enterprises get goat breed from the supplier in Surkhet.

Most of the farms have higher bargaining capacity due to the availability of alternative suppliers and they can purchase inputs from any of the suppliers after confirming quality and price. There is a high number of suppliers and high bargaining capacity of entrepreneurs in the case of local breeds. However, the supplier of machinery, and feed controls the price due to the poor investment capacity of entrepreneurs for bulk purchasing, which leads to a weak bargaining capacity of the entrepreneurs in the case of feeds and machinery. In the case of Boer goat, the international exotic breed supplier has a high bargaining capacity and controls price and delivery time easily. This is due to the lack of production in Nepal. However, the international supplier (Australia) is honest and transparent, which has helped to make a certain expansion plan for those Boer goat farms which has relation to the international supplier. But, this increased cost of production of the Boer goat farms.

Local shoes :Nepalgunj

Shoe sole, leather, and equipment suppliers in Agra, India, and shoe material suppliers in Nepal are the key suppliers of the local shoe enterprise. There are plenty of alternative suppliers both in India and Nepal. The supplier is a permanent resident of Nepalgunj and supplies materials all over the country on a large scale but at a lower price. The supplier supplies materials on credit up to 5 lakhs for about 2 months. There are no weaknesses from the side of suppliers.

Boutiques: Nepalgunj and Dhangadhi

Each competitive boutique has a relationship with more than 2 suppliers in Nepal and India. The boutiques purchase raw materials in Nepal from Nepal-based agents of Indian suppliers. Sometimes, entrepreneurs themselves visit nearby Indian cities to compare the prices of fabrics. There are options for each boutique to select raw materials and embroidery service suppliers, which enhances their bargaining power. They have competitive advantages of controlling and fixing prices and have the linkages to Karigarh (Craftsman) in Kathmandu, Nepalgunj, and Dhangadhi. They have access to the latest fabric design, threads, buttons, and the capacity to purchase raw materials in bulk (in the case of large-sized boutiques). The boutiques order raw materials after a thorough study on social media. The interviewed boutiques have a competitive disadvantage of supply of different materials than the chosen or ordered one and the full control of fabric price by the suppliers.

Kaalij : Nepalgunj, Surkhet, and Kathmandu

There is an adequate number of hatching service providers across the country. There is only one Kaalij feed producer in Lumbini. Therefore, the feed supplier has a monopoly on the quality and price of the feed. The supplier has a higher bargaining capacity in comparison to Kaalij farms and the farms depend

on carrier delivery by the same supplier. There is no availability of grass suppliers, limited maize, and millet growers, which is a competitive disadvantage to Kaali farms.

Beauty parlor: Dhangadhi and Surkhet

The beauty parlors have trustworthy relationships with the supplier of varieties of products from Butwal, Kohalpur, Dhangadhi, and Kathmandu. There are plenty of choices of suppliers that make the supply timely and competitive. The parlors are strong enough to make payments in advance. The distributor does not give credit but the wholesalers give credit to the parlors. But there is a low bargaining capacity of parlors in comparison to suppliers.

Local chicken: Dhangadhi

The broiler farms and feed industries are the key suppliers to the interviewed local chicken farm. The poultry farm supplies both chicks and feeds when needed. The feed industry supplies the feeds at the right time and it is accessible to the farms. The local chicken farms can store raw materials, the capacity to pay 50% in an advance and make the remaining payments on time, and order raw materials at least 3 days in advance. Most of the local chicken farms are dependent on the feed supplier and have limited bargaining capacity due to being irregular and small customer with limited financial capacity. The interviewed farms were unable to find quality feed suppliers in the local market due to 50% credit dependency.

Photography: Surkhet

There are 2-3 suppliers in Surkhet and one supplier in Butwal. They supply all the materials required for photography (such as a cup, printer, photo frame, camera, id card cutter, id card paper, photo paper, and lamination equipment etc). They receive quick delivery service due to regular and bulk purchases. There is a strong relationship between a photography studio and material suppliers. The interviewed photography enterprise makes partial payment in advance and the supplier provides the enterprise with one month credit facility. The enterprises have higher bargaining power than the supplier due to the bulk purchase of materials on behalf of other studios.

Meat production (Piggery): Janakpur

There are more than six suppliers of feed, piglets, and sow in Dhalke, Pokhara, and Dolakha. The pig farms in the Janakpur area (Dhalke and Mithila) source piglets, and sow from Dolakha and Pokhara for breed management. One of the feed factories is located in Dhalke, which produces pig feed. Most of the piggery farms provide the pigs with local feeds like wheat and maize which covers more than 50% of the requirement. 50% of the feed is purchased from the feed industry. The piggery farms can analyze suppliers' markets and strategies due to close connections and information access. The piggery farms check the quality of feed whenever the supplier reduces the price all of a sudden. In cases of a short supply of raw materials in the market, the farms completely depend on suppliers and have to accept the product without any quality concerns.

Poultry meat production: Janakpur

There are more than five suppliers, which supply feed and required raw materials that are needed for poultry production. The availability of more than five suppliers has given competitive advantages to the

interviewed farms to bargain on price and other transport facilities. There were cases of switching suppliers in case of charging a high price on feed. There is no weakness on the farm.

Motorcycle maintenance: Janakpur (Saptari area)

There are two suppliers of spare parts in the location where the interviewed workshop run business in Bishanpura (Bishnupur). The strong points of the interviewed workshop are; a strong relationship with the supplier and providing services on credit and a good relationship with alternate suppliers which reduces the dependency. There is low bargaining capacity on parts price due to the ten percent commission given to the workshop on sales of the parts by the supplier in the case if the motorcycle owner purchases the parts from the supplier.

Textile - Baby clothes: Kathmandu

Fabric, threads, machines, and tools suppliers are the key suppliers to the interviewed manufacturer. The manufacturer is dependent on only one fabric producer. But the fabric producers sell only to the interviewed manufacturer and ask for permission before selling to others. The weakness of the baby clothes manufacturer is not to fulfill all the demand due to the local fabric supply focus.

4.4.3 The bargaining power of customer

Goat: Nepalgunj

Most of the farms sell their goats to meat marts- almost 70% of the production is supplied to meat marts. Around 30% is purchased by local consumers at the household level. The meat mart has a strong marketing channel as well as a good cold storage capacity. It does the value addition of the meat through processing (like grading of meat parts, packaging, storage, minced meat,sausage, etc.). There is high demand for Boer goats (buck and does), especially from new market entrants and already established goat farms, but farms are not being able to supply goats as demanded. For example, the farm will be able to supply only 15 does against the demand of 200. The key weakness on the side of customers is a short supply of Boer goats against the high demand.

There is the weak bargaining power of local level household consumers who purchase goats locally at farm prices. The buyer's immediate reaction towards goat producers is; positive feedback in case of quality but meat mart comments on the irregular supply of goats due to the lack of a permanent supply chain.

Local shoes: Nepalgunj

Schools, students, security guards, armed forces, Indian businesspeople, and the general public are the key customers of this business. About 5 % of the total population of Nepalgunj i.e., approximately 10,000 population are the major customer of the local shoes. Customers have a choice to go to imported shoe suppliers. Customers have higher bargaining capacity in comparison to the producer. Boutiques started ordering shoes for brides and grooms and started buying shoes for women from local shoe producers. The customers seem satisfied with shoes because they last for a long and the designs are of their choice. There is limited bargaining on prices by the local customers but the Indian customer bargains the most. The positive reaction of the customer is that middle-class people prefer to buy local shoes but higher-class customers and lower-class customers want imported shoes.

Boutiques: Nepalgunj and Dhangadhi

The interviewed boutiques have local and foreign customers. Large-sized boutiques belong to 50% of customers from abroad and 50% of local customers.



Large-sized boutique in Nepalgunj owned and run by a girl, 2022

The medium-sized boutiques have 90% of customers in Nepalgunj, Dhangadhi, Tikapur, Kathmandu, and surrounding rural areas, and 10% of customers are from abroad. Each boutique has a network with more than 4-5 retailers and wholesalers. As per the interviewed boutiques, loyalty, regularity, positive feedback, and understanding of the mistakes of the boutique technical staff are the key strong points of the customers that make the enterprises more competitive. Most of the boutiques offer products to an average of 250- 300 bride and groom customers each year. Customers order customized products showing the photographs available online which ultimately improves the skill of the staff and the quality of the products.

In some cases, customers can't differentiate between a high quality (high price products, and low quality – high priced products), which is the key weak point of the boutique customers. The customer provides feedback on the high price of the products but is satisfied with the price after seeing the quality and finishing of the offered products. Few of the customers come for the order at the last hour and demand

the product within 24 hours but are not willing to pay the high price. This shows that there is a high bargaining power of the enterprises in comparison to their customers.

Kaalij: Nepalgunj, Surkhet, and Kathmandu

There are permanent customers of Kalij meat like restaurants, fresh houses, government officials, local representatives, and new Kalij farms of chicks. According to the interviewed farms, at this moment there is an approximately annual demand for 700,000 birds each year but the firms can supply about 70,000 birds. The strong points of the Kaalij customer are; preferring Kaalij meat as regular needs, increased frequency of eating habits by the same customer, and increasing demand for Kaalij meat by new customers. There is limited awareness among consumers regarding the nutritional value, and legality of business operation. Still, consumers feel that eating Kalij is illegal. Kalij meat will be within reach of most of the consumers if the price is lowered or comes down.

Beauty parlor: Dhangadhi and Surkhet

Female teachers, young boys, and girls are the key customers of the beauty parlors. The beauty parlor in Dhangadhi has daily 50-60 customers, and in Surkhet it has daily 7 customers. They visit weekly or three times a month. The strong points of the customers are: they demand the best service at a reasonable price, have trusted relations with each other, high frequency of visits, and make cash payments. They are satisfied with the work and do an inquiry about the quality of the product in advance. The weakness of the customers is: They do not want to wait during the rush hours, and few customers purchase the goods/ service on credit and do not make timely payments.

Local chicken: Dhangadhi

City mart, meat mart and shops, restaurants, local farmers (new entrepreneurs), other farms incorporating nine districts, and daily retail consumers are the key customers of the local chicken. According to the interviewed farms, the total demand for local chicken in Dhangadhi city is around 400 poultry birds per day. The annual demand rate has become double since the pandemics in 2019. People are preferring the local breed since the pandemic. The key strength of the customers is regularity in the purchase and timely order, and their preference for a good quality product. There is a misconception among the farmers in the village that poultry raised on the farms is not local. Such customers purchase only the birds kept in cages/baskets with a mindset that only they are local. Some of the customers prefer to the low price chicken rather than higher price and higher quality chicken (raised with large space grazing, using grass and local feed).

Photography: Surkhet

Individuals, boarding and public schools, bride and groom, wedding ceremony, and party organizers are the key customers of photography services. There are about 20,000 potential customers in Surkhet. Of them, only 2500 photography customers are served by the interviewed enterprise. Regularity, politeness, timely payments, frequent visits, and online referral to photo and video services are the key strengths of the customers. The customers are happy due to additional services offered by the enterprises like online payment of government fees, and utility facilitation. The weakness of the customer is that they prefer low-priced service even for the quality products. Schools and political parties make late payments to photography enterprises. Even they bargain after final dealing as well.

Meat production (Piggery): Janakpur

Farmers, butchers, meat shops, new pig farms, households, and restaurants are the key customers alongside the east-west highway. Customers were satisfied with the quality of piglets and pork. The customers themselves visit the farm to purchase pigs and piglets. Local government and government farms demand a large number of piglets at a fixed price (a bulk quantity rate is comparatively low). The large quantity demand could not be met in the short – term by the interviewed farm. The piggery farm provides the new customers with advice on different aspects of farm management and technical aspects of parasites and disease management.

Meat production (Poultry): Janakpur

Meat shops and marts, weekly markets (Haat-bazaar), restaurants, hotels, and daily wage earners in the Janakpur area are the key customers of the poultry meat. There is high demand for poultry meat on Sunday, Monday, Wednesday, and Friday in Janakpur city. Demand for poultry is increasing each year by 5-10%. A few customers of the poultry hold the payment for about three months, which reduces the volume of running capital of the poultry farm. The price of poultry depends on the quality of the chicken (healthy or unhealthy chicken- they also sell unhealthy chicken at a low price).

Motorcycle maintenance: Saptari area- Bishanpur

The main customers are young boys aged 30-40. Females also come for scooter servicing but are limited to 2-3 regular customers. Though customers know about the limitation of parts availability, they bring spare parts themselves and come to the shop for further repair and maintenance rather than opting out for an alternative workshop. Most of the time, customers have been giving positive feedback. Some of the customers do not make timely payments. The workshop received complaints two times when the work was done by a new staff. The workshop provided services free of cost until the customer was satisfied with the work.

Textile - Baby clothes: Kathmandu

Newly born baby families, mothers, hospitals, international wholesalers, and girls are the key customers of baby clothes. The key strong point of the customers is their loyalty to the baby clothes and its brand, customers' referral to others, frequency of visits by the same customer is high (even up to 30 times). The customers are fully satisfied. The key weak point of the customer is limited knowledge of comfortable clothes.

4.4.4 The threats of new entrants

Goat: Nepalgunj

According to interviewees, there are a few new farms that are planning to start businesses after COVID. If the new farms are established nearby, production will be increased in the location and more customers will visit the area which will eventually help to advertise both the already established and new entrants. This will increase the customer's bargaining capacity and the farm's quality in the long-term. In the short term, there will be a division of the existing customers of the goat farms. There are no big threats in this sub-sector due to new entrants. The entrants would be a threat to the Indian traders but not to the existing producers in Nepal. In the case of Boer goats, few entrants are coming and looking to purchase does which will not be a threat to the existing goat farm. It takes a long time to get

profit and requires a high capital backup. Therefore, there is no disadvantage to the existing farms due to new entrants.

Local shoes: Nepalgunj

There is no information among the existing entrepreneurs regarding new entrants. It does not make a difference to the existing entrepreneurs due to the new entrant since the local shoe producers' market segment is middle-class people. Anyone either new or existing can fail if the producer lacks good management skills. New enterprises can come with new technologies like the dye of different sizes and designs, and a new machine for helping handmade stitching, and sole pressing. This will help transfer technology to existing enterprises as well. The advanced technology requires a high investment, which may not be suitable for the handmade shoe production process.



Youth promoters and staff are from the deprived families in Nepalgunj handmade shoe enterprise, 2022

Boutiques: Nepalgunj and Dhangadhi

As per the interviewee's knowledge, there are 4-6 new boutiques entering the local market each year like Patuki design. This year, one of them may bring a better look of stitching and enhanced finishing of products by standard photography, which will motivate the existing enterprises to update the quality according to market demand. High promotion of the boutiques in the market ultimately helps to increase the number of customers in the local market. There may be high chances of price fluctuation

with the entry of new firms who make an offer of low quality at low price products to attract customers. An increase in the number of so-called copy-paste new entrants in the market may hamper the image of boutique-made products since customers have limited understanding of original or duplicate products, high quality or low-quality products.

Kaalij: Nepalgunj, Surkhet, and Kathmandu

According to the interviewed farms, around 25 new farms are entered each year in this business in the country. The competitive advantage of new entrants is a reduction of the price and entering into a large customer base. There is no threat of new entrants since it develops consumer habits to eat Kaalij meat. There is no threat of price reduction since the operating cost of Kaalij is very low in comparison to other sub-sector businesses, and the initial investment is reduced due to a reduction in chick price from NPR 5,000 to NPR 200.

Beauty parlor: Dhangadhi and Surkhet

Four to five new entrants are entering the market each month. There is no effect until now due to this entry. The new entrants do marketing if they are a student. The new entrants come with new technology and skill, which will increase customers and expansion of the market.

Local chicken: Dhangadhi

According to the sub-sector assessment and interviews with the local farms, there is no disadvantage to the sub-sector due to new entrants. It will keep strengthening the market and will act as complementary as it can exchange ideas, learn and share as well as new technology transfer, and increase demand for new chicks.

Photography: Surkhet

Only one or two new entrants are entering into photography business each year. New entrants are mainly staff from existing firms who start their business after acquiring the required skills. New entrants' relatives and network customers will go to the new one.

Meat production (Piggery): Janakpur

There are 10-15 new pig farms that are in the process of starting a business in the Bardibas and Mithila area. The interviewed farm has competitive advantages of getting an assured market for supplying a sufficient number of piglets and fetching high profits. There are no disadvantages due to new entrants.

Meat production (Poultry): Janakpur

There is no information regarding new entrants in this sub-sector.

Motorcycle maintenance: Saptari-Bishanpur

The interviewed workshop knows that around 2 new entrants open motorcycle maintenance or service center each year in this location. The new entrants may help to promote the business but the customers will be divided.

Textile- Baby clothes: Kathmandu

About 5-7 manufacturers could be new entrants shortly. Even friends who are motivated by the interviewed brand are going to start this business. The competitive advantage of the new entrant would be to establish the market system and cluster. The new entrant might have less knowledge about challenges that may occur during the starting phase. There will be misinformation about 'made in Nepal' with new entrants that only stitches and do only value addition using imported raw materials since there are limited local fabric producers in the Kathmandu market.

4.4.5 The threat of substitute products

Goat: Nepalgunj

There are two substitute products to replace local goat meat. They are poultry and turkey meat since they are less expensive and highly accessible and available in the local market. However, there are regular market segments and consumers who prefer goat meat rather than poultry and turkey due to the good taste of goat meat. But there is no substitute for the Boer goat meat in the market. There is no threat due to technology. The use of technology in goat farms, grass farms, and meat mart reduces the price and cost of production. The technology will better help the farms if they are available in the future.

Local shoes: Nepalgunj

The imported leather shoes may substitute the local shoes but middle-class people do not prefer imported products. There are no effects of online sales. There are low-quality sales against the photos posted on the website by the online service providers.

Boutiques: Nepalgunj and Dhangadhi

The readymade items are the key substitute for boutique products but the young customers prefer local embroidered products. Online marketing always confuses the customers regarding the products' quality mainly due to trendy pictures displayed in the advertisement (there are differences in quality of the fabric in the photograph displayed and original products). Tie and suits can replace Daura Surwal; however, educational industries are promoting habits of wearing different local cultural dresses among youths.

Kaalij: Nepalgunj, Surkhet and Kathmandu

Local chicken may replace the Kaalij meat due to price reasons, but not due to the meat quality and taste. Most of the Kaalij are reared in nature, therefore, there will not be an effect of technology for its substitute.

