

**Role of ICT in entrepreneurship development and
employment generation: Nepalese scenario**

DISCUSSION PAPER

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LIST OF FIGURES

Figure 1: Budget Deficit/Surplus

Figure 2: Online Trust building model

LIST OF ABBREVIATIONS

B2B	Business to Business
B2C	Business to Customer
BFI's	Banks and Financial Institutions
C2C	Customer to Customer
DOFE	Department of Foreign Employment
EDP	Entrepreneurship Development Programme
eGMP	E-Government Master Plan
G2B	Government to Business
G2C	Government to Citizen
G2G	Government
GNI	Gross National Income
GoN	Government of Nepal
HDI	Human Development Index
HR	Human Resource
ICT	Information and Communication Technology
ISs	Information Systems
NRI	Network Readiness Index
SMEs	Small and Medium Enterprises

SECTIONS OF PAPER

I.	Introduction	Page No. 1-3
	a. Country context	
	b. Overview of entrepreneurship and employment in Nepal	
	c. Reasons for use of ICT in entrepreneurship development and employment generation	
II.	State of Nepal's readiness	Page No. 4-5
	a. ICT Infrastructure and internet penetration	
	b. E-Business and Services in Nepal	
	c. Technology in job creation	
III.	Opportunities	Page No. 5-6
IV.	Challenges	Page No. 6-7
V.	Conclusion	Page No. 7
VI.	Recommendations	Page No. 8

1. INTRODUCTION

1.1 Country context

Nepal is currently ranked 144th place on the Human Development Index (HDI) and has Nrs. 2237 Gross National Income (GNI)¹ per capita. Due to low rank in HDI and poor GNI the country is in one of the least developed nations in the world.

The budget deficit of the Government of Nepal (GoN) increased to Rs.177.82 billion² in eleven months of 2017/18 from a deficit of Rs.12.65 billion in the corresponding period of the previous year.

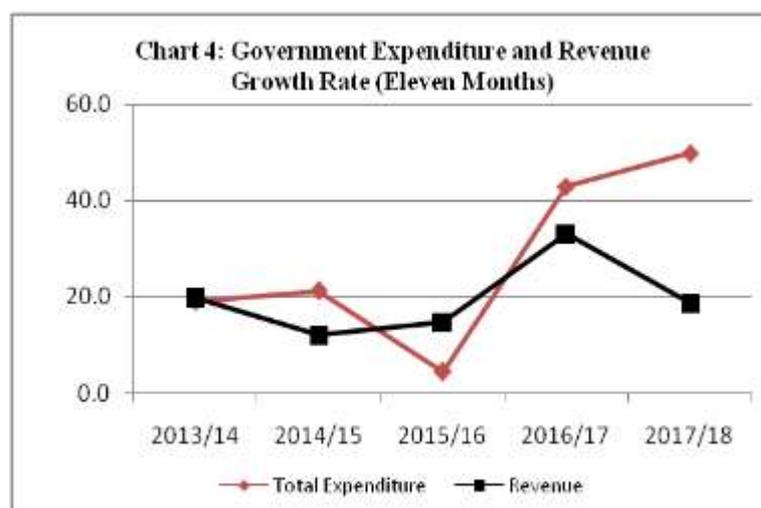


Fig. 1: Budget Deficit/Surplus

The GDP of the country is primarily comprised of three parts, agriculture, services, and industry. With Nepal's opening up to the world, agriculture and industry is contracting, while the contribution by service sector is increasing. Tourism is one of Nepal's new sources of income. However, political instability in last two decades and poor infrastructure had impacted the sector badly.

After years of debate, Nepal has new constitution at moment and entered in to new era of governance. Guided by constitutions, Nepal's governance system has changed into three tiers of government and stable government at all levels. The government has announced long term goal as "Prosperous Nepal, Happy Nepali" through "Policy and Program of Government of Nepal for the F.Y. 2018/19".

¹ Source: <http://hdr.undp.org/en/countries/profiles/NPL>

² Source: Current Macroeconomic and Financial Situation – Date of 2017/18

1.2 Overview of entrepreneurship and employment in Nepal

The goal of prosperity and happiness largely depends on promotion of entrepreneurship and employment generation in country. However, increasing consumer price inflation (4.1% in mid-June 2018 from 2.8% a year ago) threatens the living standards of people and impacting industrialization and entrepreneurial culture due to wage pressures, fuel price hikes and manpower shortage.

The structure of workforce and their availability are critical success factors in promoting entrepreneurship and employment generating. Countries having simple workforce (shortage of skilled labor) and higher trends of foreign employment in youth results in higher cost of production and hence considered as unattractive for entrepreneurship and employment.

Nepal has simple workforce where majority of population are employed in agriculture (around 66.5% out of 80.5% employment to population ration)³ and remaining 22.4% in services. Unemployment is prevalent in Nepal. The rate of unemployment and underemployment increasing significantly thus, resulting higher rate of migration in youth and mid-aged population from the country. Foreign employment continues to be the most significant motivation for international migration from Nepal. In the past consecutive fiscal years 2015/16 and 2016/17, the Department of Foreign Employment (DOFE) issued 786,564 permits for foreign employment to over one hundred destination countries⁴.

