Chapter 4 Outline of Nepal's International Trade

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4.1 Past Trend

Nepal's external trade is characterized by large trade deficits and overly high dependency on trade with India. As summarized in Table 4.1-1, the value of total imports surpasses that of total exports by more than six times in the recent three years, and the trade deficit has been expanding year after year. While the total trade is on the rise, imports have been growing at much higher rates than exports. Strong import growth – led by consumer goods - seems to be partly attributable to the increase in remittance made by overseas workers, which more than compensates for a sluggish domestic industry.

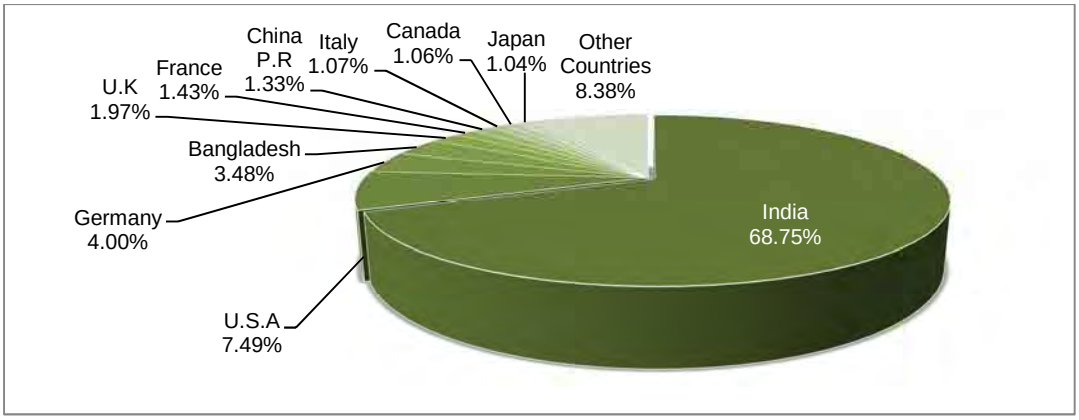
Table 4.1-1 Foreign Trade Composition of Nepal

Value Billion Rs.

	Total Exports	Total Imports	Total Trade	Trade Deficit	Export: Import Ratio
F.Y. 2009/10	60.95	375.61	436.56	314.66	1: 6.2
Share % in Total Trade	*14.0*	*86.0*			
F.Y. 2010/11	64.56	397.54	462.10	332.98	1: 6.2
Share % in Total Trade	*14.0*	*86.0*			
F.Y. 2011/12	74.09	498.16	572.25	424.07	1: 6.7
Share % in Total Trade	*12.9*	*87.1*			
Percentage Change in F.Y. 2010/11 compared to previous year	5.9	5.8	5.9	5.8	
Percentage Change in F.Y. 2011/12 compared to previous year	14.8	25.3	23.8	27.4	

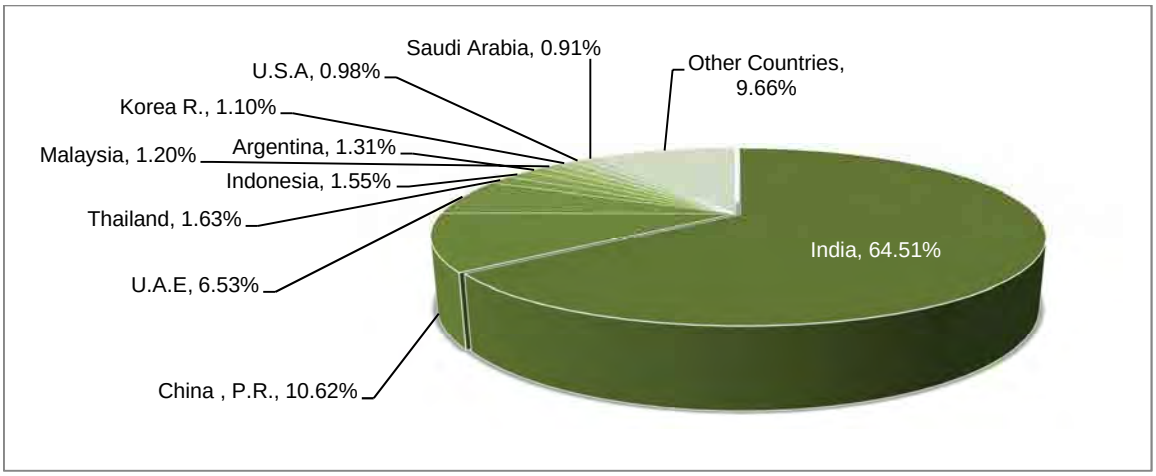
Source: Current Macroeconomic Situation, NRB

According to the 2011/12 trade statistics, exports to India account for 68.75% of Nepal's total exports and imports to it occupy 64.51% of total imports in terms of monetary amounts (Figures 4.1-1 and 4.1-2). Table 4.1-2 shows detailed trade record by country in recent years. India's dominance with more than a 60% share is not a recent trend but has been consistent for a long period of time.