Beauty parlor: Dhangadhi and Nepalgunj

There is no substitute for the services but there are always new cosmetic products available in the market. Lack of knowledge among the customers on using new products increases the cost for knowledge updating of features of the new products to the enterprise. Beauty parlor – senior beautician conduct seminars to use new products and will solve the problem of new technology and products. The beauty parlor needs to pay the cost for this kind of seminar and knowledge updates.

Local chicken: Dhangadhi

There is no substitute for local chicken by taste. But there is a price and quantity threat posed to local chicken by broiler meat as most people prefer broiler due to its low price and high meat content.

The use of storage technology can impact the local chicken demand positively if the meat mart starts to store local chicken and can adversely affect if they store imported chicken.

Photography: Surkhet

The use of mobile may reduce the demand for photography services but mobiles are not substitutes for photography services. New technology brings opportunity rather than a threat. There is new technology to print a photo on the mobile back cover, which can be an opportunity rather than a threat.

Meat production (Piggery): Janakpur

A specific group of people like Janajati, and the Tharu community prefer pork, which is a different market segment than other meat markets. People from other communities have also started eating pork as it does not have any side effects on human health. Pork consumption has been a fashion alongside the east-west highway. Emerging online technologies such as videos and training materials have helped new entrepreneurs learn new skills and start the business.

Meat production (Poultry): Janakpur

There is no substitute for poultry meat among the general public. However, goat meat is preferred by high-class customers.

motorcycle maintenance: Janakpur (Saptari area)

There is no substitute for motorcycle maintenance services.

Textile - Baby clothes: Kathmandu

There is no substitute for baby clothes products which has already established a Nepali brand in the international market.

4.4.6 Barriers to entry

Overall, there are no barriers to entering into new businesses (Boer goat, local chicken, Kalij, and piggery farms, boutiques, beauty parlors, photography, textile-baby clothes, local shoes, motorcycle maintenance businesses). Enterprises up to the capital of NPR 500,000 can be registered at the municipality, and enterprises beyond that limit of investment can be registered at the Cottage and Small Industry office. The procedure is simple but the youth entrepreneurs need to understand each respective business function and market. In the case of boutiques and beauty parlors, the new entrants should have a level -II certificate to start an enterprise, which is a bit difficult. In the case of Kalij, a locational factor is most important for its entry since the appropriate average temperature should be around 30 degrees Celsius or below on the farm. Some of the enterprises should also take approval from the Provincial Ministry of Land Management, Agriculture, and Cooperative or Veterinary Standards and Drugs Regulatory Laboratory, Budhanilakantha depending on their nature/products/services.

It is difficult to find suitable land for poultry and piggery due to the socio-cultural norms and getting approval from neighborhoods. Once approved from the neighborhood, entrepreneurs need to receive approval and registration from the ward and later from the cottage and small industry office and Internal Revenue Department. All this procedure is completed within a month, so the entry is not so tedious. In the case of a hatchery, the new entrants should receive approval from veterinary hospitals

and livestock service centers. For motorcycle maintenance, it takes about a week for registration, but It takes at least 4 years of learning before entering the motorcycle repair and maintenance business.

4.4.7 Barriers to exit

It is difficult to exit from the business operation, which has a heavy investment in infrastructure. It takes about 3-6 months. The easiest way to exit from the business is to sell the enterprise. Otherwise, the entrepreneur can close the company after a complete report that includes audits and tax clearance by fulfilling all the obligations. It is difficult for the Boer goat farm to exit quickly from the business due to heavy investment in infrastructure and grassland preparation. Exit for motorcycle maintenance is easy since most of them are not registered.

4.5 Technical and economic viability confirmation

4.5.1 Technical viability

This section highlights the discussion on the technical viability of each selected sub-sectors/enterprise. The focus areas of technical analysis were on; products and services, how the business works, customers and market segmentations, installed production capacity, availability of plants equipment maintenance services, skilled human resources, labor productivity, physical infrastructure, and support services, and availability of raw materials. The identified critical success factors for youth enterprises are; running capital, skilled workers, quality of product and timely delivery, owner's time for management, a realistic strategy, immediate technical support, knowledge of customers, time management, and monitoring. The analysis of each technical area has been presented below. Each discussion in the respective sub-sector belongs to an individual interviewed enterprise business model.

4.5.1.1 Products and services

Boer goat: Female goats (does) and male goats (bucks), a crossbreed of Boer goats (50-75%), it has not yet been offered goats for meat due to limited supply.

Local shoes: *Leather party and office shoes* for semi-armed force, police, and hotel staff and *normal shoes* for school children, youth, and teachers. *Bridal and groom shoes* as per the order advised by boutiques and beauty parlor. It is made of leather and Nepali Dhaka.

Boutiques: Bridal sets and groom wear, Daurasuruwal, and stitching training for new youths

Kaalij farm: Male birds for meat, and chicks for new farms.

Beauty parlor: Unisex haircuts and dressing, normal make-up, bridal and groom make-up, hair color, hair straight, nail arts, and cosmetic products sales services, and skincare.

Local chicken farm: Chicken for meat, chicks, and eggs, and restaurant service.

Photography: Photography, photo print, videography, video editing, lamination, online form fill-up, and utility payment service

Piggery: Piglets, and pigs for meat, pure breed of pigs (80%), and 40%-50% breed are also available

Poultry: Poultry for meat

Motorcycle maintenance: Bike servicing, full engine, half engine repair, spare parts replacement, Mobil change, tubeless, puncture, and washing

Textile- baby clothes: Baby clothing, maternity clothing, eco-pad, Kokro, and Patuka (belt).

4.5.1.2 Business – how does it work

This sub-section analyses the mechanisms of businesses. It highlights how the business operate in daily life. This section helps to develop an understanding of the business operation modality of identified 11 sub-sectors. Each discussion in the respective sub-sector belongs to an individual interviewed enterprise.

Boer goats

The grass is produced on the farm itself and feed is purchased from the market. Thus Boer goat farming leads to only 25% dependence on external sources for the raw materials. The goats are fed twice a day. Sheds are cleaned every day. Feeding and cleaning are managed either by employed staff or by the owner. The breed (Boer goat) was initially imported from Australia.



Boer goat farm in Nepalgunj, 2022

Regarding the supply, the buyers visit the farm themselves and make procurement to ensure that pure breeds have been purchased. Most of the buyers book the baby goats in advance i.e. at least six months before.

Local shoes

The local handmade shoes are produced in a small room factory. The required raw materials like Aster, medium leather, nails, etc. are available in the Nepalgunj market (60%), sole and leathers are purchased in the Kathmandu market (20%), and leather and fiber in the Indian market (20%). These raw materials dye and shoemakers' skills are sufficient to produce shoes locally. Four people work in the factory to

manufacture shoes and 2 people work for the final finishing. The enterprise sells products directly from its outlet to the individual customer, and supplies to three dealers, a police training center, and schools (institutional retailers). The shoe producers sell in credit and get payment after the delivery from the institutional customers. Machines will be used during the hitting, stitching, and sticking process only. Covid stopped the process for 3 months due to a lack of raw material.

Boutiques

Most of the raw materials (fabrics, embroidery materials, yarn, etc.) can be purchased in Nepal (Kathmandu and Nepalgunj) from 3-5 suppliers once a month as per the consumer's choices and trending fashion in the market. The order from the customers which includes (wholesalers, retailers, and foreign customers) is noted by the staff and the main owner herself. The owner also takes advance payment during the order or the customers themselves bring the required fabric of their choice. Order (design and quantity) from the wholesaler is taken in bulk, Kaligarhs (Craftsman) produce dress as per the agreed design, and are delivered within 1 month. Regarding the retail order, the products are made ready within 4-5 days. Since the training is provided by the boutique, the learners are assigned for stitching as per their interest and capacity. To avoid dependency on limited suppliers in Nepalgunj and Kathmandu, networking is done with numerous other suppliers by the boutique. After the order is collected, the design is done by the proprietor herself and the stitching is done by Kaligarh (Craftsman). During the peak season (wedding and festival), order from wholesale is not taken. From this fiscal year, most of the best boutiques in Nepalgunj have started exporting some of their products to foreign countries as well through friends and relatives. A medium-sized Boutique produced and delivered 392 sets of wear to wholesalers in the six months (from Shravan to Push), 50 bridal and groom wear were supplied in the retail market.

Kaalij

In the beginning, the Kaalij farm at Pokhara and Kathmandu supplied the chicks by hatching the imported eggs from Belgium and France. The French breed is quite similar to the Nepalese breed. Now breeds are available in Kathmandu, Pokhara, Dang, Surkhet, Butwal, and Kerabari. Nets are available in Nepalgunj, and Kathmandu markets, and fencing materials are available in each studied location. After booking the chicks, the interviewed enterprises constructed sheds, and nets and fenced the area that is required for the birds on leased land. They reared brought one day chick for two months in a brooding room. The farm needs to take care of the chick for a month very carefully to reduce the risk of mortality due to cold. After two months of brooding, the chicks are transferred to the fenced area for their rearing and feeding on the ground. They must not need to shed in the night. The farms start selling 6-month male birds for meat and keep hens (in a ratio of 8 hens and 1 cock together) for eggs and chick production. Three staff (2 staff for the farm and 1 staff responsible for brooding) manage the farm. They feed the birds twice a day. A bird takes about 15-gram feed at a time and clean drinking water. Birds prefer to eat grass. They sell either chicks or cock birds for meat. One hen lays around 80 eggs in a season. Some of the farms also run restaurants. The enterprise sells 3-12 Kaalij every day at the farm gate.



Kaalij farm in Dang, 2022

Beauty parlor

The parlor has a two-room space fully equipped with chairs, tables, tools, and cosmetic products. Kathmandu and local suppliers supply cosmetic products. The parlor needs to be assured of quality products. The parlor opens each day early from 8 am until 7 pm. The client visits the salon themselves while home service is also provided, but very rarely. The four permanent staff take care of the clients with frequent support from trainee students. Customers get the service on a rolling basis (they get their turn in around 20-25 mins lining in the queue). The parlor serves around 40-50 customers per day resulting in 18,250 customers annually. The parlor uses social media for advertising/marketing its services.

Local chicken

After the development of farmland, construction of poultry shed, and fencing, the promotor purchased the first lot of 500 chicks from a local hatchery and in the 2nd lot purchased 1500 chicks from Banke. Both the lots were raised in a natural grazing and feeding system. Birds were provided feeds twice a day and grass once a day (berseem grass). About 5-10 visitors visit the farm each day to buy meat and chicks. Now, the farm has started hatching and selling chicks (weekly 1500 chicks and a minimum of 12,000 in 8 months) Farm sells 10 chickens per day on average. The farm also runs a small restaurant.

Photography

Single room space at a prime location, photography skills, camera, photo printer, and video editing computers, and one or two people are needed to run a photography enterprise. In case of ceremonies like marriage, birthday, and bartabanda (secret thread receiving), the photo studio gets the invitation through referrals from boutiques, beauty parlors, shoe producers, and previous clients. The firm then

visits the function for recording/shooting, and the editing/printing is done at the studio. The product delivery is done from the studio. For online services, individuals have to visit the studio. School children, school forms, citizenship applicants, jobs, and language exam participants visit the studio and take photos and print. Individual people visit the studio for lamination and framing. The studio opens in the morning and closes in the evening.



Photography and videography run by youths from the deprived families in Surkhet from a single room space in 2022

Piggery

In the beginning, the promoter learned about pig farming by watching the video on YouTube. She built a traditional shed for 13 pigs and later on added a cage/pen system and now she has a total of 26 pigs (Breeds: Durek, Yorkshire, Hampshire, and Landrace). They are fed 2 times a day. Young piglets are given minerals i.e., iron on 3rd, 4th, 9th, and 14th day of their birth. They are also given Albendazole against tapeworm. After 45 days' of their birth, piglets are handover to the customers who had made the booking. Customers are also provided with technical advice for immediate management and care during and after the transport. She plans to expand the production to 50 pigs but she has not been able to do so due to a lack of access to loans.

Broiler poultry

The poultry promotor buys chicks from the hatchery in Kathmandu and rears them in two sheds constructed on the leased land. The farm also works as a dealer to supply chicks to other farmers. He has his own fresh house as well. The rest of the chickens are delivered to the customers according to the demand. He has owned a pick-up for this purpose. Furthermore, he also collects chicken from other

farms and supplies them to the markets. The promoter provides the poultry with feed three times a day and water 4 times a day. The farm produces 4 lots of poultry (8000 birds) in a year.

Motorcycle maintenance

The promoter has a rented workshop and provides services to 80 -100 customers a month. He purchases the required parts from the dealers located in Rajbiraj and Lahan. Customers come to the workshop and he provides the service as per the availability of parts. Depending on the nature of the service, he takes a maximum of three days to provide service. He manages to provide services in credit to regular customers. Sometimes, he also provides service on-call basis.

Textiles- baby clothes

The baby clothes enterprise has a long-standing relationship with the fabric producers of Central Prison. The prisoners' woven fabric is under the design supervision of the owner and all the productions are purchased back by the factory owner. The factory produces baby clothes as per the set design in the factory. Women are involved in the process of design, cutting, and stitching of the products. A total of 13 factory laborers produce 40-50 sets in a day. There are 30 trained laborers available in case of high demand, who produce products at home. The products are distributed by 3 outlets in Kathmandu.

4.5.1.3 Customers and market segments

Most enterprises are enjoying high demand for their products and services in the identified sub-sectors. According to the interviewed enterprises, the demand for each of the following sub-sector is increasing and there is a potential to increase more in the future. As per their estimation, the interviewed enterprise market penetration ranges from 0.00050% (Piglets) to 12.5% (Photography), which sets the standard target goal for another enterprise to reach out in the market. The detail has been presented below. Each discussion in the respective sub-sector belongs to an individual interviewed enterprise.

Boer goat

The target customers are the local farms. In the current fiscal year, 10 Boer goats were sold to the local farms with the prediction of 20 in the next year. As the demand for the Boer goat is increasing in the market, there is almost certain of the demand for the coming 10 years. In the local market, there is a demand for almost 1000 Boer goats annually. The current market penetration rate is very small (1%) as only 10 goats are supplied out of 1000 demand in the local market.

Local shoes

The enterprise targets the general public from children to old, youth, specific target school college students, police, the army, and hotels in Nepalgunj, market. Four dealers in Surkhet make the supply to officials and teachers in Karnali, and hilly people (60%). Indian businesspeople (2%) nearby the border purchase directly from the enterprise outlet. It has a market share of 5% of the local shoe market.

Boutiques

The main target customers are the bride and groom in Nepalgunj. On average, annually 392 sets (including bridal and groom wear) are prepared by a medium-sized enterprise. Daura surwal is also prepared for school annual functions and ceremonies. Saree, lehenga, and gown are also in demand by the local customers.

The demand is more likely to increase in the next few years. According to the interviewed boutiques, the annual bridal demand is around 5,000 in the Nepalgunj market.

Large-sized boutiques' target customers are youths abroad and the local market. There are new emerging markets for bridal and groom dresses, lehenga, and sarees in Australia, the UK, and the USA. They sell their 50% of products in the domestic market and 50% in abroad market. Medium-sized boutiques export only 10% of their sales to the abroad market. The interviewed boutique has a market penetration rate of around 8% in Nepalgunj. This indicates a big unmet market demand for this enterprise in Nepalgunj and the market abroad. There is room for new entrants in the market due to the low penetration rate of the successful enterprise.

Kaalij

Local government representatives, government officials, and individuals are the key customers of Kaalij. The left-out market segment that has high demands for Kaalij meat is hotels, but the farms have not been able to make supplies yet. The other market is new entrants to Kaalij farm which demands chicks. Many new farms are entering the market. The interviewed farm can supply only 12 Kaalij (for meat) a day during the season (August – January). There is a demand for 2500 Kaalij per day in the Surkhet municipality area. That means the daily market penetration rate of the interviewed Kaalij is only 0.48%.

Beauty parlor

Both males and females aged 15-50 are the target customers of the beauty parlor business in the local city. The demand for parlor and salon services is increasing every year. The demand is high due to the reasonable price and quality services offered. It is estimated by the interviewed beauty parlor that the daily demand for parlor services in a local city like Dhangadhi is about 2000 per day. The market penetration rate of the parlor is only 2.5% a day.

Local chicken

The local chicken farm has regular customers like hotels (10), retailers (15), meat wholesalers (2), and individuals in Nepalgunj. The demand for local chicken is increasing each year. The demand for local chicken was doubled immediately after Covid 19 due to the use of chicken soup as a healthy diet both for Covid 19 infected or normal people. There is a demand for 30 Kg of chicken meat in a week in 2022 on the interviewed farm. The farm estimates that the demand for meat will be increased to 60 kg per week in the next year. Of the 200 local chicken farms, 50 farms buy chicks from the interviewed farm. The farm has a market share of only 0.5% in the hotel and wholesale market.

Photography

Events, students, public service, job seekers, and students are the key target customers in both urban and rural market segments. Most of the customers are from rural areas. The demand for service is increasing during ceremonies and events, online form filling, and payments services. There is an annual demand of 20,000 people for photography and video graphic services in Surkhet alone. The market penetration rate of the interviewed photography is about 12.5% only. It serves only 2,500 people annually.

Piggery

The local individuals in Bardibas and Mithila, other pig farms, meat processors, and external customers from Bardibas to Itahari are the key customers of the pig farms. There is an annual demand for 255,500 piglets (everyday demand for at least 700 piglets and pigs) in this market segment and the annual supply of the interviewed farm is only 130 piglets. The market penetration of the farm is only 0.00050%. For the coming 4-5 years the demand for the pure breed will keep on increasing.

Poultry

The individuals, butchers (20), and own fresh houses are the key target market of the poultry farm. From the fresh house, the farm supplies 50kg per day whose main customers are local people as well as a businessman. There is a demand for about 100 quintals of poultry meat annually in the Jannakpur market. The farm supplies around 7 quintals of poultry per year. The market penetration rate of the farm is about 7%.

Motorcycle maintenance

The main customers are young boys aged 30-40. Females also come for scooter servicing but are limited to 2-3 regular customers. Looking into 9 workshops in the locality, the daily demand is for 30 services and the average customer in his workshop is 3 per day. This indicates that the interviewed maintenance provider has a 10% market penetration in the Bishanpur area.

Textiles- baby clothes

The baby clothes enterprise targets both Kathmandu and the International market. Each hospital requires 3000 warm bags each year. The interviewed enterprise wants to fulfill this demand. Demand is always increasing as the birth of the child is inevitable, with 562.12 thousand children birth in 2020¹⁴ in Nepal. It has a 0.1% market penetration rate in Kathmandu.