Entrepreneurship Development Programme (EDP) is mainly focused on development, promotion and strengthening of micro, cottage and small enterprises with the technical and financial support⁵. It shall provide various types of services to potential entrepreneurs, existing entrepreneurs/enterprises, and intermediary organizations which are involved in the entrepreneurship development. Mainly EDP includes:

- Entrepreneurial capacity and competency development through training and research Business start-up and improvement training: Start-up schools
- Micro enterprise creation (Business identification, selection, planning, feasibility and financial assistance)
- Business counseling

³ Source: <http://hdr.undp.org/en/countries/profiles/NPL>

⁴ Source: Labour Migration for Employment - A Status Report for Nepal: 2015/2016 – 2016/2017

⁵ Source: Janapriya Journal of Interdisciplinary Studies, Vol. III (December 2014)

- Production and productivity management (Productivity improvement, marketing, financial management, business management)
- Research and development – Innovation Lab

Similarly, Job and being employed have been considered as the most necessary factor for human survival since ancient time. It is the source of economic generation, survival and integrated part of one's social identity. Employment is contributing to person's economic and social role that it is regarded as an indicator for every government's success and programs. In this context, Nepal (country with serious poverty and unemployment) has serious challenge of promoting macro and micro enterprises and employment friendly strategies directed towards poverty reduction.

1.3 Reasons for use of ICT in entrepreneurship development and employment generation

The advent of information technology has changed all the aspects of the world in the third millennium to a great extent and the entrepreneurship in particular. The world is fast entering the information age, which in result, is changing the way business and people communicate, transact and behave. The advancement in Information and Communication Technology (ICT) helping businesses and people to use new technologies and Information Systems (ISs) in transactions and information exchange.

The entrepreneurship and employment has following common characteristics other than their uniqueness and environment as listed below:

- Innovativeness in converting ideas to reality
- Risk taking
- Proactiveness in sense of doing
- Learning from failure and success

The role of ICT is only means to create meaningful effect on increasing **RICH and REACH** of common characteristics of entrepreneurship and employment.

2. STATE OF NEPAL'S READINESS

2.1 ICT Infrastructure and internet penetration

As of 15th June 2018, the voice telephony penetration in country is 132.82% (population projection of 29,291,746) and broadband penetration (except internet services through GPRS) is 50.32%. Most of consumers access the internet through smartphones with 78% market share⁶.

The Global Competitiveness Report 2017-2018 by World Economic Forum's has ranked Nepal at 88th position, ten position up than previous year. After formation of stable governments at three tiers (Federal, Provincial and Local Level) in this year, the four sub-indexes of Network Readiness Index (NRI) as mentioned below are changing but solid strategies has to be taken by the government to promote uptake of technology in personal and business use:

- Environment index (political, regulatory, business and innovation environment)
- Readiness index (infrastructure, affordability and skills)
- Usage index (individual, business and government usage)
- Impact index (economic and social impacts)

2.2 E-Business and Services in Nepal

Doing the business online has emerged as practice in Nepal. Though the industry is in nascent stage but has shown tremendous potential over last few years especially after competitive growth in banking sector. The growing young, educated and technology friendly population has contributed largely in growing trends of e-business in Nepal. Popular E-Commerce models Business to Business (B2B), Business to Customer (B2C) and Customer to Customer (C2C) are adopted by many Small and Medium Enterprises (SMEs) as a growth strategies for their business. Similarly, public service innovations are also driven by Government to Government (G2G), Government to Citizen (G2C) and Government to Business (G2B) models.

Exemplary initiatives in private sectors include: eSewa, Khalti, QFX, Hamrobazar.com, Sarathi, Foodmandu.com, Munch.com, Helmet Nepal, etc.

⁶ Source: <https://nta.gov.np/wp-content/uploads/2018/07/Jestha-2075.pdf>

Similarly, HelloSarkar, Online passport, Online tax registration, Extranet of Office of Company Registrar, Online vehicle registration, Digital driving license, Website and presence in social media of public institutions and many more others are deliberate initiatives taken by Government of Nepal (GoN).

However, the initiatives in public and private are at very initial state due to lack of integrated initiatives guided by E-Government Master Plan (eGMP).

2.3 Technology in job creation

Information and communications technologies (ICTs) are creating new job opportunities and making labor market more inclusive, innovative, simple, easy, flexible and global. ICTs are empowering industries to easily get competent Human Resource (HR) and influencing individuals to access new forms of work in new and more flexible ways.

The use of effective and efficient ICT enabled system, will lead to creation of new job and expand employment opportunities. The ICT enabled job system shall include three global drivers:

- Greater connectivity – especially penetration of mobile telephones
- Digitization of more aspects of work – today, telecommuting and outsourcing have become standard business practices globally
- More globalized skills – India and the Philippines have become major outsourcing hubs. The English language skills considered as major contributor of growth.