Source: Trade & Export Promotion Center

Figure 4.1-1 Composition of Export Counterparts (2011/12)



Source: Trade & Export Promotion Center

Figure 4.1-2 Composition of Import Counterparts (2011/12)

Table 4.1-2 Major Trading Partners of Nepal

EXPORTS

Value in '000 Rs.

S.N	Countries	F.Y 2009/10	F.Y 2010/11	F.Y 2011/12	%
1	India	39,902,811	42,868,108	50,933,222	68.75%
2	U.S.A	3,867,223	4,392,600	5,551,916	7.49%
3	Germany	2,391,036	2,768,972	2,965,891	4.00%
4	Bangladesh	3,373,718	3,471,938	2,578,080	3.48%
5	U.K	1,228,188	1,389,528	1,461,905	1.97%
6	France	1,152,930	1,206,172	1,062,887	1.43%
7	China P.R	1,008,696	746,023	985,693	1.33%
8	Italy	716,188	758,283	792,245	1.07%
9	Canada	768,090	820,351	782,059	1.06%
10	Japan	554,158	652,352	767,227	1.04%
11	Turkey	276,970	865,692	548,770	0.74%
12	Bhutan	1,554,824	425,484	543,836	0.73%
13	U.A.E	255,032	326,300	440,792	0.59%
14	Netherlands	258,139	300,991	411,447	0.56%
15	Australia	333,140	304,824	354,270	0.48%
16	Vietnam	49,754	82,305	276,534	0.37%
17	Spain	181,061	279,556	273,516	0.37%
18	Hongkong SAR	369,414	179,455	255,482	0.34%
19	Belgium	265,807	244,631	247,215	0.33%
20	Kuwait	2,232	77,233	246,526	0.33%
21	Pakistan	78,971	142,338	225,907	0.30%
22	Switzerland	370,959	215,288	219,901	0.30%
23	Denmark	175,945	192,884	199,851	0.27%
24	Austria	100,969	163,061	176,016	0.24%
25	Malaysia	110,324	76,416	113,589	0.15%
26	Singapore	305,665	349,865	108,144	0.15%
27	Brazil	73,961	54,217	107,969	0.15%
28	Russia	33,876	117,119	95,152	0.13%
29	Taiwan	71,187	80,936	73,747	0.10%
30	Korea R	41,324	87,826	38,532	0.05%
31	Other Countries	1,077,012	921,696	1,250,738	1.69%
	Grand Total	60,949,603	64,562,444	74,089,060	100%

IMPORTS

Value in '000 Rs.

S.N	Countries	F.Y 2009/10	F.Y 2010/11	F.Y 2011/12	%
1	India	214,261,109	259,162,277	321,346,419	64.51%
2	China , P.R.	39,218,203	45,635,962	52,924,945	10.62%
3	U.A.E	33,398,621	13,615,677	32,540,181	6.53%
4	Thailand	7,504,724	7,039,735	8,098,446	1.63%
5	Indonesia	8,093,843	8,403,085	7,740,468	1.55%
6	Argentina	5,036,656	7,369,341	6,529,625	1.31%
7	Malaysia	4,207,297	4,962,553	5,978,247	1.20%
8	Korea R.	5,885,329	5,737,191	5,461,033	1.10%
9	U.S.A	5,384,826	3,930,988	4,885,225	0.98%
10	Saudi Arabia	1,832,945	3,172,754	4,538,443	0.91%
11	Japan	6,267,573	3,957,915	4,479,354	0.90%
12	Ukraine	2,499,366	445,606	3,462,359	0.70%
13	Singapore	5,007,334	3,347,521	2,646,484	0.53%
14	Germany	2,321,819	2,330,043	2,569,290	0.52%
15	Brazil	620,858	1,184,859	2,510,432	0.50%
16	Taiwan	1,519,883	1,450,077	2,270,523	0.46%
17	Australia	4,950,297	1,829,768	1,996,628	0.40%
18	Vietnam	281,436	1,035,585	1,980,528	0.40%
19	Switzerland	2,743,879	2,456,573	1,914,382	0.38%
20	U.K.	7,298,818	2,040,553	1,899,390	0.38%
21	France	1,662,686	1,322,207	1,639,948	0.33%
22	Russia	436,032	647,369	1,511,754	0.30%
23	Bangladesh	764,830	1,104,150	1,502,817	0.30%
24	Italy	949,066	771,544	1,279,641	0.26%
25	Netherlands	511,998	768,096	1,035,074	0.21%
26	Canada	551,039	1,089,558	905,949	0.18%
27	New Zealand	1,091,571	1,038,232	841,303	0.17%
28	Finland	1,214,488	606,892	554,646	0.11%
29	Egypt	403,626	838,911	502,747	0.10%
30	Turkey	404,577	1,849,869	420,301	0.08%
31	Other Countries	9,281,141	8,391,053	12,194,496	2.45%
	Grand Total	375,605,870	397,535,942	498,161,074	100%