4.5.1.4 Installed production capacity

All the interviewed enterprises utilized their installed production capacity of less than 50%. This is due to a lack of understanding of the business at the beginning and high investment due to improper planning, and limited capital to expand each function at a time. The sub-sector-wise enterprise installed and production capacity have been discussed below. Each discussion belongs to successful enterprise in the respective sub-sector.

Boer goat

The installed infrastructure and shed production/ service capacity is for 500 goats with the possibility of extension up to 1000 goats in the future. It has utilized only 25% of the installed capacity. It has infrastructures in 5 bighas of land.

¹⁴ <https://knoema.com/atlas/Nepal/topics/Demographics/Fertility/Number-of-births>

Local shoes

The shoe factory has its installed capacity to produce about 12,000 pairs of shoes in a year by 6 people. Until now, it produced 600 pairs in the last six months, and seems that only 1200 pairs can be produced this year. The factory has utilized only 50% of its production capacity.

Boutiques

The interviewed boutique has installed 10 normal sewing machines and 6 Jukki machines. These machines have a lifetime of 10 years. All these machines are labor-intensive. The boutique can employ 10 technical labor to utilize existing production installation. Currently, it has employed only 4 technical laborers. If the staff is fully utilized, 1 manpower can produce 2 bridal sets in a day or 4 normal sets/day.

Kaalij

The interviewed Kaalij has installed a brooding room, fence with net infrastructure, and other facilities to rear 5000 Kaalij birds and produce 10,000 chicks on 1 bigha of land. It has only 700 birds in stock for the production process. This shows that it has utilized only 14% of its production capacity. It has to increase its production capacity utilization in the future to meet the daily demand for Kaalij birds. It is estimated that there will be a demand for 4000 birds daily for meat in the future since Kalij meat is becoming popular in Surkhet.

Beauty parlor

The interviewed beauty parlor can serve 100 people per day. It has utilized 50% of its installed infrastructure, equipment, and staff capacity. It can utilize its full capacity in the future by hiring additional staff members.

Local chicken

The local farm has fenced land, two sheds for rearing birds, one hatchery, and one restaurant. The hatchery has the capacity of producing 1500 chicks in a week. Similarly, the farm has a capacity of producing 60 kg of meat in a week. But as of now, the farm utilizes a hatchery to a capacity of 80% and meat only 50% of production capacity

Photography

The interviewed photography enterprise has the capacity to deliver online form filling service to 30 clients, video shooting - 3 events a day, and photo printing and delivery to 50 clients. It has utilized 100 % capacity to deliver videography during the lagan season. It can deliver only 3 videography in a day. It has utilized its online service delivery capacity of 66% and photo print capacity of only 20%.

Piggery

The interviewed pig farm has an installed capacity including pig sheds, cages, breed, and human resources to rear 150 pigs. Currently, she is rearing only 26 pigs. The utilization of installed capacity is only 17%.

Poultry

The poultry has been also integrated with a fish farm. The fish farming is on 2.5 bighas of land where 4 ponds have been constructed. The constructed poultry shed and human resource can rear 2500 birds per lot but the farm currently rears only 2000 birds in a lot. The resource for poultry has been underutilized but for fish, the resources have been fully utilized. The promoter observes that the demand for fish is slightly less compared to poultry.

Motorcycle maintenance

The interviewed motorcycle maintenance service provider can service 8 motorcycles per day but it operated only at 37.5 % of its capacity. The demand will keep on increasing in the future.

Textiles- baby clothes

The baby clothes factory can produce 100 sets of clothes each day. All the required machines and infrastructure are available for this production. It can produce clothes throughout the year (280 days in a year). Now it has utilized only 50% of its capacity.

4.5.1.5 Availability of plants and equipment maintenance services

Most of the interviewed enterprises in each sub-sector have access to maintenance services locally except the maintenance of beauty parlor equipment and camera. The technical issues associated with camera and beauty parlor equipment can be fixed in Kathmandu.

Goat

The farm has permanent sheds and grassland in five Bighas of land nearby a forest area. The farm has plants and equipment in a good condition. The maintenance services for sheds and equipment are available locally.. At present, there is a milking machine, chaff cutter, and goat hair cutting machine on the farm.

Local shoes

Plants and equipment maintenance services for stitching machines are available. Maintenance services for this enterprise are easily available.

All the **boutique**-related machine maintenance services are locally available.

Kaalij requires only net fenced infrastructure and a brooding house. The brooding house can be constructed using bricks, cement, iron, and corrugated iron sheets. The materials related to brooding house and fencing net having a 1-inch hole, 8 -10 fit height are available in the local market. The nylon or para suite net needs to be purchased from Nepalgunj. The maintenance services for these facilities are locally available.

Beauty parlor

All raw materials are not available locally. Maintenance services for machines need to be hired from outside, either from Kathmandu or Delhi if required. There is difficulty in finding quality equipment in the locality.

Local chicken

The technicians are available in the veterinary hospital. Feed producers also send technicians as needed. Only the hatchery equipment and associated maintenance service providers need to be brought from Chitwan.

Photography

The photography camera and memory card maintenance service are available in Dhangadhi and the printing machine maintenance service is available in Surkhet. The camera and memory card maintenance service is not available in Surkhet.

Piggery

The required tools and materials for constructing sheds/cages are easily available in the local market. Maintenance people and medical service providers are also available. In most of the cases, the promotor herself treats the pigs.

Broiler poultry in Janakpur

There is the availability of maintenance and repair service providers for the plants and equipment installed at the poultry farm. The farm needs to bring the broken equipment to the Janakpur market area for repair and maintenance.

Motorcycle maintenance (Saptari-Bishanpur area)

It is difficult to get some of the parts like wires and associated parts. For maintenance of the workshop equipment, the service provider has to go to Lahan or Rajbiraj. It takes about 3-4 days for complete maintenance.

Textiles- baby clothes

The baby clothes enterprise uses electric machines but it has no backup for power during load shedding. All the equipment and machines need to be brought to Kathmandu for repair and maintenance. The service is easily available in Kathmandu.

4.5.1.6 Availability of human resources

The interviewed enterprises employ 2 -16 human resources depending on the size and nature of the business. There is the availability of farm-based technical resources but the off-farm based technical staff need to be trained by the enterprises themselves as per their need. It is very difficult to find a skilled human resource for motorcycle repairing due to the low pay in this sub-sector. Photography technicians are very limited in the market. Beauty parlors, boutiques, and textile sub-sector prepare the skilled human resources themselves and keep the trainees as backup resources. Male beauticians are not easily available in the market.

Boer goat

Junior technicians and farm laborers are available, expert human resources are not available in the market.

Local shoes

There is a backup plan to fulfill the gaps in human resources by engaging girl-workers. Existing human resources (6) will continue since they have received good facilities in comparison to other shoe producers.

Boutique

The boutique itself provides the new youths with tailoring and fabric embroidery training, which helps to develop skilled workers. They are always kept as backup laborers to engage them during the peak period.

Kaalij

The required human resources for Kaalij farm like JTA and support staffs are easily available in each city.

Beauty parlor

Skilled female human resources are available but it is difficult to find skilled males.

Local chicken

There is limited availability of chicken farm labor as and when required.

Photography

There is limited availability of video experts and photographers to expand the enterprise business.

Piggery

Veterinarian doctors are available in the market and the promotor is also capable of doing operations during parturition. The enterprise has kept one dedicated specialist to look after the farm.

Poultry

The interviewed farm employs three staff. The required human resources are easily available but it takes time to train new staff and their adaptation. One staff is allocated to the farm, one in the fresh house, and one in the vehicle.

Motorcycle maintenance

It is difficult to get human resources due to the low salary at the initial phase in the motorcycle maintenance sub-sector.

Textiles- baby clothes

The baby clothes enterprise involves 16 skilled human resources in its production process. They are well trained and well paid. There is an assurance of staff retention. Additionally, the enterprise has trained 30 females to produce clothes at home. These trained females have been treated as a backup force in case the existing human resources leave the company.

4.5.1.7 Management capacity

Most of the enterprises are managed by promoters themselves utilizing their part-time or full time. They have both the technical and managerial capacity to operate their enterprise. The majority of the promoters devote their full time to the enterprise, which has yielded a significantly higher Internal Rate of Return (IRR), Benefit-Cost Ratio (BCR), Return on Equity (RoE), and low Payback Period (PBP).

Boer goat

The promotor himself manages the farm on a full scale. He provides the farm with at least 4 hours a week.

Local shoes

The owner himself manages the factory and outlet. He is capable of convincing the clients, marketing, and delivering backup services. The enterprise practices timely delivery, and no compromise on the quality of materials to be used. The owner wants to continue his father's image of keeping a limited margin in the sales and producing quality and durable shoes.

Boutiques

The promotor herself manages the enterprise. She has strong networking, technical and motivational skills. She trains staff in their area of thematic interests. She is engaged with the chamber of commerce and industry and relevant business forums as a member.

Kaalij

Kaalij farm promoters themselves look after the management of the farm on a rotational basis since all the promoters are engaged in other professions as well. All the promoters are well trained in the management function of an enterprise.

Beauty parlor

The promoter herself manages the beauty parlor. She has good skills in managing time and is flexible in opening the salon as per the time preferred by clients.

Local chicken

The promotor himself provides the farm with 60% of the time for farm management and supervision. He is a graduate and has experience working in Korea.

Photography

The promotor himself manages the photography. The management is fully happy with the current scale of operation but the management wants to improve the system with high-speed internet and computers in the future.

Piggery

The promoter herself is responsible for the overall management of the farm. One of her family members, either she or her husband dedicates full time to the farm. They have learned skills to manage the farm from YouTube, and require additional training.

Broiler poultry

The promoter himself manages the farm and markets the products including the delivery of meat and chicks.

Motorcycle maintenance

The owner himself manages the workshop as a manager and technical expert. The interviewed owner works full-time in the workshop from 7 am to 7.30 pm.

Textiles- baby clothes

The promoter herself looks after the management of the factory and outlet with support from inventory staff, accountants, and sales managers. The promoter has sufficient experience in managing people and networks including social media.

4.5.1.8 Labor productivity

It is difficult to compare cross-sector labor productivity since it has to be compared with peer standards in the same sector. The identified labor productivity of the interviewed enterprises ranges from 6% to 50% of their estimated productive capacity in the same enterprise. This shows that labor productivity is underutilized by all interviewed enterprises, which is mainly due to a start with a relatively large-sized investment and structures that were not needed in the starting phase. Similarly, limited capital to operate the firm at its full capacity, and limited monitoring of business were equally contributing to the lower level of labor productivity. The new entrants may push up the productivity of the existing enterprises in the future by solving these issues.

Boer goat

The farm employs 3 human resources to rear 125 goats. Per staff productivity in this enterprise is only 41.66. According to the promotor, if the farm is operated at full capacity a single staff/human resource can rear 166 goats.

Local shoes

The existing labor productivity of this enterprise is only about 200 pairs of shoes per year. According to the promoters' own production experience, the maximum production capacity per person per year is about 2000 pairs.

Boutiques

Among 10 technical labors, 4 technical labors were assigned for making Daura, 3 for bridal lehenga, and 3 for normal lehenga. During the peak season, a temporary staff used to be added to complete the order in time. One labor can produce 6 bridal sets, 12 normal lehenga sets, and 16 Daurasuruwal in a day, and annually s/he can produce 1,152 bridal sets, 2304 normal lehenga, and 3,072 Daurasuruwal provided s/he has adequate technical skills and practice.

But actual productivity of this enterprise is 392 sets which indicated very low labor productivity. It is only 6% of its full production potential (6,533 sets annually).

Kaalij

The interviewed Kaalij farm employs 3 staff members. It is selling 1000 birds for meat purposes and 5000 chicks for rearing in a year. It has the capacity of producing 10,000 chicks and 5,000 birds each year. Per staff, productivity is only 333 birds for meat and 1667 chicks. The farm has utilized only 40% of its production capacity.

Beauty parlor

The interviewed beauty parlor is operated by only one staff and she serves 10 clients per day. The staff productivity is only 40% of her capacity.

Local chicken

The farm employs 5 people including 3 for the restaurant. Per staff productivity in terms of meat sales is 312 kg and in terms of chick production, it is 5,000 chicks per year.

Photography

Per staff, productivity is 9 for online services, 3 for videography, and 3 for photography per day. Annual per staff productivity is 3285 online forms, 90 videography, and 1095 photo print.

Piggery

Per labor productivity of the pig farm is 65 piglets per year.

Broiler poultry

Per staff, labor productivity is 2, 666 broiler poultry per year.

Motorcycle maintenance

The motorcycle workshop has one working staff and one owner working together. Per worker productivity is 540 motorcycle maintenance in a year.

Textiles- baby clothes

Per staff, labor productivity is 1,141 sets of baby clothes production per year, which is 50% of its capacity.

4.5.1.9 Physical infrastructure and support service availability

Most of the interviewed enterprises have good access to physical infrastructure and support service providers in the studied markets. In some cases, there was an irregular supply of electricity and water, which hampered the business operation. However, the enterprises had managed manually operated machines during load-shedding, and also engage labors in tasks that do not need electricity.

Goat

The electricity, water supply, and road access to the market are in a good position. The physical infrastructures inside the farm are in good condition with slight maintenance requirements for some of the equipment.

Local shoes

Electricity and transports are available for the production process and the delivery of required inputs and outputs. The enterprise generally hires autorickshaws to deliver shoes and receive raw materials.

Boutique

The electricity supply is irregular. However, they have a two-story rented building with 5 rooms.

Kaalij

Kaalij farm faces difficulties due to an irregular supply of electricity. Other facility and service providers' services are readily available.

Beauty parlor

There is an increase in load-shedding in the last few months. The interviewed beauty parlor installed a generator and inverter to operate her business even during the load shedding. which led to damage to the machine due to the fluctuation of voltage. After the damage to the machines, the beauty parlor stopped using the generator during load-shedding.

Local chicken

There is the availability of water supply and electricity, and agro vets' services, but the grass required for the chicken is not available in the locality/market.

Photography

All the required facilities for this business (electricity, internet, high-speed computer, and printer) are easily available in Surkhet.

Piggery

The required physical infrastructure like motorable roads and electricity are available but the farm faces a problem with water supply. She plans to dig well to solve this problem with support from the government.

Poultry-

There is a good supply of electricity and water on the farm with an easily accessible and an easily accessible approach road. The veterinary services are also available locally.

Motorcycle maintenance: Saptari-Bishanpur

The workshop faces a problem with electricity as he brings electricity from a nearby house and they cut off electricity during the machine load which hinders the service.

Textiles- baby clothes

The manufacturing has good access to the electricity, water, road, and communication system but the factory itself has limited physical space (infrastructure). In the case of load-shedding, the workers start other work such as packaging, cutting, etc to utilize time effectively.

4.5.1.10 Availability of raw materials

Most of the enterprises express that there is the availability of raw materials like fabrics, cosmetics, leathers, feathers, feeds, grass, local gains, motorcycle parts, vitamins, and photo printing papers in the market except hard availability of wiring materials that are needed for motorcycle sentence.

Boer goat

The interviewed Boer goat farm produces 75% of the raw materials in the farm. There is more land available to produce more grass in the future as well. The external feeds can be purchased easily from the Nepalgunj market.

Local shoes

Raw materials are easily available. International animal rights campaigners can hamper the availability of raw materials. Shoe factories can use fiber instead of leather in this scenario.

Boutiques

Need to order fabrics and embroidery materials a month in advance from Kathmandu.

Kaalij

The required raw material is available locally. One kg mix feed is sufficient for a bird for 1 month period, which costs around NPR 40. About 90% of feed materials are locally available.

Beauty parlor

Raw materials like cosmetic products are available in Kathmandu and will be consistently available in the future as well.

Local chicken

The required raw materials (feeds, grass, medicine, and vaccine) required for the farm are available locally. The grass is produced on the farmland. The feeds are purchased from the local suppliers in Nepalgunj. In the future, the farm is planning to produce the required quantity of grass on itsland.

Photography

The required raw materials for photography are photo printing paper, lamination paper, and framing materials. They are easily available in Dhangadhi and Surkhet markets.

Piggery

The feeds (ration) and medicines are easily available. If the farm needs boar for breeding purposes, it has to place an order 8-9 months before the needed time.

Poultry

Raw materials like feeds, vaccines, and medicines are easily available. For the majority of the time, feeds are available on time but there are also some instances of delayed supply.

Motorcycle maintenance

The duplicate parts are available easily in the local markets except for wiring sets.

Textiles- baby clothes

The supplier of fabric is the governmental agency, the Central Prison office. Private suppliers are also readily available in the market but they supply imported raw materials.

4.5.1.11Critical factors

Critical factors of success for all the studied 11 sub-sectors are running capital, skilled workers, quality of product, timely delivery, owner's time for management, realistic business strategy, technical support, knowledge of customers, time management(staff, input and output seasonal cycle, etc), monitoring, diverse skills working together, teamwork, and technical work efficiency.

Boer goat

Several factors such as access to the fund, infrastructure, and technical capacity in the team determine the success of the farm, however financial factors have the utmost importance for its expansion.

Local shoes

Skilled workers and running capital are critical factors for success—there is a medium level of uncertainty for retaining skilled laborers.

Boutique

The critical factor for the success of the boutique is the delivery of high-quality products at the ordered time.

Kaalij

The critical success factors for the Kaalij farm are full-time management by the owner and changes in the strategy as per the market demand. At least the market is certain for coming years.

Beauty parlor

The critical success factor of beauty parlor – unisex is human resources. There is a high chance of skilled staff not being available. The parlor should have a backup of female staff.

Local chicken

The most critical factor for the success of the farm is the availability of regular technical services to the farm. There is the certainty of getting such service in the future.

Photography

The owner's own time for the business is a critical factor for the success of the photography business.

Piggery

The critical factor for the success of the pig farm is owners' time and farm management skills. Lack of knowledge on the part of consumers regarding breed quality can also be a problem for the owner.

Broiler poultry

The critical success factor of the farm is proper time management and regular monitoring of the farm. The farm has also installed a CCTV camera for monitoring.

Motorcycle maintenance

The critical factor for the success of the motorcycle maintenance service is the time of the owner. He should provide time. Staff can only handle the shop for 1 day in the owner's absence.

Textiles- baby clothes

The critical factor for the success of the baby clothes business is diverse skills working together, teamwork, and work efficiency.