3. OPPORTUNITIES

It is also hoped that both government and non-government companies do make most of ICT to add to the efficiency and effectiveness of their performance and employment rate.

However, the optimum benefits out of investment on ICT will depends on an opportunities in the country. Nepal has the following opportunities to use ICT for promotion of entrepreneurship and job creation.

- Believe on ICT has a meaningful effect on facilitating doing business and job access:
Signature success stories

- Better telephony and broadband penetration
- E-Readiness and E-Participation of citizens
- Emerging micro enterprises (SMEs)
- Improving Global presence, E-Government development index and ranking

4. CHALLENGES

Nepal also has some distinct challenges in using ICT for the purpose of entrepreneurship development and employment generation.

- Lack of culture of innovation and low level of capacity for research and development: Innovation lab where public and private dreams can be translated into reality. Some of tools under this practice include modeling, learning and development, knowledge management, discussion paper and policy discourses, etc.
- Investment on Infrastructure as a utility to every citizen: Broadband Highway, Universal Access to Mobile, Public Internet Access Program (PIAP), Electronic manufacturing, Commitment of Investment on ICT by Government, Non-Government and Banks and Financial Institutions (BFI's)
- Re-imagining e-Government implementation framework and strategies: Initiatives on electronic transactions, cashless culture, cost of digital services and incentivizing digital behaviours (time and cost benefits)
- Integration of ICT at all levels and types of education. Increasing scholarships of ICT related education (especially at under graduation, graduation and post-graduation level) nationally and internationally
- Digital divide: Awareness, Available, Accessible and Affordable
- Legislative and policy harmonization and continuous update: Especially in the area of Privacy, Security, Copyright, Retention, Access to Information and Language. Since these are major components of Online Trust Building Model as shown below:

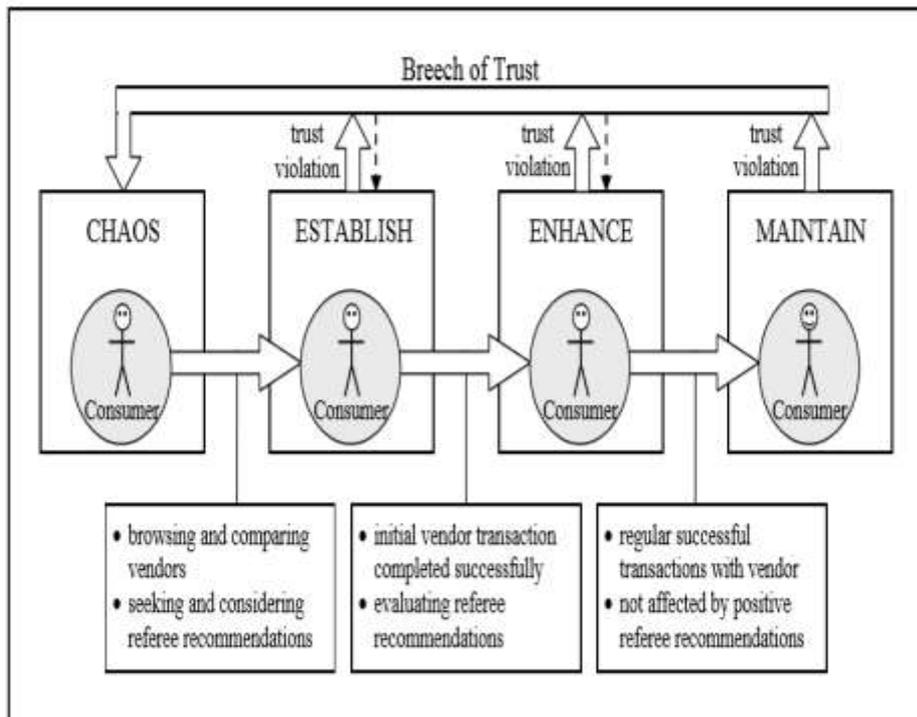


Fig. 2: Online Trust building model⁷

5. CONCLUSION

Information and Communication Technology is considered as product and behavior of developed countries and used by them for better RICH and REACH their products and services. However, it should not be viewed as disability of under developed countries like Nepal. Any country can take the benefits of using ICT provided, its application and role has analyzed better in terms of country present opportunities and challenges. Initiatives for Nepal to leverage ICT in promoting entrepreneurship and employment generation shall include following, however the role and commitment of Government is most crucial.

- Define the national development framework by re-imagining the role of ICT
- Develop of Vision Paper – ICT in Nepal 2030 A.D.
- Increase Policy dialogue as an integral culture to leverage policies and rules for promoting use of ICT in personal, professional and business
- Conduct E-Readiness survey

⁷ Source: Trust in Online: Evaluating the impact of third-party seals

6. RECOMMENDATIONS

The recommendations for Role of ICT in entrepreneurship development and employment generation will be added to the paper based on further analysis of context, discussion on paper and feedback from the conference.