



UKaid Skills for Employment Programme (शीप)

Catalyzing Collaborations to Promote and
Expand Digitally-Enabled Jobs and
Enterprises

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In Collaboration with

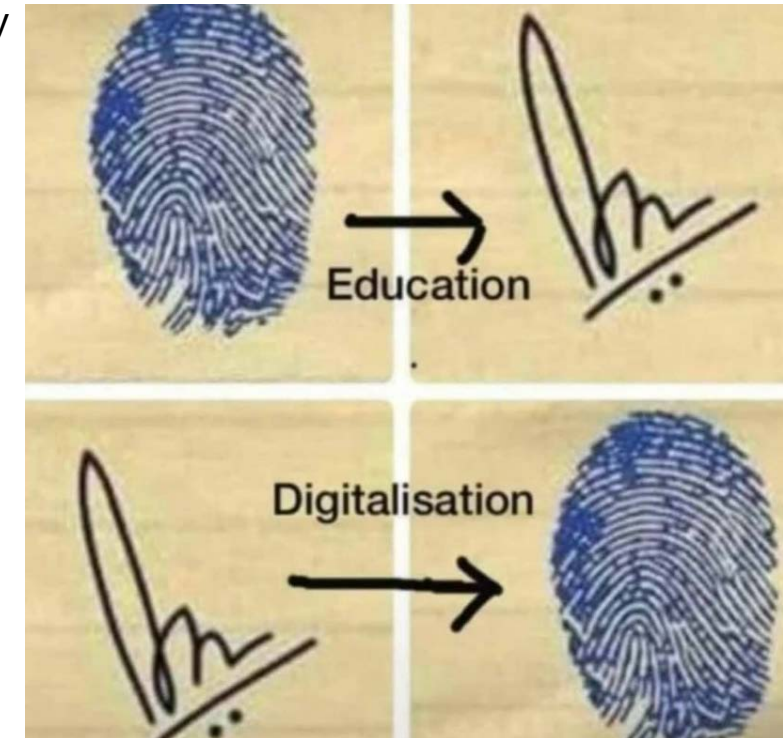


INSTITUTE FOR INTEGRATED
DEVELOPMENT STUDIES



Global Digitalization Trends

- Global Internet Protocol (IP) traffic a proxy for data flows, has grown from about 100 gigabytes (GB) per day in 1992 to more than 45,000 GB per second in 2017; by 2022 global IP traffic is projected to reach 150,700 GB per second
- Estimates of the size of the digital economy range from 4.5 to 15.5% of world GDP
- Global employment in the ICT sector increased from 34 million in 2010 to 39 million in 2015, with computer services accounting for the largest share (38 per cent)
- The share of the ICT sector in total employment rose over the same period, from 1.8 per cent to 2 per cent
- In 2018, digitally deliverable service exports amounted to \$2.9 trillion, or 50 per cent of global services exports. In LDCs, such services accounted for an estimated 16 per cent of total services exports, and they more than tripled from 2005 to 2018
- United States and China account for 75% of all patents related to blockchain technologies, 50% of global spending on IoT, and more than 75% of the world market for public cloud computing
- US leads the global AI race “in four of the six categories of metrics” (talent, research, development, and hardware), and China comes out on top in the remaining two (adoption and data). The EU commands primacy in none, though it is close behind the US in terms of talent



The 4th Industrial Revolution will be the primary factor influencing global economic and political arrangements in the post-pandemic future- Big data/AI, horizontal/vertical integration, cloud computing, AR, IIoT, 3D Printing, Autonomous Robots, Digital Twin, Cybersecurity

Nepal's ICT Sector and Progress on Digitalization

- Comprised of more than 6,000 firms of which only 256 were officially registered. Most of these are MSMEs firms operating informally and are supported significantly by freelancers.
- A significant number function as subsidiaries of overseas parent companies, and much of their income is accrued overseas, besides revenue to cover operational costs in Nepal.
- Shift to online/digital mediums across sectors being expedited in post-COVID environment. New entrants.
- Increased demand for internet connections. Increased demand from other industries in enabling digital workplace.
- Increased focus on technologies like artificial intelligence, big data, augmented reality, and virtual reality, among others. **Firms operating in these areas are demanding skilled ICT employees.**
- Emerging **Digital Nepal Framework** to usher in Digital Integration and Expansion, and drive impact across key sectors in Nepal

Sector Overview	
Sector Contribution to GDP	7.5%
Sector Contribution to Employment	60,000
Minimum Monthly Salary	NPR 21,700 (Approx. USD 180)
Average Sector Growth	15-20% annually (CAN)
Key Domestic Markets	Kathmandu, Pokhara
Key Export Market	USA, Australia, UK
Key Sources of Raw Material	India, China, Singapore, Hong Kong, USA
Sub-sector	Project Management, Solutioning & Architecting, Infrastructure Support, Software Design, Database Management, BPO Management, Infocomm Sales & Marketing, Software Development, Digital Media & Animation, Internet Service Providers, Telecom – Hardware and Solutions and E-commerce Providers, AI, CC
FDI Contribution in the form of Equity	46.9% (Mid July 2016)

Sources: UNCTAD, 2019; WSP Research; Project Syndicate, National ICT Policy 2015, Nepal Labour Force Survey 2017/18, SEP Macroeconomic Assessment Report 2018, NRB Survey Report on FDI in Nepal 2018

Digitization in Nepal: UKaid सीप/WSP's Vision for a Digitally Skilled and Connected Economy

Digital Transformation

Digital Data (Cloud)

- Data Centers/Cloud Access
- Cloud Computing
- Data Mining: Machine Learning, AI, Big Data, Blockchain, IoT

Fixed & Virtual Access

- Access to global digital platforms
- Digital literacy, Virtual/Augmented Reality
- Smart Devices- Platform/Sharing Economy

Automated Systems and Processes

- Tech-enabled Industries, equipment, production processes
- FinTech, EdTech, AgriTech, HealthTech, BioTech

No Geographic Boundaries

- Local and global connectedness for the landlocked
- Rural-Urban Linkage-Digital IDs
- Digital Twin/Digital Governance

Post-COVID: Nepal Economic Sectors



Digitalization Impact on Industries?

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Industry	Digitalization Impact	Key Initiatives/Programs
Travel/Hospitality	Booking; marketing; mapping and logistics; payments and financial services; connected to other services: weather, security, transportation, Digital Platforms (Uber, local example)	Rojgari
Remittances/Financial Services	Mobile Wallets; POS/NFC/Mobile payments; Biometric Credit Assessment; Data-driven credit decisions; financial literacy; front-and bank end lending process automation.	IME Pay/E-Sewa
Manufacturing	Supply/value chain automation; price discovery of components; marketing and sales; local and global market connection; Virtual/Augmented Reality Training	NYMA
Construction	GPS Enabled Tracking Systems, Simulation; Safety; Fleet Management; Human and Other Resource Management	MAW Skilling Academy, NYMA
Wholesale/Retail	E-Commerce, supplier and distribution connection; logistics management; financial services linkages.	MFS, RTGS/CSD aut SEP/Sakchyam Challenge Funds
Agriculture	Weather information, price discovery, input supply, sales and marketing, connected markets; linkages to retails and wholesale, market linkages; Weather-based Insurance (Sakchaym); access to digital platforms	Stonestep; Shreenagar Agro

WSP Support Through Ukaid सीप and Ukaid Sakchyam

Enterprise Development

Skilling & Capacity Building

Funding & Financing

Ecosystem Support

Market Linkages