4.5.2 Economic viability

This section presents cost and revenue, sources of financing, investment sizes, profitability, and economic viability of the successful enterprises owned and run by youths and women as analyzed in technical viability section 4.5.1 from five different markets. The consultant used annual average revenue, average fixed and variable factor cost, Investment Present Value (IPV), Internal Rate of Return (IRR), Pay Back Period (PBP), Net Present Value (NPV), Benefit-cost Ratio (BCR), and an annual average Return on Equity (ROE) variables to confirm the economic viability of the studied enterprises. The internal rate of return is calculated at a 12% discount rate in three years. All the financial data were given by the interviewed enterprises for this analysis purposes only. The sub-sector name represents enterprise to safeguard the privacy of financial data given by each interviewed enterprise.

4.5.2.1 Cost and revenue

Table 4 shows a summary of annual average total fixed cost (AATFC), annual average total variable cost (AATVC), annual average total cost (AATC), and annual average revenue (AARRevenue i.e., AAR) of the 15 enterprises in the five studied locations. The annual average is calculated using three years of cost and revenue data of each interviewed enterprise owned by youths. Table 4 shows that the fixed factors are mobilized more efficiently by motorcycle maintenance enterprises and variable factors are mobilized more efficiently by Kaalij in Surkhet (Kaalij -S) enterprise. That is one NPR of a fixed factor cost of motorcycle maintenance-use generates NPR 128.78 of annual average revenue, which is the highest among 15 enterprises. This is due to informal settings, which became more efficient than others. The Kaalij -S enterprise yielded the highest revenue (11.16) utilizing its variable factors of production. The photography enterprise has the highest efficiency in mobilizing total factors of production, which yielded 6.6 NPR of revenue using 1 NPR of the total factor cost (both fixed and variable factors).

Table 3: Summary of annual average (AA) cost and revenue of enterprises in five locations

Enterprises	AATFC	AATVC	AATC	AARRevenue	AAR/AATFC	AAR/AATVC	AAR/AATC
Boer goat	978,681	1,015,333	1,994,014	6,100,000	6.23	6.01	3.1
Local shoes	166,000	1,742,336	1,908,336	2,666,667	16.06	1.53	1.4
Boutique - N ¹⁵	499,500	517,000	1,016,500	1,657,938	3.32	3.21	1.6
Boutique -D ¹⁶	263,266	2,637,333	2,900,599	10,982,500	41.72	4.16	3.8
Kaalij-N ¹⁷	673,667	2,766,000	3,439,667	10,466,667	15.54	3.78	3.0
Kaalij-S ¹⁸	899,900	696,000	1,595,900	7,766,667	8.63	11.16	4.9
Kaalij-K ¹⁹	141,000	332,500	473,500	2,242,500	15.90	6.74	4.7
Beauty parlor-D ²⁰	598,933	1,560,000	2,158,933	6,378,333	10.65	4.09	3.0
Beauty parlor-S ²¹	192000	910,000	1102000	1,767,533	9.21	1.94	1.6
Local chicken	696117	792,333	1,488,450	3,504,000	5.03	4.42	2.4
Photography	381,000	812,000	1,193,000	7,926,667	20.80	9.76	6.6
Piggery	65167	686,667	751833	1,337,500	20.52	1.95	1.8

¹⁵ Boutique enterprise in Nepalgunj

¹⁶ Boutique enterprise in Dhangadhi

¹⁷ Kaalij enterprise in Nepalgunj (Dang)

¹⁸ Kaalij enterprise in Surkhet

¹⁹ Kaalij enterprise in Kathmandu

²⁰ Beauty parlor enterprise in Dhangadhi

²¹ Beauty parlor enterprise in Surkhet

Enterprises	AATFC	AATVC	AATC	AARRevenue	AAR/AATFC	AAR/AATVC	AAR/AATC
Broiler poultry	1,094,000	3,354,000	4,448,000	5,138,000	4.70	1.53	1.2
Motorcycle maintenance	10,667	433,733	444,400	1,373,667	128.78	3.17	3.1
Textile – baby clothes	957,994	4,329,333	5,287,328	8,000,000	8.35	1.85	1.5
Annual average	507,859	1,505,638	2,013,497	5,153,909	10.15	3.42	2.6

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Boer goat: Nepalgunj

The table below shows that the fixed cost is stable from the second year onwards, and the total cost of production growth between the second and third year is only 2.7 % but the yield growth in this period is significantly high. This shows the long-term growth potential of the enterprise if the factors and demand conditions are the same in the future.

Table 4: Cost and revenue of Boer goat enterprise in Nepalgunj from fiscal year (2076/77-2078/79)

Year	TFC NPR	TVC NPR	TC NPR	Revenue
2076-77	462,000	-	462,000	-
2077-78	1,240,000	1,483,000	2,723,000	1,500,000
2078/89	1,234,043	1,563,000	2,797,043	16,800,000
Annual average	978,681	1,015,333	1,994,014	6,100,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Boutique: Nepalgunj

The table below shows the cost and revenue structure of one of the interviewed boutique enterprises in Nepalgunj. The enterprise has stabilized its fixed factor cost. The total variable cost in the current fiscal year is high in comparison to the fiscal year 2077-78. This is due to the expansion of the dealer network for products, and the inclusion of the opportunity cost of the proprietor in the variable cost structure. There is double growth of the revenue in the same period. The enterprise needs to manage variable factors appropriately to generate good revenue in the future. An average annual revenue yield in terms of using one unit of total factor cost is only 1.6, which is relatively low in comparison to other enterprises.

Table 5: Cost and revenue of boutique enterprise in Nepalgunj

Year	TFC	TVC	TC	Revenue
2075-76	434,000	180,000	614,000	958,750
2076-77	378,000	80,000	458,000	688,750
2077-78	518,000	388,000	906,000	1,578,750
2078-89	668,000	1,420,000	2,088,000	3,405,500
Annual average	499,500	517,000	1,016,500	1,657,938

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Local shoes: Nepalgunj

Table 6 shows the cost and revenue structure of one of the interviewed local shoe manufacturers in Nepalgunj. The enterprise has stabilized its fixed factor cost. The total variable cost in the current fiscal year is high in comparison to the fiscal year 2077-78. This is due to the expansion of operation and the inclusion of the opportunity cost of the proprietor in the variable cost structure. There is an 80% growth in the revenue in the same period. The enterprise needs to manage variable factors appropriately to generate higher revenue in the future. An average annual revenue yield in terms of using one unit of total factor cost is only 1.53, which is relatively low in comparison to other enterprises.

Table 6: Cost and revenue of the local shoes' enterprise in Nepalgunj

Year	TFC	TVC	TC	Revenue
2076-77	142,000	1,950,002	2,092,002	2,400,000
2077-78	178,000	1,375,002	1,553,002	2,000,000
2078-89	178,000	1,902,003	2,080,003	3,600,000
Annual average	166,000	1,742,336	1,908,336	2,666,667

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij – Nepalgunj

Table 7 shows the cost and revenue structure of one of the interviewed Kaalij farms in the Nepalgunj area. The enterprise has well stabilized its fixed factor cost. The total variable cost in the current fiscal year is low in comparison to the fiscal year 2077-78. This is due to the feeding cost to rear additional 5000 chicks. There is a 76% growth in the revenue in the same period. The enterprise needs to manage variable factors appropriately in the future. An average annual revenue yield in terms of using one unit of total factor cost is only 3.78, which is medium in comparison to other enterprises.

Table 7: Kalij farm cost and revenue Nepalgunj

Year	TFC	TVC	TC	Revenue
2076/77	608,000	1,848,000	2,456,000	3,500,000
2077/78	705,000	3,948,000	4,653,000	10,100,000
2078/89	708,000	2,502,000	3,210,000	17,800,000
Annual average	673,667	2,766,000	3,439,667	10,466,667

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

The enterprise lost 5,000 birds in August 2020 due to heavy rainfall and congested spacing for birds. The raising of these birds for 4-5 additional months increased feeding costs in 2077/78, which led to an increase in the total variable cost.

Beauty parlor: Dhangadhi

The table below shows the cost and revenue structure of one of the interviewed beauty parlors in Dhangadhi. The enterprise has stabilized its fixed factor cost. The total variable cost in the current fiscal year is high in comparison to the fiscal year 2077-78. This is due to the expansion of business and the inclusion of the opportunity cost of the proprietor in the variable cost structure. There is a 98% growth in the revenue in the same period. The enterprise needs to manage variable factors appropriately to reduce the cost of production in the future. An average annual revenue yield in terms of using one unit of total factor cost is only 4.09, which is medium in comparison to other enterprises.

Table 8: Beauty parlor enterprise cost and revenue Dhangadhi

Year	TFC	TVC	TC	Revenue
2076/77	600,000	1,320,000	1,920,000	6,545,000
2077/78	600,000	1,560,000	2,160,000	4,220,000
2078/89	596,800	1,800,000	2,396,800	8,370,000
Annual average	598,933	1,560,000	2,158,933	6,378,333

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Local chicken: Dhangadhi

The table below shows the cost and revenue structure of one of the interviewed local chicken enterprises in Dhangadhi. The enterprise has reduced its fixed factor cost. The total variable cost in the current fiscal year is low in comparison to the fiscal year 2077-78. This is due to sales of matured chicken and chicks being under production to rear the next batch. There is a 22% growth in the revenue in the same period. The enterprise needs to improve its fixed and variable factors' productivity. An average annual revenue yield in terms of using one unit of total factor cost is only 4.42, which is medium in comparison to other enterprises

Table 9: Local chicken enterprise cost and revenue in Dhangadhi

Year	TFC	TVC	TC	Revenue
2076/77	750,833	493,000	1,243,833	1,013,000
2077/78	696,833	1,005,000	1701833.3	4,270,000
2078/89	640,683	879,000	1519683.3	5,229,000
Annual average	696117	792,333	1,488,450	3,504,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Boutiques: Dhangadhi

Table 10 shows the cost and revenue structure of one of the interviewed boutique enterprises in Dhangadhi. The enterprise has stabilized its fixed factor cost and the efficiency of the fixed factor is the second-highest among others. The total variable cost in the current fiscal year is high in comparison to the fiscal year 2077-78. This is due to the expansion of dealer network demand for products, and the inclusion of the opportunity cost of the proprietor in the variable cost structure. There is a 76% growth in the revenue in the same period. The enterprise needs to manage variable factors appropriately concerning revenue generation in the future. An average annual revenue yield in terms of using one unit of total factor cost is only 4.16, which is medium in comparison to other enterprises.

Table 10: Boutique enterprise cost and revenue in Dhangadhi

Year	TFC	TVC	TC	Revenue
2076/77	263,266	1,715,500	1,978,766	7,612,500
2077/78	263,266	2,502,500	2,765,766	9,172,500
2078/89	263,266	3,694,000	3,957,266	16,162,500
Annual average	263,266	2,637,333	2,900,599	10,982,500

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Textile- baby clothes: Kathmandu

Table 11 shows the cost and revenue structure of one of the interviewed textile enterprises in Kathmandu. The enterprise has increased its fixed factor cost in the current fiscal year. This is due to the increase and addition of outlet lease costs. The total variable cost in the current fiscal year is low in comparison to the fiscal year 2077-78. The variable factors are efficiently managed by the entrepreneur. There is a 29% growth in the revenue in the same period. The enterprise needs to manage fixed factors appropriately in the future. An average annual revenue yield in terms of using one unit of total factor cost (one NPR) is only 1.85 NPR, which is relatively low in comparison to other enterprises.

Table 11: *Cost and revenue of textile - baby clothes manufacturing in Kathmandu*

Year	TFC	TVC	TC	Revenue
2076/77	150,300	1,220,000	1,370,300	2,000,000
2077/78	835,300	6,072,000	6,907,300	9,600,000
2078/89	1,888,383	5,696,000	7,584,383	12,400,000
Annual average	957,994	4,329,333	5,287,328	8,000,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij – Kathmandu

Table 12 shows the cost and revenue structure of one of the interviewed Kaalij farms in Kathmandu. The enterprise has stabilized its fixed factor cost. The total variable cost in the current fiscal year is high in comparison to the fiscal year 2077-78. This is due to the feeding cost to rear additional birds and the inclusion of the opportunity cost of the promoter. There is a 2508% growth in the revenue in the same period. This is due to sales of matured birds reared in the previous year. An average annual revenue yield in terms of using one unit of total factor cost is only 3.78, which is medium in comparison to other enterprises.

Table 12: *Kaalij farm cost and revenue in Kathmandu*

Year	TFC	TVC	TC	Revenue
2076/77	0	0	0	0
2077/78	136,000	170,000	306,000	165,000
2078/89	146,000	495,000	641,000	4,320,000
Annual average	141,000	332,500	473,500	2,242,500

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij – Surkhet

Table 13 shows the cost and revenue structure of one of the interviewed Kaalij farms in Surkhet. The enterprise has stabilized its fixed and variable factor costs. This is due to the utilization of local material for feeding. There is no growth in the revenue in the same period. This is due to a lack of birds to sell. An average annual revenue yield in terms of using one unit (one NPR) of total factor cost is 11.16 (NPR), which is the highest in comparison to other enterprises.

Table 13 : Kaalij farm cost and revenue in Surkhet

Year	TFC	TVC	TC	Revenue
2076/77	470,000	576,000	1,046,000	1,750,000
2077/78	1,111,000	696,000	1,807,000	11,250,000
2078/89	1,118,700	816,000	19,347,00	10,300,000
Annual average	899,900	696,000	1,595,900	7,766,667

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Photography: Surkhet

Table 14 shows the cost and revenue structure of one of the interviewed photography enterprises in Surkhet. The enterprise has stabilized its fixed and variable factor costs. This is due to the utilization of the entrepreneur's own time. There is a 10.5% growth in the revenue between the current year and the previous year. An average annual revenue yield in terms of using one unit of total factor cost is 9.76, which is high in comparison to other enterprises.

Table 14: Photography enterprise cost and revenue in Surkhet

Year	TFC	TVC	TC	Revenue
2076/77	375,000	812,000	1,187,000	7,860,000
2077/78	375,000	812,000	1,187,000	7,560,000
2078/89	393,000	812,000	1,205,000	8,360,000
Annual average	381,000	812,000	1,193,000	7,926,667

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Beauty parlor: Surkhet

Table 15 shows the cost and revenue structure of one of the interviewed beauty parlor enterprises in Surkhet. The enterprise has spent adequate time stabilizing its fixed and variable factor costs. There is a 90.8% growth in the revenue this year compared to the previous year. An average annual revenue yield in terms of using one unit of total factor cost is only 1.94, which is relatively low in comparison to other enterprises.

Table 15: Beauty parlor enterprise cost and revenue in Surkhet

Year	TFC	TVC	TC	Revenue
2076/77	188,800	860,000	1,048,800	1,248,800
2077/78	188,800	910,000	1098800	1,393,800
2078/89	198,400	960,000	1158400	2,660,000
Annual average	192000	910,000	1102000	1,767,533

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Piggery – Janakpur

Table 16 shows the cost and revenue structure of one of the interviewed piggery enterprises in the Janakpur area. The enterprise has provided adequate time to stabilize its fixed and variable factor costs. There is a 211.5% growth in the revenue between the current year and the previous year. An average

annual revenue yield in terms of using one unit of total factor cost is only 1.95, which is relatively low in comparison to other enterprises.

Table 16: *Piggery enterprise cost and revenue in Janakpur*

Year	TFC	TVC	TC	Revenue
2076/77	41,000	0	41,000	0
2077/78	77,000	1,030,000	1107000	975,000
2078/89	77,500	1,030,000	1107500	3,037,500
Annual average	65167	686,667	751833	1,337,500

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Broiler Poultry: Janakpur

The table below shows the cost and revenue structure of one of the interviewed poultry enterprises in Janakpur. The enterprise has properly stabilized its fixed factor costs. This is due to the stable lease costs. There is a 21% growth in the revenue between the current year and the previous year. An average annual revenue yield in terms of using one unit of total factor cost is only 1.53, which is the lowest in comparison to other enterprises.

Table 17 : *Broiler poultry enterprise cost and revenue - Janakpur*

Year	TFC	TVC	TC	Revenue
2076/77	1,074,000	2,780,000	3,854,000	4,800,000
2077/78	1,074,000	3,180,000	4,254,000	4,800,000
2078/89	1,134,000	4,102,000	5,236,000	5,814,000
Annual average	1,094,000	3,354,000	4,448,000	5,138,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Motorcycle maintenance: Saptari-Bishanpur area

The table below shows the cost and revenue structure of one of the interviewed motorcycle maintenance enterprises in the Janakpur area. The enterprise has stabilized its fixed factor costs well, which are the lowest among others and the fixed factor efficiency is the highest among others. This is due to the stable lease costs, and no other costs associated with factor cost. There is a 9.5% growth in the revenue between the current year and the previous year. An average annual revenue yield in terms of using one unit of total factor cost is only 3.1, which is medium in comparison to other enterprises.

Table 18: *Motorcycle maintenance enterprise cost and revenue - Janakpur*

Year	TFC	TVC	TC	Revenue
2076/77	2,000	71,400	73,400	32,600
2077/78	12,000	505,600	517,600	1,951,200
2078/89	18,000	724,200	742,200	2,137,200
Annual average	10,667	433,733	444,400	1,373,667

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

4.5.2.2 Financing

This section highlights the findings on the sub-sector-wise investment and its allocation by different sources of financing. All the investment-related information is based only on the response given by the promoters during the interview as per their current memory and knowledge. The average size of the investment is NPR 2,888,533. The highest amount has been financed by entrepreneurs, own savings (54%) followed by Banks (16%), Cooperatives and relatives (13% each), money lenders (3%), and grants (1%).

Table 19: Enterprise investment and sources of financing

Enterprises	Investment	Sources of financing					
		Banks	Saving	Relatives/ Friends	Money lender	Cooperatives/ community	Grants
Boer goat- Nepalganj	9,975,000	20%	0%	80%	0%	0%	0%
Local shoes-N	690,000	0%	87%	0%	0%	13%	0%
Boutique -N	500,000	60%	0%	0%	0%	40%	0%
Boutique -D	1,500,000	67%	33%	0%	0%	0%	0%
Kaalij-N	9,600,000	0%	100%	0%	0%	0%	0%
Kaalij-S	7,000,000	0%	100%	0%	0%	0%	0%
Kaalij-K	1,555,000	6%	94%	0%	0%	0%	0%
Beauty parlor-D	2,500,000	60%	0%	0%	0%	40%	0%
Beauty parlor-S	400,000	0%	0%	0%	0%	100%	0%
Local chicken- D ²²	4,400,000	34%	9%	57%	0%	0%	0%
Photography- S ²³	1,103,000	0%	100%	0%	0%	0%	0%
Piggery-Janakpur	270,000	0%	63%	0%	37%	0%	0%
Broiler poultry - Janakpur	2,900,000	0%	91%	0%	0%	0%	9%
Bike maintenance- B ²⁴	235,000	0%	100%	0%	0%	0%	0%
Textile – baby clothes - K ²⁵	700,000	0%	28.5%	61.5%	0%	0%	0%
Average Investment	2,888,533	16%	54%	13%	2%	13%	1%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

4.5.2.3 Profitability

This section presents the profitability and economic viability of the successful enterprises owned and run by youths and women. These diagnosed enterprises from five different markets are Boer goat farms, boutiques, local-shoe, beauty parlors, photography, Kaalij, local chicken, textile- baby clothes, motorcycle maintenance, piggery, and poultry (broiler). The consultant used Internal Rate of Return (IRR), Pay Back Period (PBP), Net Present Value (NPV), Benefit-cost Ratio (BCR), and an annual average Return on Equity (ROE) variables to confirm the economic viability of the studied enterprises. The internal rate of return is calculated at a 12% discount rate in three years. The studied enterprise assured IRR ranging from 19% (Boer goat) to 603% (photography). The photography enterprise yields the highest IRR, BCR, ROE, and lowest payback period among the 15 enterprises. All the enterprises having more

²² Dhangadhi

²³ Surkhet

²⁴ Bishanpur, Saptari

²⁵ Kathmandu

than 12% IRR and a benefit-cost ratio of more than 1, and positive NPV are economically viable under the same factors, and demand conditions.

Table 20: Summary of profitability variables and values

Profitability variables	IPV	IRR	PBP	NPV	BCR	ROE
Boer goat- Nepalganj	8,919,643	19%	2.71	1303,996	1.27	43%
Local shoes	690,000	96%	1.85	2,154,977	4.12	187%
Boutique - N	500,000	84	1.89	1,466,790	3.93	128%
Boutique -D	1,500,000	400%	0.27	18,773,191	13.52	539%
Kaalij-N	9,600,000	48%	2.15	10,438,204	2.09	74%
Kaalij-S	7,000,000	64%	1.64	1,0561,439	2.51	111%
Kaalij-K	1,555,000	89%	1.29	2,946,020	2.89	132%
Beauty parlor-D	2,500,000	168%	0.54	9,754,703	4.9	169%
Beauty parlor-S	400,000	105%	1.68	1,438,443	4.6	166%
Local chicken	4,400,000	36%	2.21	2,921,322	1.66	46%
Photography- Surkhet	1,103,000	603%	0.17	16,096,010	15.59	610%
Piggery	270,000	148%	2.09	2,813,405	11.42	217%
Broiler poultry	2,900,000	22%	2.39	613,584	1.21	24%
Motorcycle maintenance	235,000	182%	1.19	1971129	9.39	395%
Textile – baby clothes	700,000	200%	1.02	5,497,363	8.85	513%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

4.5.3 Business sustainability

Business sustainability depends on the practices of business and people's behaviors with the planet, people, and profits. The interviewed youth enterprises were asked regarding their behaviors with the local community on environmental issues that reflect the bearable business practice, how do they share the business benefit among rural, girls, and marginalized that reflects the equitable or responsible business practices, and use and reuse of waste products to increase profitability, which makes the viable business in the future as well. This section highlights the reflection of the respondents regarding the sustainability of their business practice. Most business practices are equitable and whenever possible entrepreneurs have tried to reuse the waste. Most enterprises recruit staff and laborers from rural and marginalized communities. Most sub-sector enterprises emphasize recruiting women and girls from poor families. Interaction with the community to make the environment more bearable for society and people were found relatively poor/limited.

Boer goat

There is the realization that environmental issues should be taken into consideration but no efforts have been done at the local community level to promote more bearable environmental conditions. The farm has the practice to provide the local community with Boer buck breeding service so that they have access to high breed and the farm plans to prepare a separate male goat for the community farmers. In this way, the farm trickles down its benefit to the rural community. It also uses goat waste as organic manure on the agricultural land to increase soil productivity and ultimately profitability. The grass is also replanted on the same land.

The Boer goat farm practices a sustainable way of doing business within the enterprise in terms of transferring benefits to the rural communities through local employment and breed service sharing.

Hence, the enterprise is economically and socially sustainable. It has already proven in running the business in profit in a situation of underutilization of its resources but it should also need to be involved at the community level to conserve local forests and generate private fodders and forage, in the long run, to demonstrate a bearable practice in the nature and society.

Local shoes

The local shoe producer has no interaction with the local community regarding environmental issues. The shoe producer employs skilled workers from the Dalit community which transfers the benefit of the enterprise to marginalized groups. The product itself is friendly to women, schoolgirls, and people in Karnali. The street shoemaker uses the waste extracted from the factory– the used sole of the shoes can be sold at 20 per piece.

The enterprise is economically and socially sustainable since it has the practice to transfer its benefit through employing marginalized people, paying reasonable salaries and commissions, and enhancing their skills. The product itself is women, school girls, and marginalized area friendly. The enterprise is generating a high IRR in a short payback period and also practices utilizing raw materials and product wastes by the ultra-marginalized shoemaker on the street. They are the skilled labor for the enterprise in the future. The enterprise needs to be connected with the local community to address environmental issues that may be emerged in the future like leather use issues that may reduce raw materials.

Boutiques

The interviewed boutique involves in carrying out a cleanliness campaign in coordination with the local government. While hiring the staff, the main priority is given to a female who is a victim of domestic violence and belongs to a very rural and marginalized community. Among the 10 staff, 6 are females and 4 are males. Raw materials wasted after cutting are reused to make small bags.

The boutique has established good practices of expressing concerns over environmental issues at the local level. The enterprise generates high profit and is socially connected with the female, rural and marginalized communities by providing them with employment opportunities. The boutique is transferring its benefit to needy people through salary, bonuses, and employment. They are the critical resources to continue production in the future. The enterprise can economically be sustained even if it provides more benefits to its employee in the future due to its higher return on equity. The enterprise practices reusing raw material waste which helps to teach them to be resilient during a shortage of raw materials in the long run.

Kaalij

The birds are reared using a natural process. The enterprise has planted trees for feed and planning to plant more trees for agroforestry. The farm employed staff from the marginalized community which trickles down the benefit of the farm through given wages. The waste meat is given to the dog whereas the feather is not reused.

The Kaalij business practice is environmentally and socially bearable since birds are reared using natural processes and utilizing a majority of local raw materials produced by local community people. The enterprise transfers its benefit to socially marginalized community people through employment salary, and shelter, who are engaged to rear the birds. The enterprise demonstrated to generate higher profit,

which can be continued in the future even if it transfers more benefits to its employee and pays a higher price to the locally produced raw materials due to currently established equitable practice between its economic activity and social issues of inclusion. The Kaalij wastes are utilized on its grazing land but the feathers are not being re-used. The enterprise needs to be more careful regarding viable practices between environment and economy.

Beauty parlor

The promotor of the beauty parlor was involved in the youth club before the pandemic and is interested in environmental issues. She employs four staff, of them three are female, one is male. Three staff are local and one Indian. She prefers the quality of work of the staff rather than equitability. The beauty parlor has a practice of reuse of long hair cuts to make hair donuts and the rest of the wastage are loaded in the wastage bus of metropolitan.

The enterprise has a good practice to interact with the local community on environmental issues, which is a bearable practice between the environment and society. It also demonstrates the re-use of haircuts, which helps to protect the environment and generate income for the business.

The enterprise generates high profits but limits trickling down the benefits of the enterprises to marginalized community people through employment and salary since it does not care about equitability but it cares about the quality of work. This practice weakens the long-term social and economic relation of equity. It will pull down the existing higher profit due to social and equity issues.

It can be concluded that the beauty parlor business is moderately sustainable in the long run since it is economically and environmentally viable but not equitable.

Local chicken

The promotor of the local chicken farm works with local forestry group members and grows planting material each year. He provides the local people with employment. Currently, the local chicken farm employs two males and two females from the local community. The farm does not reuse the wastes like a feather and waste meat.

The enterprise generates good profit and shares the benefit with marginalized people through employment, and wages, which demonstrates equitable practice. It interacts with the community and the promoter works with community forestry, which demonstrates a bearable practice between the environment and society and helps to ensure the availability of local raw materials for the business. The enterprise lacks reusing waste meat, and feather which limits economically and environmentally viable practices in the long run. This also shows that the enterprise is moderately sustainable but it can be sustainable after improving its re-use of waste material practices.

Photography

There are no efforts made by the photography enterprise to interact with the community on environmental issues. The entrepreneur himself is Dalit and employs one girl as a helper. There is no reuse of photopaper waste. All the wastes are delivered to the cleaning service provider.

The enterprise generates the highest profit and transfers the benefit and profit to deprived families as promoters and workers. This practice will not dilute the future profit of the business. It delivers the

waste to cleaning providers for its re-use or decomposition, which shows a viable practice between economic activity and the environment. The enterprise limits its interaction with the community on environmental issues but the service itself is environment friendly. In this context, the photography business is sustainable but the enterprise should improve its interaction with the community regarding environmental issues.

Piggery

The pig farm has done tree plantation in the farm location. During the supply of piglets for meat, it has been supplied to the terai community (Madhesi – Yadav), which is a cross-cultural benefit and business sharing. The manures ultimately go into the agricultural land, which helps to reuse waste.

The piggery business is sustainable since it generates higher yield and transfers benefits to marginalized ethnic families including Tharu and Yadav communities through priority to provide piglets for business. The tree plantation in the location and use of waste on the agricultural land helps to generate raw materials locally to continue the business. The enterprises have all three business practices; bearable, equitable, and viable, which ensures the business sustainability in the long run.

Poultry

The promoter teaches his staff about the cleanliness of the environment but he is yet to reach the community people. The farm employs 3 male staff from a marginalized community (Muslim and Chamar). The poultry wastes are used in the fish farm. In the fresh house, Magur fish is placed in two tanks, and the meat wastage is used to feed the Magur fish.

The enterprise generates moderate profit, transfers benefit to marginalized community people through employment and wages, poultry wastes and meat wastes are reused on the fish farm which reduces raw material costs, and no interaction with the community on environmental issues shows limited bearable practice. In this context, it is concluded that the broiler poultry business is suitable provided that the promoter regularly interacts with the local communities on the environmental issue.

Motorcycle maintenance

The owner of the workshop worked as a president of the child club for 1 year where he organized many campaigns on environmental awareness. He has employed 2 male staff from a marginalized community. The waste irons are sold to a wastage collector for their reuse.

It can be conducted that the motorcycle maintenance business demonstrates bearable practices in interacting with communities on environmental issues, equitable practices through transferring benefits to the marginalized employee, and viable practices using waste iron through waste collectors. The motorcycle maintenance business is sustainable to continue its existing profit ratios.

Textiles- baby clothes

The baby clothes enterprise promoter often interacts with the local community and staff on environmental issues like planting trees, cleaning the factory environment. The enterprise transfers its benefit to staff members through fair pay, giving a two-month bonus, organizing retreats, empowerment through exposure, conducting workshops and training on nutrition diet, and cooking

skills, and recruiting women staff from a marginalized community. The bay clothes factory produces zero waste, every fabric is shredded and reused after a chemical-free wash.

In this context, the baby clothes business is sustainable since it generates high profit fulfilling all the three business sustainability criteria; bearable, equitable, and viable as demonstrated above statement.

5 Conclusions and recommendations

Conclusion

The diagnostic team confirms that there are still reservations among people and society towards youths' engagement as enterprise owners in Nepal. The societal wisdom and household level perception indicate that the youths should develop their career as workers abroad, and in general, the girls should not get involved in the business. Most of the participants indicated the self-centric mentality of politicians and policymakers which is preventing them to focus on producing and retaining skilled human resources in 'production and technology' related industries/jobs in the country. In most cases, the youth themselves lack an entrepreneurial mindset. Profits from businesses have been used to purchase land and houses rather than reinvest in business expansion.

The **systemic complexities** such as youth self-employment facility, certificate collateral, agriculture concessional loan, and women entrepreneurship loan policies at the macro level have not been implemented at both meso and micro level to reach out to needy youths and youth-led private sector enterprises. Similarly, poor coordination between meso level support agencies and service providers; a limited link between metalevel thinking, policy implementation, and support practices; and some critical factors like limited running capital, skilled workers, low-quality products and delay in delivery, limited time of owner for business management, and unrealistic business strategy **are the main factors hindering startup, competitiveness, and expandability of youth-led enterprises.**

Competitiveness and market attractiveness analysis undertaken in five different markets revealed that *youth wears (local shoe, boutiques) and Kaalij (Nepalgunj)*; *beauty parlor and local chicken (Dhangadhi)*, *photography, beauty parlor, and Kaalij (Surkhet)*, *motorcycle maintenance and meat production – Piggery and Poultry (Janakpur)*, *textile (baby clothes) and Kaalij (Kathmandu)* ensure higher demand potential, higher profitability, and sustained incomes. Youth wear (local shoes and boutiques) and services (beauty parlor and photography), and babywear are urban-based enterprises successfully run by both girls and boys. Local chicken, piggery, broiler poultry, Kaalij, and motorbike maintenance services are rural-based enterprises mostly run by boys. The Kaalij and piggery farms are owned and managed by girls as well.

The technical analysis of the most successful 15 enterprises confirms that most of the enterprises are enjoying higher demand for their products and services in the market and this demand is growing day by day. The market penetration rate of the interviewed enterprises ranged from **0.00050% (Piglets) to 12.5% (Photography)**, which indicates that there is a big potential for the expansion or growth of the business in the locality.

The interviewed enterprises **employ 2 -16 human resources depending on their size and nature** of the business. **There is the availability of technical human resources for farm-based enterprises but the off-farm based technical human resources are rarely available and the enterprises themselves need to train those per their need.** It is difficult to find a skilled technician for motorcycle repairing due to the low pay in this sub-sector. **Photography technicians are very limited in the market.** Beauty parlors, boutiques, and textile sub-sector prepare the skilled human resources themselves through apprenticeships and they keep the trainee as backup resources. Male beauticians are almost unavailable in the market.

Most of the enterprises are managed by promoters themselves utilizing their part-time or full time. They have a good capacity (technical and managerial) to manage their enterprises. ***The majority of the interviewed enterprise promoters provide their full time for enterprise management, which yielded significantly higher IRR, BCR, ROE, and low PBP.***

It was difficult to compare cross-sector labor productivity since by principle it has to be compared with peer standards in the same sector, which was not possible in this study. The identified ***labor productivity of the interviewed enterprises ranged from 6% to 50% of their estimated productive capacity.*** This shows that ***labor productivity is underutilized by all of the interviewed enterprises,*** which is due to a start with a relatively large investment including structures, which were not needed at the beginning of the business. Other reasons were lack of capital for full utilization of the productive capacity, limited monitoring of work efficiency, and fetching sufficient profit even in this underutilized capacity situation. The new entrants may push up the productivity of the enterprises through a reasonable and small investment in the beginning rather than a big investment, and competition.

Most of the interviewed ***enterprises have good access to physical infrastructure and support services in each market.*** In some cases, there is an irregular supply of electricity and water, which has hampered the business operation. However, the enterprises have practiced managing operation time so effectively that during load-shedding they do works that don't need electricity. Some of them had used manual-operated machines during load shedding.

Most of the enterprises expressed that ***there is the availability of raw materials in the market*** except wiring materials needed for motorcycle repairing.

The identified critical success factors for youth enterprises are; ***running capital, skilled workers, quality products, timely delivery, owner's time for business management, a realistic business strategy, availability of immediate technical support, knowledge of customers, time management (staff, input, and output seasonal or operational cycle), monitoring mechanism, diverse skills working together (different skilled workers work together to produce a single design or product), teamwork, and technical work efficiency.***

Cost and revenue analysis of 15 enterprises across different markets revealed that ***fixed factors have been mobilized more efficiently by motorcycle maintenance enterprises in Saptari and variable factors have been mobilized more efficiently by the Kaalij enterprise in Surkhet (Kaalij-S).*** Per unit of a fixed factor of motorcycle, maintenance-use generates 128.78 units of annual average revenue, which is the highest among 15 enterprises. This is due to informal settings, which stand more efficiently than others. Data shows that the Kaalij -S enterprise yields the highest revenue (11.16) utilizing its variable factors of production. The ***photography enterprise has the highest efficiency in mobilizing total factors of production,*** which yields 6.6 units of revenue using 1 unit of the factor of production in terms of monetary value.

Analyzed data shows that the average size of the investment of 15 enterprises is NPR 2,888,533. The highest amount has been financed from entrepreneurs' own savings (54%) followed by Banks (16%), Cooperatives and relatives (13% each), moneylenders (3%), and grants (1%). The highest investment is required for Boer goat farming (NPR 9,975,000) and the lowest for motorcycle maintenance (NPR 235,000). ***Data shows that there is very limited access to banks and finance for the existing youth enterprise. Most entrepreneurs have mobilized their savings to start and run their businesses.***

The studied enterprise assured IRR ranging from 19% (Boer goat) to 603% (photography). The ***photography enterprise yields the highest IRR, BCR, ROE, and lowest payback period among the 15 enterprises***. All the enterprises having more than 12% IRR and a benefit-cost ratio of more than 1, and positive NPV are economically viable under the same factors, and demand conditions. This confirms that all 15 enterprises are economically viable.

Recommendations

- Photography, textile- baby clothes, beauty parlor-unisex, local shoe, boutiques, Kaalij, piggery, and motorcycle maintenance enterprise models are recommended for its replication by youths and women. The investment size depends on the capacity of the entrepreneurs and rural or urban market settings. The technical and economic viability models in section 4.5 show that all these enterprises can be started with small, medium, or large investment volume. All the enterprises have sound factors and demand conditions in each location.
- The new entrepreneurs should get at least level II or advanced level skills training or one year of work in the same business before starting photography, textile- baby clothes, beauty parlor, and boutiques enterprises. The baby clothes manufacturers should develop their networking capacity at the international and national levels. Other entrepreneurs require strong local-level networking capacity. These enterprises are culturally connected. Cultural festivals and events like birthdays, baby feeding, sacred thread offering, and marriage ceremonies in Nepalese society have been consistently resulting in increased demand for baby clothes, boutiques, beauty parlors, photography, and party shoes or bridal and groom shoes. Unknowingly, all these enterprises have developed referral, networking, and complementary support system in each market, which is leading to the development of a network business cluster. The developed cluster provides the entrepreneurs with confidence for quality improvement and sustainability of the business.
- The new entrepreneurs who want to start a motorcycle maintenance business should have practical training combined with work experience of at least 4 years before the start of the business. It will help them to get the trust of the clients and operate without any fears of failure.
- Entrepreneurs or support agencies should pilot Papaya farming including planting material production in Madhes province since it has market potential to grow but the sub-sector has not been developed yet. The critical factor in the success of Papaya farming is the availability of suitable land. One of the start-ups experienced that only 10% of land in Madhes province is suitable for Papaya. It requires a slight slopy high land area so that there will not be any waterlogging.
- The new entrepreneurs interested to start piggery and Kaalij farm should start with minimal investment and a small structure but there should be ample scope for land area expansion in the same location since both the enterprise models have a high incremental capacity with minimal efforts for risk management. Both enterprise models should concentrate on utilizing local feed and developing a network with maize, wheat, millet, mustard, and grass producers. The piggery enterprise is most suitable along the east to the west highway but in bit isolated locations.

- The new starter of a local shoe manufacturing business should have a thorough knowledge of the raw material supply chain network. Local shoes can be started with a small investment and with a basic level of skills. Local shoe manufacturing is strongly complemented by large industries like hotels, and education industries. Therefore, this is a strategic value proposition in this subsector to expand the existing business.
- All the recommended enterprise models must improve their productivity, variable factor efficiency, networking skills among the other entrepreneurs in their locality and with financial services, and assure the quality of support industries and suppliers before expanding/replicating business.
- The market penetration rate of each enterprise is very low. This shows high demand potential. But the successful enterprise should target to penetrate at least 12.5% of the demand similar to the peer standard set by the photography enterprise.
- The local chamber of commerce and industries, commodity, or sub-sector associations, and youth entrepreneurs should collaborate for learning and sharing. They can conduct training for the new entrants on successful business models. Similarly, allow youth to observe business prototypes so that they can run their business effectively,
- Youth entrepreneurs should form their sub-sector association or should be linked with existing ones, and develop successors. This will help entrepreneurs raise systemic issues and overcome systemic complexities professionally and apolitically.
- All the support agencies and programs should coordinate and develop a common program to create a youth-friendly business environment in the country to attract youths to business. This will help in retaining a large number of youths in the country.
- Mostly subsidies and concessional loans are in the access of people with high political influence. Government should develop an effective mechanism to make these provisions accessible to real and needy youth entrepreneurs.
- The local government should offer a youth economic empowerment focused program after a thorough market analysis of the individual product
- Sub-sector associations should conduct refresher training or workshops regularly to teach the trendy market designs and fashion, and provide entrepreneurs with the latest market information and required advice
- Develop a fast-track technical support mechanism to resolve business-specific technical problems faced by enterprises at the local level.
- National Youth Council should be able to advocate on behalf of youth entrepreneurs on the issues of certificate collateral, women entrepreneurship loan, and concessional loan policy which are not being appropriately implemented by concerned agencies. There is no access to such policy incentives by real and needy entrepreneurs. Each bank should have enterprise loan delivery

departments for youths at the national and branch level with dedicated staff to facilitate and implement such policies.

- Youth Self-Employment Fund is nearly restricted to private enterprises. Most of the fund is directed through cooperatives and groups at local levels. Mostly it has been accessed by the politically affiliated youths, but not by the enterprise who need it. It should develop mechanisms to directly deliver loans to real entrepreneurs and needy youths.
- Government and international organizations should be fair, transparent, and neutral in cases of awarding contracts to purchase local products and services. This will boost the confidence of the newly emerging enterprises when they get an open and competitive environment for market entry.

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Annex-1: Systemic competitiveness – Youth Enterprises – Strong and Weak Points at a different level

Meta

Macro

Meso

Micro

First competitor

Youth Enterprise

Sub-sector attractiveness

Potential to increase youth's income and enterprise profitability	High			
	Medium			
	Low			
		Low	Medium	High
	Potential market demand			

Annex 2: List of respondents and participants

S.N	Name	Gender	Name of company	Type of Business	Position	Age	Contact	Participants	Location
1	Almad Ansari	M	Sidra International private limited	Herbs Trading		32	9804508365	Workshop	Nepalgunj
2	Ashish Gupta	M		Food		34	9801500067	Workshop	Nepalgunj
3	Nitesh sharma								
3	bHatta	M		Government			98480892301	Workshop	Nepalgunj
4	Dinesh Sharma	M		Organic fertilizer	Proprietor		9848035994	KEI	Nepalgunj
5	Anwesh adhikari	M	A.R.C Tech	Product Design		20	9842415333	KEI	Nepalgunj
6	Yogesh B. Singh	M	lord buddha educational academy	Agriculture Product Farm	Contract farming		9843943114	KEI	Nepalgunj
7	Purna Bahadur Ramtel	M	Anugraha Jutta Udh yog	Shoes Maker	Proprietor		9802551452	KEI, TAE	Nepalgunj
8	Vishwa Tripathi	M		Information technology		29	9848271663	Workshop	Nepalgunj
9	Sangita Gautam	F	Sisters Boutique and Training Centre	Boutique	Proprietor	31	9848045214	KEI, TAE	Nepalgunj
10	Sarala Chaudhary	F	Angle queen beauty parlor	Beauty Parlour	Proprietor	25	9826526672	KEI	Nepalgunj
11	Ritika Shrestha	F	Shiwani Beauty Parlour Training Centre	Beauty Parlour	Proprietor		9848259269	Workshop	Nepalgunj
12	Shalu Kashyap	F	Shivam Brush Udh yog	Brush Udh yog	Proprietor	22	9812419251	Workshop	Nepalgunj
14	Kanhailala Tharu awadesh Kumar	M				40		Workshop	Nepalgunj
15	Yadav	M		Shoes industry	Proprietor	24	9858031232	Workshop	Nepalgunj
16	Krishna Sareki	M		Shoes industry	Proprietor	30	9858040045	KEI	Nepalgunj
17	Sarita Bohora	F		Beauty Parlour		29	9858033345	Workshop	Nepalgunj
18	Sudhir Singh	M	Dhanvarsha Industries and Biotechnology Private Limited		Proprietor		9800539789	KEI	Nepalgunj
19	Pramila Malla	F		Beauty Parlour	Proprietor	28	9814592262	KEI	Nepalgunj
20	Menuka rawat	F					9869966310	Workshop	Nepalgunj
21	Binod kumar thapa	M	nepalgunj Multipurpose agrofim Private limited	Goat Farm	Proprietor	38	9858055989	KEI TAE	Nepalgunj
22	Sandip Chand	M		Goat Farm	Proprietor	24	9812429953	Workshop	Nepalgunj
23	Mahendra KC	M		Goat Farm	Proprietor	28	9866538962	Workshop	Nepalgunj
24	Yek Bahadur Khadka	M		Goat Farm	Proprietor	36	9848126058	Workshop	Nepalgunj
25	Bijay Kumar Loniya	M		Livestock	Proprietor	20	9800578637	Workshop	Nepalgunj
26	Shakti Kumar	M	Eemaan Agriculture Farm	Livestock	Proprietor	41	9815500372	Workshop	Nepalgunj
27	Kalem Ahamad	M		goat farming	Proprietor	40	9868200786	Workshop	Nepalgunj
28	Nirmal Nepal	M	Himalayan Wildlife and Agro	Kalij	Promotor	40		KEI TAE	
28	Kumar Oli	M		Veterinary doctor		32	985110377	Stakeholder	Nepalgunj
29	Ajaya Singh Prajaparti	M	Chamber of Commerce		karyalaye pramukh 6th level			Stakeholder	Nepalgunj
30	Krishna Prasad Joshi	M	Office of nepalgunj sub-metropolis city		government officer			Stakeholder	Nepalgunj

31	Sagar Dhakal	M	Agriculture Knowledge centre		9th level government officer			Stakeholder	Nepalgunj
32	Pramila Chaudhary	F	Shova boutique	Boutique	Proprietor	29	9821613809	KEI TAE	Dhangadi
33	Saraswati Yonjan	F		Boutique	Proprietor		9864315344	Workshop	Dhangadi
34	Sapana Rokaya	F	Natural Beauty Home	Beauty salon	Proprietor	28	9848611367	KEI TAE	Dhangadi
35	Garima Thapa	F	Glow up beauty zone	Beauty parlour	Proprietor		9815650608	Workshop	Dhangadi
36	Roma Rawat	F	Glamour Boutique	Boutique	Proprietor		9848482519	KEI TAE	Dhangadi
37	Shabhana Khan	F	Glamour Boutique	Boutique	Staff		9822651565	Workshop	Dhangadi
38	Kamala Gurung	F	Beauty parlour- BBC	Beauty Parlour	Proprietor		9800617092	Workshop	Dhangadi
39	Bindu Chaudhary	F	Laxmi Beauty Parlour	Beauty parlour	Owner partnership owner		9849384647	KEI	Dhangadi
40	Sanju Chaudhary	F	Laxmi Beauty Parlour	Beauty parlour			9824609498	KEI	Dhangadi
41	Indra Ranee	F	Indu Beauty parlor	Beauty parlour	Proprietor	32	9805740415	KEI	Dhangadi
42	Janaki Kohar	F	Samjhata sarita				9862271774	Workshop	Dhangadi
43		F	New look boutique	Boutique	Proprietor	23	9800605912	KEI	Dhangadi
44	Tej Rawat	M	PKS Pig Farm	Pig Farm	Proprietor	35		KEI	Dhangadi
45	Dambersingh dhami	M	NS Poultry Farm	Poultry farm	Proprietor	38	98447761075	KEI TAE	Dhangadi
46	Brishram rana	M	Youth and Small Enterprise Self employment Fund		member Secretary			stakeholders	Dhangadi
47	Goma Gyawali	F	Karnali Chamber of commerce		Facilitator Executive Director			stakeholders	Dhangadi
48	Hari prasad Joshi	M	Veterinary hospital and Livestock Service Centre	Veterinary officer			9858488882	stakeholders	Dhangadi
	Lokendra Bohora	M	Sirisha Poultry and Suppliers	Chicken	Proprietor			KEI	
49	Birkha Baduwal	M	Malika Goat Farm, Galaxy Mobile Hub	Goat farm and mobile centre	Proprietor	35	9858050124	Workshop	surkhet
50	Rafitun Khan	F	Karnali Masala Udhyog		Chairperson	31	9843969175	Workshop	surkhet
51	Parbati BK	F		Beauty parlour	Proprietor	28	9860747652	Workshop	surkhet
52	Maan Kumari Magar	F	Dhaka Tatha Un		Proprietor	30	9848212936	Workshop	surkhet
53	Rabina Sharma	F	Birendra Nagarpalika		5th level officer	32	9848290950	Workshop	surkhet
54	Shanti Poudel	F	Buffalo farming			25	9844835094	Workshop	surkhet
55	Sibraj Timilsina	M		Poultry farm	Proprietor	26	9848122021	Workshop	surkhet
56	Indra Bahadur Thapa	M	Birendra Nagarpalika Office		Sakha adhikrit	55	9848075483	stakeholders	surkhet
57	Hima Upadhyaye	F	Bhawani Chapakhana		Proprietor	30	9858067999	Workshop	surkhet
58	Ram Kumar Thapa	M	aatriya kosh pashupanchi tatha chyaw bikash kendra		Manager	34	9848051271	Workshop	surkhet
59	Bimala BK	F	Karnali Udhyog						
60	Sandip BK	M	Sarsafai		Manager	34	9843318209	Workshop	surkhet
61	Er Prakash Kharal	M		Photography		20	9827584854	Workshop	surkhet
62	Raj Bahadur Shah	M	DTI SOFT MICROSOFT Subhakamana Agro Enterprise		Founder manager	23	9844814003	Workshop	surkhet
63	Rama Acharya	F		Mushroom farming		30	9848285259	Workshop	surkhet
64	Karna Bahadur Rabindra Kumar Chand	M	Saamel Agriculture Private Limited		Managing Director	36	9858071902	Workshop	surkhet
65		M	Green Agro Farm		Director	38	9858056870	Workshop	surkhet
66	Kamal Bahadur	M	HK organic Wild and agriculture research private Limited		Shareholder	38	9848336200	KEI TAE	surkhet
67	Sarita Rawal	F		Fiber tatha allo		30	9858066626	Workshop	surkhet

68	Bal Kumari Hamal	M		Tailoring	Director	39	9848228225	Workshop	surkhet
69	dipak Buda	M	Gangamaal travels and tours private limited		Director	32	9858052810	Workshop	surkhet
70	Kalpana salami Magar	F				16	9848212936	Workshop	surkhet
71	Bhanubhakta Khadka	M	Ratnalaxmi Garment Bheri Karnali Krishi farm private limited		Chairperson	31	9850051638	Workshop	surkhet
72	Prem Bahadur Shahi	M	Mountain wildlife Food Pro.Pra	kalij farm	Sanchalak	35	9866681800	KEI	surkhet
73	Ganesh Poudel	M	Smriti krishi tatha pashupalan farm	Kalij farm	Sanchalak	31	9868347203	KEI TAE	surkhet
74	Manoj Kumar Sahi	M	Lumbini Photo and Videography	local chicken	Sanchalak	37	9851109963	Workshop	surkhet
75	, Narayan Thapa magar-	M	Oshan Beauty Parlour and Training centre	photography	Shareholder	34	9841813320	KEI	surkhet
76	Laxmi	F	Parbati cosmetic and beauty parlour	beauty parlour	Proprietor	30	9800546569	KEI TAE	surkhet
77	Parbati BK	F	Uttarganga Digital Photo studio	beauty parlour	Proprietor	28	9860747652	Workshop	surkhet
78	Ganesh Bahadur gaha	M	Chamber Of commerce, surkhet	photography	Proprietor	28		KEI TAE	surkhet
79	Bhadra Bhandari	M	Agriculture development directory		sachib		9858051859	stakeholders	surkhet
80	Chitra bahadur rokaya	M						stakeholders	surkhet
81	Dr Bikash Shrestha	M	Animal Disease Diagnostic laboratory		Senior Veterinarian Officer			stakeholders	surkhet
82	Parbati BK	F	Parbati cosmetic and beauty parlour	beauty parlour	Proprietor	28	9860747652	KEI	surkhet
83	gunu sunar	F	CFWA	NGO	FO		9847017953	Workshop	janakpur
84	Kalpana rai	F	Kirat krishi farm	pig farm	Proprietor	33	9809670955	KEI TAE	janakpur
85	rakesh Mishra	M	Kitli tea and snacks	snacks and tea	Proprietor		9812193298	Workshop	janakpur
86	Keshab raj joshi	M	RRPK	NGO	FO		9851169745	Workshop	janakpur
87	Ankita Ghimire	F	RWVA	NGO	FO		9801972366	Workshop	janakpur
88	Proful singh	M	RYC	NGO	FO		9801674867	Workshop	janakpur
89	Birendra Kumar	M	Chandan Poultry Farm	Poultry farm	Proprietor		9844021997	Workshop	janakpur
90	Binod Kumar Das	M	Mithilaphalful nursery		Proprietor		9823280196	Workshop	janakpur
91	Diwash chaudhary	M	Mukesh poultry	Poultry farm	Proprietor		9826809748	Workshop	janakpur
92	Tilak Bahadur Basnet	M					9862065093	Workshop	janakpur
93	Rabindra Ray	M	Ram janaki breeder farm		Proprietor		9854035251	Workshop	janakpur
94	Bhim kumari baral	M	Baral multipurpose agriculture farm	agriculture	Proprietor		9844081137	Workshop	janakpur
95	Ramkewal Mahato	M	Everest banana krishi farm	papaya, floriculture	Proprietor	28	98444481616	KEI TAE	janakpur
96	Amrit kumar sancheti	M	kamal suppliers		Proprietor		9824741126	stakeholders	janakpur
97	Milan kumar singh	M	milan dairy food Ind pvt ltd	dairy	MD		9852821900	Workshop	janakpur
98	anwar ali	M	M and M autoparts	bike parts	MD		9804702951	Workshop	janakpur
99	Ramesh Kumar shah	M	Ramesh kirana pasal	kirana shop	MD		9801544114	Workshop	janakpur
100	roshan kumar mandal	M	sabal nepal saptari	NGO	JT		9801560026	Workshop	janakpur
101	Kishani mahato	M	Jajatakrishi sahakari		Member		9814860899	Workshop	janakpur
102	Aangxilo sherpa	M	Pratikshya krishi farm		Proprietor		9844448878	Workshop	janakpur
103	Anisha tamang	F	sangarsha Krishi farm		Proprietor		9864085218	Workshop	janakpur
104	N.B. Rai	M	United foodship agrofarm		Proprietor		9800817055	Workshop	janakpur
105	Raj Kumar Ale	M	RA- Krishi farm		Proprietor		9841351466	Workshop	janakpur

106	Bhuwan Singh Magar	M	Singh Bangur Farm		Proprietor		9860212477	Workshop	janakpur
107	Lanka Man	M	Lali gurash		Proprietor		9818711220	Workshop	janakpur
108	Yagya bahadur bhujel	M	Gaun Besi Bangur Farm	pig farm	Proprietor	30	9813044897	KEI	janakpur
109	Kabita kumari singh	F	RN Kukhura farm	Poultry farm	Proprietor		9819845790	KEI	janakpur
110	Jay sankhar singh	M	Ankush ansh poultry farm	poultry farm	Proprietor		9824910286	Workshop	janakpur
111	Umesh prasad shah	M	sumit matsya palan kendra	poultry farm	Proprietor		9854025535	Workshop	janakpur
112	Arun kapar Shrawan Kumar	M	avay poultry farm	Poultry farm	Proprietor		9813572530	Workshop	janakpur
113	Yadav	M	Yadav Macha and Kukhurapalan	Poultry and fish farm	Proprietor	28	9854028721	KEI TEA	janakpur
114	deepak kumar thakur	M	subekshya macha farm	fish farm	Proprietor		9854021961	Workshop	janakpur
115	Akendra Bahadur Shah	M	Akendra Motorcycle Workshop	Bike service	Proprietor	27		KEI	janakpur
116	Manoj Chaudhary	M	Motorcycle	Bike service	Proprietor	41		KEI	janakpur
117	Shyam	M	shyam motorcycle garage	Bike service	Proprietor	23		KEI TAE	janakpur
118	Pradip dutta	M	Provincial chamber which is the branch of central unit					stakeholders	janakpur
119	Sabita Maharjan	Female	Kirtipur Hosiery		Proprietor	17	9841649035	KEI	Kirtipur, kathmandu
120	Suresh Maharjan	Male	Kirtipur Hosiery				9841969581	Workshop	Kirtipur, kathmandu
121	Watsal Rajbhandari	Male	Dochaa Pvt. Ltd		Proprietor		9803002203	KEI	Gaurighat, kathmandu
122	Kawish Shrestha	Male	Sajilo Marmat Sewa		Proprietor		9801855514	Workshop	Jhamsikhel, kathmandu
123	Jiban Bhai	Male	Muse Restobar		Proprietor		9851198100	Workshop	Lazimpat, kathmandu
124	Nisha Tacjale	Female	Kathmandu Organics		Proprietor		9801165067	KEI	Bansbari, kathmandu
125	Denim Krishna Shrestha	Male	Fitbox		Proprietor		9851047539	Workshop	Balkumari, kathmandu
126	Janaki Dhami	Female	Guru Wildlife Agro Pvt. Ltd.		Proprietor		9848770449	KEI	Budhanilkantha, kathmandu
127	Deepika Gyawali	Female	Green Growth Group		Proprietor		9849151700	Workshop	Gairigaun, Sinamangal, kathmandu
128	Rohan Maharjan	Male	Farm to Finger				9818280655	Workshop	Teku,kathmandu
129	Rewati Gurung	Female	Kokroma Nepal		Proprietor	38		KEI and TAE	Bouddha, kathmandu
130	Kiran Timsina	Male	Urban Girl Inc Pvt. Ltd					Workshop	
131	Prakash Thapa Magar	Male	Raniban Kalij Farm		Proprietor	35	9846552940	KEI TAE	Raniban
132	Bikash Mali, Bikram Mali	Male	Mali Agro and Wildlife Product Pvt. Ltd.		Partners	29,30	9841009924	KEI	Thecho, Lalitpur
133	Ganga Devi Neupane	Female	National Youth Council				9841832211	stakeholders	Sanothimi, Bhaktapur
134	Dr Nabin Upadhyaya Ghimire	Male	Veterinary Standards and Drug Regulatory Laboratory		Information officer		14650457	stakeholders	

Annex 3: Five forces tool for key enterprise interview

Introduction and ice break

1. Firm's name and contact:
2. Year of establishment:
3. Shareholders and age:
4. Total investment:
5. Products and services:
6. Innovation:
7. Used technology:
8. Annual turnover this year:
9. Annual profit in the past years: 2076/77.....
2077/78.....
2078/79 (annualized).....
10. Historical background and motivational factor of the entrepreneur:

Competition:

11. Who are your competitors?
12. What is your competitive advantage compared to your competitors?
13. What is your competitive disadvantage compared to your competitors?

Suppliers' bargaining power:

14. Who are your suppliers?
15. What are your strengths compared to your suppliers?
16. What are your weaknesses compared to your suppliers?

Customer's bargaining power:

17. Who are your customers? What are their size and share?
18. What are the strengths of your customers from your point of view?
19. What are the weaknesses of your customers from your point of view?
20. How do they react to your products and services?

New entrants:

21. Who could be new market entrants?
22. What could be the competitive advantage of new market entrants?

23. What could be the competitive disadvantage of new market entrants?

Substitute products:

24. Is there a threat of substitute products/services?

25. Is there a threat due to technology?

26. What could that be?

Overall:

27. What are the key barriers to entry and exit?

28. What are the strong and weak points of government policy in your sector?

29. What are the strong and weak points of events that occurred in the past and are likely to occur in the future?

30. How do you cope with these incidents?

31. What activities could actors from the sector do together to become more competitive?

Annex 4: Five forces tool for stakeholders only

Introduction and ice break

1. Stakeholder's name and contact:
2. Year of establishment:
3. Services:
4. Offered innovative services to youth entrepreneurs:
5. Promoted technology:
6. Annual support budget to youth enterprise:
7. The annual budget for this FY:
8. The motivational factor for the youth entrepreneurs:

Competition:

9. What is the most competitive business/ sub-sector owned and managed by youth in the city (19-39)?
10. What is the competitive advantage of this business-related sub-sector in comparison to another sub-sector?
11. How does this business/sub-sector complement the other sub-sectors? Which are they?

Sub-sector suppliers' bargaining power:

12. Who are the key suppliers of the business/sub-sector mentioned above?
13. What are their strengths compared to buying enterprises in this sub-sector?
14. What are suppliers' weaknesses compared to buyers in this sub-sector as per your knowledge?

Customer's bargaining power:

15. Who are the key customers in this sub-sector? What are the customer size and share of Nepalgunj?
16. What are the strengths of customers of this sub-sector from your point of view?
17. What are the weaknesses of customers of this sub-sector in your point of view?
18. How do they react to the sub-sector products and services?

New entrants:

19. Who could be new market entrants in this sub-sector?
20. What could be the competitive advantage of new market entrants?
21. What could be the competitive disadvantage of new market entrants?

Substitute products:

22. Is there a threat of substitute products/services in this sub-sector?

- 23. Is there a threat due to technology?
- 24. What could that be?

Overall:

- 25. What are the key barriers to entry and exit?
- 26. What are the strong and weak points of government policy in this sub-sector sector in promoting youth enterprises?
- 27. What are the strong and weak points of events that occurred in the past and are likely to occur in the future?
- 28. How do you cope with these incidents?
- 29. What activities could actors from the sub-sector do together to become more competitive?

Annex 5: Technical and economic viability checklist

Technical

1. What are your products and services features?
2. Business mechanism – how does it work?
3. Who is the target customer? What is the level of demand certainty in the next few years?
4. What is the market segment and penetration rate?
5. What is the installed production/service capacity and annual delivery status, and will be the future scenarios?
6. What are the conditions of availability of plants and equipment maintenance?
7. What are the conditions of the availability of required human resources?
8. What is the different capacity of the management?
9. What is labor productivity?
10. What is the condition of physical infrastructure and support service providers?
11. What is the current trend in the availability of raw materials and what will be the future scenario?
12. What are the critical factors for the success of the firm and what is the level of uncertainty?

Business sustainability

13. **Bearable:** How often do you interact with the local community on environmental issues?
14. **Equitable:** How do you share your benefits among rural, girls, and marginalized youths?
15. **Viable:** How do you use raw materials and reuse waste products to increase your profitability?

Economic

16. What is the trend of products and services cost: _total, fixed, variable, and per unit of input cost, per unit of output cost?

Cost categories	2074/75	2075/76	2076/77	2077/78	2078/89 six month
Fixed cost					
Admin staff cost					
Number of admin staff					
Other admin costs					
Lease cost					
Regulatory					
Depreciation					
Financial cost					

Variable cost/ number					
Technical human resources					
Number of technical staff					
Self-employment labor cost					
Number of self- employed					
Raw materials					
Marketing cost					

17. **What is the revenue trend:** total, by product, and per-unit revenue?

Cost categories	2074/75	2075/76	2076/77	2077/78	2078/89 six month
Revenue and output					
Product/service production 1:					
Number of produce products					
Number of sales					
Per unit price of sale					
Revenue P1					
Product/service production 2					

Cost categories	2074/75	2075/76	2076/77	2077/78	2078/89 six month
Number of produce products					
Number of sales					
Per unit price of sale					
Revenue P2					
Product/service production 3					
Number of produced products					
Number of sales					
Per unit price of sale					
Revenue P3					
Net profit					

18. What is the return on the sales ratio and expenses to income ratio trend?

Sources of Financing

19. What is the funding structure (saving, bank loan, external grants, and borrowing from relatives and friends)?
20. What is the trend of the debt-to-equity ratio?

Sources of investment	2074/75	2075/76	2076/77	2077/78	2078/89 six month
FI loan					

Saving					
Relatives					
Grants					
Others					
Investment	2074/75	2075/76	2076/77	2077/78	2078/89 six month
Total Initial investment to date					
Investment item					
Breed					
Shed					
Tractor Machinery					
The average lifetime of all item					
Additional investment					
Investment item					

The average lifetime of additional investment item					
Equity					

21. What is the scrap value (if any)? :

Profitability

22. What are the profitability ratios of the firm?

- Net Present Value (NPV):
- Internal Rate of Return (IRR):
- Benefit-Cost Ratio (BCR):
- Pay Back Period (PBP):
- Return on equity:

Annex 6: Market attractiveness of youth engaged sub-sector or products in five different cities

Table 21: Market attractiveness for youth engaged products or sub-sectors in Nepalgunj

Potential to increase youth' income and enterprise profitability	High	<ul style="list-style-type: none"> Organic vegetables Shoes (Police, army, and security guards) Agriculture drone, smart dustbin (A.R.C Tech) 	None	<ul style="list-style-type: none"> Goat farming Leather shoes (party and office wear) production Social media marketing Apple and Samsung wearables trade
	Medium	None	<ul style="list-style-type: none"> Fish, poultry Shoes (school/ college) Game bird (Kalij) N.J.A.W Watch Readymade wears Beauty service 	<ul style="list-style-type: none"> Bio-Shakti (Granulated Organic fertilizer) Fisheries Cow farming Shivam brush Majhito
	Low	<ul style="list-style-type: none"> Website and application making 	None	<ul style="list-style-type: none"> Timur trade Chemical fertilizer trade Vegetable production
		Low	Medium	High
	Potential market demand			

Source: Mini-workshops among youth entrepreneurs and stakeholders in January 2022

Figure 8: Market attractiveness for youth engaged products or sub-sectors in Dhangadhi

Potential to increase youth' income and enterprise profitability	High	<ul style="list-style-type: none"> Local chicken eggs, battai eggs Local seeds of rice, wheat, maize, and vegetables Fishery feeds 	<ul style="list-style-type: none"> Hybrid seeds of rice and wheat 	<ul style="list-style-type: none"> Make-up and boutique in the urban-based setting and local poultry in a rural setting Pig farming Goat farming, hybrid seeds of maize and rice
	Medium	<ul style="list-style-type: none"> Leafy plates 	<ul style="list-style-type: none"> Broiler poultry Mushroom seeds Vegetable Local chicken and fish farming Duna tapari Hybrid seeds Pig farming Organic vegetables Vegetable production using IPM Vegetable seedlings Banana farming 	<ul style="list-style-type: none"> Asparagus Facial Mushroom Broiler (highly impacted by open border and import from India)
	Low	<ul style="list-style-type: none"> Lentil and mustard seeds Broiler poultry 	<ul style="list-style-type: none"> Seeds of maize Turkey meat and eggs 	<ul style="list-style-type: none"> Feed production (broiler) Hybrid seeds of vegetables Buffalo farming Broiler chicken Hair cut
		Low	Medium	High
	Potential market demand			

Source: Mini-workshops among youth entrepreneurs and stakeholders in January 2022

Figure 9: Market attractiveness for youth engaged products or sub-sectors in Surkhnet

Potential to increase youth' income and enterprise profitability	High	<ul style="list-style-type: none"> • AI technology 		<ul style="list-style-type: none"> • Wedding photography • Website designing, development, and domain hosting
	Medium		<ul style="list-style-type: none"> • Beauty Parlour • Krishi farm • Printing press color/black-white • Tailoring • School software • Accounting software 	<ul style="list-style-type: none"> • Kaalij meat • Local chicken (registered max 7)-meat and egg production • Krishi machinery and equipment (nursery house and mini-tillers) • Mushroom production
	Low	<ul style="list-style-type: none"> • Dhaka and cotton items such as a shawl, khada, and choli 	<ul style="list-style-type: none"> • Mushroom • Android application • Vegetable (seasonal/off seasonal tunnel/agriculture materials) • Schoolhouse dresses and T-shirts 	<ul style="list-style-type: none"> • Fiber bag • Kalij chicks • Mushroom production • Soap
	Low	Low	Medium	High
Potential market demand				


Source: Mini-workshops among youth entrepreneurs and stakeholders in February 2022

Figure 10: Market attractiveness for youth engaged products or sub-sectors in Janakpur

Potential to increase youth' income and enterprise profitability	High	<ul style="list-style-type: none"> • Goat/broiler chicken 	<ul style="list-style-type: none"> • Oil trade 	<ul style="list-style-type: none"> • Pig farming (high demand for pure hybrid breed piglets) • Bike maintenance service • Chat-pate • Papaya • Bike sales • Brinjal • Khaja : saadeko momo and chowmein • Noodles (Rumpum) trade
	Medium		<ul style="list-style-type: none"> • Tea (kanchi chiya, matka chiya and paan chiya) • Marigold • Broiler chicken • Cauliflower, cabbage • Banana • Egg • Spare parts 	<ul style="list-style-type: none"> • Flower seedlings • Cauliflower • Soap • Milk • Akbare Chilly • Dairy products • Rice
	Low	<ul style="list-style-type: none"> • Carrot 		<ul style="list-style-type: none"> • Milk • Chemical fertilizers • Tomato • Bajaj Motorcycle • Oil
	Low	Low	Medium	High
Potential market demand				

Source: Mini-workshops among youth entrepreneurs and stakeholders in March 2022

Figure 11 Market attractiveness for youth engaged products or sub-sectors in Kathmandu

Potential to increase youth' income and enterprise profitability	High	None	None	<ul style="list-style-type: none"> Textile- baby clothing
	Medium	None	<ul style="list-style-type: none"> Kalij meat, chicks-production Indigenous Agri-products- trade Organic food products-trade Restaurants 	<ul style="list-style-type: none"> Repairing and maintenance service Footwear and accessories Production healthy foods Green products- service
	Low	<ul style="list-style-type: none"> Textile – hand-knitted clothing 		<ul style="list-style-type: none"> Products -cakes and gifts
		Low	Medium	High
	Potential market demand			

Source: Mini-workshops among youth entrepreneurs and stakeholders in March 2022

Annex 7: Investment and sources of financing by studied enterprise and city

Goat - Nepalgunj

The interviewed Boer goat enterprise initially invested in pure breed, shed construction, irrigation equipment and machinery, tractor, tools, grass planting materials, and land development. The total investment for the studied Boer goat farm is NPR 9,975,000 in 2076.

Table 22: *Boer goat farming investment in Nepalgunj*

Investment categories	Investment value NPR
Initial investment	125,000
Breed	5,200,000
Shed	3,500,000
Tractor and machinery	100,000
Planting materials-grass	300,000
Land development	250,000
Irrigation equipment and machinery	500,000
Total investment	9,975,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Most machinery and infrastructure item than irrigation machinery has a lifetime of 25 years. The irrigation machinery has a lifetime of 15 years. The entrepreneur sourced finance 20% of the total investment from his saving and others sourced from relatives. The investor shifted his investment from the hospitality sub-sector to goat farming. Most of the investment is in the breed since the Boer goat was brought from Australia. The new investors must not need to invest so much money to buy breeds since they are available in Nepal.

Boutique – Nepalgunj

Of the total investment, the entrepreneur sourced 60% of the total investment from banking finance, and the remaining funds were mobilized from the local cooperative. Besides the capital investment, the boutique entrepreneur should invest in developing entrepreneurs' skills.

Table 23: *Boutique enterprise investment in Nepalgunj*

Investment categories	Investment value NPR
Initial investment- materials- fabrics	150,000
Machines	350,000
Total investment	500,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Local shoe – Nepalgunj

The table below shows that the interviewed shoe enterprise in Nepalgunj invested NPR 690,000 in stitching machines, heating, and furnishing that are needed to revive his father's handmade factory. The entrepreneur sourced 87% of the investment from saving and the remaining from the local cooperative.

Table 24: *Local shoe enterprise investment in Nepalgunj*

Investment categories	Investment value NPR
Stitching machine	20,000
Heating and tools	20,000
Stock inherited	600,000
Furnishing	50,000
Total investment	690,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij fam – Nepalgunj

The Kaalij farm entrepreneurs invested NPR 9,600,000 in fencing, nets, bringing eggs from Belgium, shed construction for staff quarter, and brooding house to start the business in 2076/77. The five returnee migrant workers utilized their savings in this regard. All the investment was secured from saving only.

Table 25: *Kaalij farm investment - Nepalgunj*

Investment categories	Investment value NPR
Fencing (155 per kg)	2,500,000
Net (per kg 1200)	2,500,000
Eggs brought from Belgium	2,100,000
Shed construction- staff quarter and brooding house	2,500,000
Total investment	9,600,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Beauty parlor: Dhangadhi

The beauty parlor entrepreneur invested NPR 2,500,000 in the security deposit, carpenter tables, false ceiling, tile, chairs, equipment, cosmetic products, and tools in 2076/77. The security deposit was needed to secure the leased rooms from the Dhangadhi municipality building for the enterprise. The entrepreneurs secured 60% of the investment from cooperative loans and 40% of the investment from their savings.

Table 26: *Beauty parlor enterprise investment item and value- Dhangadhi*

Investment categories	Investment value NPR
Security deposit	200,000
Carpenter tables, false ceiling, tile	1300000
Chair and equipment	500,000
Cosmetic products, and tools	500,000
Total investment	2,500,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Boutique: Dhangadhi

The boutique entrepreneur invested NPR 1,500,000 in purchasing machines and tools for tailoring, rack counter, and initial fabric materials to prepare designed boutiques in 2076/77. The entrepreneur secured 67% of the investment from a bank and the remaining from other sources including savings.

Table 27: *Boutique enterprise investment item and value - Dhangadhi*

Investment categories	Investment value NPR
Machines and tools	144,000
Rack counter	100,000
Initial materials	1,256,000
Total investment	1,500,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Local chicken: Dhangadhi

The local chicken promoter in Dhangadhi invested NPR 4,400,000 in shed construction, hatching machine, generator, chicks, drinkers, feeder, and fencing of the land. The entrepreneur secured 34% of the investment from the bank, 9% from saving, and the remaining 57% from other sources and relatives.

Table 28: *Local chicken enterprise investment item and value- Dhangadhi*

Investment categories	Investment value NPR
Sheds construction (3)	3,100,000
Hatching and generator	500,000
Chicks, drinker and feeder	300,000
Fencing	500,000
Total investment	4,400,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Textile – baby clothes: Kathmandu

The interviewed baby clothes producer invested in stitching machines, tools, initial raw materials like fabrics, and furniture and equipment fixing in the factory. The total initial investment is only NPR 700,000. The entrepreneur sourced 28.5% investment from her saving and the remaining capital was granted by an anonymous lady individual.

Table 29: *Textile- baby clothes investment and sources of finance in Kathmandu*

Investment categories	Investment value NPR
Initial investment- materials	300,000
Furniture and tools	245,000
Machines	155,000
Total investment	700,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij- Kathmandu

The Kaalij farm entrepreneur in Kathmandu invested NPR 1,555,000 in buying chicks, fencing land, nets, shed construction, brooding house, and land development in 3 Ropanis of land in 2077. The entrepreneur sourced 94% of the investment from his saving and the remaining was managed from a loan.

Table 30: *Kaalij farm enterprise investment item and values- Kathmandu*

Investment categories	Investment value NPR
Fencing and nets	500,000
Chicks	455,000
Shed construction- brooding house	500,000
Land development	100,000
Total investment	1,555,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij: Surkhet

The Kaalij farm entrepreneur in Kathmandu invested NPR 7,000,000 in buying chicks, fencing land, nets, shed construction, and brooding house in one Bigha of land in 2076/2077. The source of financing is investors' savings.

Table 31: *Kaalij farm investment item and value- Surkhet*

Investment categories	Investment value NPR
Fencing and nets	3,000,000
Chicks	1,000,000
Shed construction	1,000,000
Brooding house	2,000,000
Total investment	7,000,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Photography: Surkhet

The photography promoter invested NPR 1103,000 in decoration, Cameras, computers and printers, photocopy, lamination machine, camera gimble, and inverter. The entrepreneur mobilized saving and borrowing from relatives to start the business.

Table 32: *Photography enterprise investment categories and value in Surkhet*

Investment categories	Investment value NPR
Decoration	150,000
Camera	600,000
Computers and printers	180,000
Photocopy	28,000
Lamination machine	15000
Camera gimble	50,000

Inverter	80000
Total investment	1,103,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Beauty parlor: Surkhet

The beauty parlor enterprise invested NPR 400,000 in furniture, chairs, and cosmetic products. The interviewed enterprise accessed loan from a local financial institution to finance the investment capital.

Table 33 : *Beauty parlor enterprise investment items and values in Surkhet*

Investment categories	Investment value NPR
Furniture	150,000
Chairs	100,000
Cosmetic products	180,000
Total investment	400,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Piggery: Janakpur

The entrepreneur had sourced 37% of the investment from the moneylender at the rate of 36% interest and the remaining investment had been managed by utilizing her saving.

Table 34: *Piggery enterprise investment item and values - Janakpur*

Investment categories	Investment value NPR
Shed construction	150,000
Piglets (21)	120,000
Total investment	270,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Broiler poultry: Janakpur

The poultry farm entrepreneur invested NPR 2,900,000 in shed construction, chicks purchase, fish pond, motor, boring, pre-investment, and meat shop construction. Of the total investment, 91% of the investment finance was mobilized from parental sources (saving), and the remaining 9% of the investment was mobilized through the government of Nepal grant.

Table 35: *Poultry farm investment item and value- Janakpur*

Investment categories	Investment value NPR
Poultry farm shed construction	2,000,000
Chicks	30,000
Fish pond	350,000
Motor	80,000
Boring	60,000
Pre-investment	380,000
Meat shop construction	250,000
Total investment	2,900,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Motorcycle maintenance: Janakpur

The table below shows investment items to start a motorcycle maintenance business. It requires a lot of training investment. The entrepreneur should have at least 4 years of practical training to independently be able to manage and provide the clients with services. It requires initial equipment and tools. The interviewed entrepreneur just invested NPR 85,000 for equipment and tools and NPR 150,000 for his training, particularly on engine repairing. He mobilized the investment from his saving and deposit of equipment and tools during training.

Table 36: *Motorcycle maintenance investment item and value - Janakpur*

Investment categories	Investment value NPR
Equipment and tools	85,000
Self-training before start	150,000
Total investment	235,000

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Annex 8: Profitability ratio of the studied enterprise in each city

Boer goat: Nepalgunj

The annual average return and average equity of the enterprise are NPR 4,096,986 and NPR 9,560,086 respectively in three years from 2076/77 to 2078/89 (annualized). The internal rate of return of the enterprise is 19% which is seven percent higher than the 12% discounted rate. However, the entrepreneur has access to lower costs of funding and self-fund. This internal rate of return yields is in three years. This rate of return will be higher in the years to come since the payback period of the investment cost is only 2.71 years. The current stock of 125 goats will produce more than the 28 goats purchased during the investment recovery period. The internal rate of return would be higher if the enterprise utilizes its capacity only up to 40%. The enterprise can rear 500 Boer goats utilizing the same infrastructure, land, grass farm, and human resources. Most of the investment was done during the Covid 19 period.

Table 37: Boer goat enterprise profitability variables and values- Nepalgunj

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 8,919,643
Internal Rate of Return (IRR)	19%
Pay Back Period (PBP)	2.71 Years
Net Present Value (NPV) in three years	NPR 1,303,996
Benefit Cost Ratio (BCR)	1.27
Annual average return on equity (RoE)	43%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Youth wear: Boutiques and shoes

Boutique: Nepalgunj

The table below shows that the boutique in Nepalgunj is very profitable since IRR is 84%, and the payback period of the investment in present value is only 1.89 years. It will take about 23 months after its operation to recover its investment value in the condition that the promotor is highly trained in the boutique and have a network in the local community. The cost-benefit ratio is 3.93 The net present value benefit is 3.93 times higher than the present value cost of investment. Annual average return and average equities are NPR 641,438 and NPR 500,000 respectively in fiscal years 2075/76-2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the boutique enterprise in Dhangadhi city

Table 38: One of the boutique profitability in Nepalgunj

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 500,000
Internal Rate of Return (IRR)	84%
Pay Back Period (PBP)	1.89 Years
Net Present Value (NPV) in three years	NPR 1,466,790
Benefit Cost Ratio (BCR)	3.93
Annual average return on equity (RoE)	128%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 20

The table below shows that the boutique in Nepalgunj is very profitable since IRR is 96%, and the payback period of the investment in present value is only 1.89 years. It will take about 23 months after its operation to recover its investment value in the condition that the promotor is highly familiar with the shoe material supply chain and have a network in the local community. The cost-benefit ratio is 4.12. The net present value benefit is 4.12 times higher than the present value cost of investment. Annual average return and average equities are NPR 758,331 and NPR 690,000 respectively in fiscal years 2076/77-2078/79 (Annualized). These profitability results show that the Covid 19 could not significantly affect the shoe enterprise in Nepalgunj.

Table 39: One of the local shoes' enterprise profitability in Nepalgunj

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 690,000
Internal Rate of Return (IRR)	96%
Pay Back Period (PBP)	1.85 Years
Net Present Value (NPV) in three years	NPR 2,154,977
Benefit Cost Ratio (BCR)	4.12
Annual average return on equity (RoE)	110%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij: Nepalgunj

The table below shows that the Kaalij fam in the Nepalgunj area including Dang is profitable since IRR is 48%, which is higher than the discount rate of 12% and the payback period of the investment in present value is only 2.15 years. It will take about 26 months after its operation to recover its investment value in the condition that the promotor is efficient in managing the risk of chick-rearing and using local materials and grass as feed. The cost-benefit ratio is 2.09. The net present value benefit is 2.09 times higher than the present value cost of investment. Annual average return and average equities are NPR 7,027,000 and NPR 9,500,000 respectively in fiscal years 2076/77-2078/79 (Annualized). These profitability results show that the Covid 19 could not significantly affect the Kaalij enterprise in Dang.

Table 40: Kalij farm profitability variables and values Nepalgunj

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 9,600,000
Internal Rate of Return (IRR)	48%
Pay Back Period (PBP)	2.15 Years
Net Present Value (NPV) in three years	NPR 10,438,204
Benefit Cost Ratio (BCR)	2.09
Annual average return on equity (RoE)	74%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Beauty parlor: Dhangadhi

The table below shows that the beauty parlor in Dhangadhi is very profitable since IRR is 168%, and the payback period of the investment in present value is only 0.54 years. It will take about 7 months after its operation to recover its investment value in the condition that the promotor is highly trained in parlor service and have a network in the local community. The cost-benefit ratio is 4.9. The net present value benefit is 4.9 times higher than the present value cost of investment. Annual average return and

average equities are NPR 4,219,400 and NPR 2,500,000 respectively in fiscal years 2076/77-2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the beauty parlor enterprise in Dhangadhi city.

Table 41: *Beauty parlor profitability variables and values in Dhangadhi*

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 2,500,000
Internal Rate of Return (IRR)	168%
Pay Back Period (PBP)	0.54 Years
Net Present Value (NPV) in three years	NPR 9,754,703
Benefit Cost Ratio (BCR)	4.9
Annual average return on equity (RoE)	169%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Boutique: Dhangadhi

The table below shows that the boutique in Dhangadhi is very profitable since IRR is 400%, and the payback period of the investment in present value is only 0.27 years. It will take about 3 months after its operation to recover its investment value in the condition that the promotor is highly trained in the boutique and have a network in the local community. The cost-benefit ratio is 13.52. The net present value benefit is 13.52 times higher than the present value cost of investment. Annual average return and average equities are NPR 8,081,901 and NPR 1,500,000 respectively in fiscal years 2076/77-2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the boutique enterprise in Dhangadhi city.

Table 42: *Boutique profitability variables and values- Dhangadhi*

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 1,500,000
Internal Rate of Return (IRR)	400%
Pay Back Period (PBP)	0.27 Years
Net Present Value (NPV) in three years	NPR 18,773,191
Benefit Cost Ratio (BCR)	13.52
Annual average return on equity (RoE)	539%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Local chicken: Dhangadhi

The table below shows that the local chicken in Dhangadhi is profitable since IRR is 36%, which is higher than the discount rate of 12% and the payback period of the investment in present value is only 2.21 years. It will take about 27 months after its operation to recover its investment value in the condition that the promotor is efficient in managing the risk of chick-rearing. The cost-benefit ratio is 1.66. The net present value benefit is 1.66 times higher than the present value cost of investment. Annual average return and average equities are NPR 2,015,550 and NPR 44,000,000 respectively in fiscal years 2076/77-2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the local chicken enterprise in Dhangadhi city.

Table 43: *Local chicken enterprise profitability variables and values in Dhangadhi*

Profitability variables	Value
Total investment in the present value at a 12% discounted rate	NPR 4,400,000
Internal Rate of Return (IRR)	36%
Pay Back Period (PBP)	2.21 Years
Net Present Value (NPV) in three years	NPR 2,921,322
Benefit Cost Ratio (BCR)	1.66
Annual average return on equity (RoE)	46%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Textile – Baby clothes

The table below shows that the textile-baby clothes in Kathmandu are profitable since IRR is 200%, and the payback period of the investment in present value is only 1.02 years. It will take about 13 months after its operation to recover its investment value in the condition that the promotor is highly trained in designing and effective in national and international networking, and branding. The cost-benefit ratio is 8.85. The net present value benefit is 1.66 times higher than the present value cost of investment. Annual average return and average equities are NPR 2,737,972 and NPR 533,333 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the baby clothes manufacturing in Kathmandu city.

Table 44: Textile - baby clothes profitability variables and value in Kathmandu

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 700,000
Internal Rate of Return (IRR)	200%
Pay Back Period (PBP)	1.02 Years
Net Present Value (NPV) in three years	NPR 5,497,363
Benefit Cost Ratio (BCR)	8.85
Annual average return on equity (RoE)	513%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij: Kathmandu

The table below shows that the Kaalij fam in Kathmandu is very profitable since IRR is 89%, which is higher than the discount rate of 12% and the payback period of the investment in present value is only 1.29 years. It will take about 16 months after its operation to recover its investment value in the condition that the promotor is efficient in managing the risk of chick-rearing and using local materials and grass as feed. The cost-benefit ratio is 2.89. The net present value benefit is 2.89 times higher than the present value cost of investment. Annual average return and average equities are NPR 2,054,000 and NPR 1,555,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the Kaalij enterprise in Kathmandu city.

Table 45: Kaalij enterprise profitability variables and values- Kathmandu

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 1,555,000
Internal Rate of Return (IRR)	89%
Pay Back Period (PBP)	1.29 Years
Net Present Value (NPV) in three years	NPR 2,946,020

Benefit Cost Ratio (BCR)	2.89
Annual average return on equity (RoE)	132%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Kaalij: Surkhet

The table below shows that the Kaalij fam in Surkhet is very profitable since IRR is 64%, which is higher than the discount rate of 12% and the payback period of the investment in present value is only 1.64 years. It will take about 20 months after its operation to recover its investment value in the condition that the promotor is efficient in managing the risk of chick-rearing and using local materials and grass as feed. The cost-benefit ratio is 2.51. The net present value benefit is 2.51 times higher than the present value cost of investment. Annual average return and average equities are NPR 7,770,766 and NPR 7,000,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the Kaalij enterprise in Surkhet city.

Table 46: *Kaalij farm profitability variables and values in Surkhet*

Profitability variables	Value
Total investment in the present value at 12% discounted rate	NPR 7,000,000
Internal Rate of Return (IRR)	64%
Pay Back Period (PBP)	1.64 Years
Net Present Value (NPV) in three years	NPR 1,0561,439
Benefit Cost Ratio (BCR)	2.51
Annual average return on equity (RoE)	111%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Photography: Surkhet

The table below shows that photography in Surkhet is very profitable since IRR is 603%, which is very higher than the discount rate of 12% and the payback period of the investment in present value is only 0.17 years. It will take about 3 months after its operation to recover its investment value in the condition that the promotor is highly trained in photography and effective in managing the local network of events, boutiques, and parlors. The cost-benefit ratio is 15.59. The net present value benefit is 15.59 times higher than the present value cost of investment. Annual average return and average equities are NPR 6,733,667 and NPR 1,103,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not affect the photography enterprise in Surkhet city.

Table 47: *Photography profitability variables and value - Surkhet*

Profitability variables	Value
Total investment in the present value at a 12% discounted rate	NPR 1,103,000
Internal Rate of Return (IRR)	603%
Pay Back Period (PBP)	0.17 Years
Net Present Value (NPV) in three years	NPR 16,096,010
Benefit Cost Ratio (BCR)	15.59
The annual average return on equity (RoE)	610%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Beauty parlor: Surkhet

The table below shows that the beauty parlor in Surkhet is very profitable since IRR is 105%, which is very higher than the discount rate of 12% and the payback period of the investment in present value is only 1.68 years. It will take about 20 months after its operation to recover its investment value in the condition that the promotor is highly trained in beauty parlor and effective in managing the local network of photography, boutiques, and parlors. The cost-benefit ratio is 4.6. The net present value benefit is 4.6 times higher than the present value cost of investment. Annual average return and average equities are NPR 665,533 and NPR 400,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not significantly affect the beauty parlor enterprise in Surkhet city.

Table 48: *Beauty parlor profitability variables and value in Surkhet*

Profitability variables	Value
Total investment in the present value at a 12% discounted rate	NPR 400,000
Internal Rate of Return (IRR)	105%
Pay Back Period (PBP)	1.68 Years
Net Present Value (NPV) in three years	NPR 1,438,443
Benefit Cost Ratio (BCR)	4.6
Annual average return on equity (RoE)	166%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Piggery – Janakpur

The table below shows that the piggery in Bardibas and Mithila area is very profitable since IRR is 148%, which is very higher than the discount rate of 12% and the payback period of the investment in the present value is only 2.09 years. It will take about 25 months after its operation to recover its investment value in the condition that the promotor is highly committed to the piggery and effective in managing the piglet risks, using the locally prepared feed. The cost-benefit ratio is 11.42. The net present value benefit is 11.42 times higher than the present value cost of investment. Annual average return and average equities are NPR 585,667 and NPR 270,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not significantly affect the piggery in the Janakpur area.

Table 49: *Piggery enterprise profitability variables and values - Janakpur*

Profitability variables	Value
Total investment in the present value at a 12% discounted rate	NPR 270,000
Internal Rate of Return (IRR)	148%
Pay Back Period (PBP)	2.09 Years
Net Present Value (NPV) in three years	NPR 2,813,405
Benefit Cost Ratio (BCR)	11.42
Annual average return on equity (RoE)	217%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Broiler poultry: Janakpur

The table below shows that the poultry enterprise in Janakpur city is profitable since IRR is 22%, which is higher than the discount rate of 12% and the payback period of the investment in the present value is only 2.39 years. It will take about 32 months after its operation to recover its investment value in the

condition that the promotor is highly committed to the poultry and effective in managing the chick risks, and engaging in the delivery of poultry. The cost-benefit ratio is 1.21. The net present value benefit is 1.21 times higher than the present value cost of investment. Annual average return and average equities are NPR 690,000 and NPR 2,900,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not significantly affect the poultry in the Janakpur area.

Table 50: *Broiler poultry enterprise profitability variables and values - Janakpur*

Profitability variables	Value
Total investment in the present value at a 12% discounted rate	NPR 2,900,000
Internal Rate of Return (IRR)	22%
Pay Back Period (PBP)	2.39 Years
Net Present Value (NPV) in three years	NPR 613,584
Benefit Cost Ratio (BCR)	1.21
Annual average return on equity (RoE)	24%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

Motorcycle maintenance: Saptari-Bishanpur

The table below shows that the motorcycle maintenance enterprise in the Janakpur area is profitable since IRR is 182%, which is higher than the discount rate of 12% and the payback period of the investment in the present value is only 1.19 years. It will take about 15 months after its operation to recover its investment value in the condition that the promotor is highly committed, trained in motorcycle maintenance, and effective in managing parts supply. The cost-benefit ratio is 9.39. The net present value benefit is 9.39 times higher than the present value cost of investment. Annual average return and average equities are NPR 929,267 and NPR 85,000 respectively from fiscal years 2076/77 to 2078/79 (Annualized). These profitability results show that the Covid 19 could not significantly affect motorcycle maintenance in the Janakpur area.

Table 51: *Motorcycle maintenance enterprise profitability variables and value - Janakpur*

Profitability variables	Value
Total investment in the present value at a 12% discounted rate	NPR 235,000
Internal Rate of Return (IRR)	182%
Pay Back Period (PBP)	1.19 Years
Net Present Value (NPV) in three years	NPR 1,971,129
Benefit Cost Ratio (BCR)	9.39
Annual average return on equity (RoE)	395%

Source: Interview with the enterprise for technical and economic viability confirmation by Paribartan in January-March 2022