Source: Trade & Export Promotion Center

Next to India, Nepal's exports go to the United States, Germany, Bangladesh, the UK, and France, in order of share. That is, major importers are neighboring countries (South Asia) and western countries although shares of the other countries are fairly small in contrast to India's whopping 68% share. Note that the share of the United States is decreasing after the termination of the import quota for garment products from Nepal.

The second largest exporter to Nepal is China, which shows a certain degree of presence (10.62% of the total), followed by the United Arab Emirates, Thailand, Indonesia, Argentine, Malaysia, and South Korea. Nepal imports from these countries raw materials, machinery and consumer goods. Asian countries are not major export destinations probably because Nepal's major export items (agricultural products, processed food, and textile and apparel) compete with those exported by those countries.

Japan ranks 10th as an impostor from Nepal and 11th as an exporter to it. Although Japan's presence as a supplier seems to be small, it is probably because Japanese companies export some products to Nepal from factories operating in Southeast Asia. Major exports from Nepal to Japan are ginger, pashmina, honey, and coffee, and major imports from Japn include machinery, industrial products, auto parts, and steel and iron products.

Thus, Nepal's trade pattern is characterized by India's predominant presence, while major importers of its products are neighboring countries, the U.S. and Europe and major exporters China and South Asian countries.

4.1.1 Export Trend in terms of Items

Tables 4.1-3 and 4.1-6 list major export and import items in the recent three years, respectively (order based on the trade value in the 2011/12 data). Textile and apparel products including yarns (such as polyester and cotton) and carpet continue to rank high in the country's exports. While Nepal is not endowed with raw materials for these products, it manufactures them for India at factories owned and operated by Nepalese and Indian companies. Major exports coming after them are metal products including galvanized iron sheets, wires, and pipes, and food products such as cardamom, juices, and lentils. Again, metal products are made by using metal plates imported from India and are exported, for the country does not have steel mills. On the other hand, cardamom, lentils, tea, and ginger are considered the country's specialty products.

Industrial products, such as machinery and electric equipment, are not found in the list, which is partly accounted for by the lack of industrial foundation including supply capability of materials and technologies, as well as a small number of business owners who are willing to drive industrial development by making investment in technology and production

Table 4.1-3 Total Exports of Some Major Commodities

In '000 Rs.

S.N	Commodities	F.Y. 2009/10	F.Y. 2010/11	F.Y. 2011/12	Annual Change % in valuecompared to previous year	
		Value	Value	Value	F.Y. 2010/11	F.Y. 2011/12
1	Yarns (Polyester, Cotton and others)	4,680,822	5,545,075	6,320,684	18.5	14.0
2	Woolen Carpet	4,256,171	4,920,085	6,001,657	15.6	22.0
3	Textiles	4,156,767	3,701,384	5,217,213	-11.0	41.0
4	Readymade Garments	3,758,161	4,084,040	4,059,964	8.7	-0.6
5	Flat rolled product of iron or non alloy steel, of a width 600mm or more plated coated with zinc	3,246,349	3,251,178	3,562,484	0.1	9.6
6	Cardamom	1,171,597	2,043,716	3,496,733	74.4	71.1
7	Juices	1,071,517	1,348,507	3,072,512	25.9	127.8
8	Lentils	3,744,922	3,349,101	2,677,970	-10.6	-20.0
9	Wire of iron or non-alloy steel	1,488,550	1,777,830	2,459,047	19.4	38.3
10	Flat rolled products of iron or non-alloy steel, of a width of 600mm or more, plated or coated with corrugated zinc	2,432,339	3,031,827	2,409,130	24.6	-20.5
11	Tubes, pipes and hollow profiles of iron and steel	1,432,408	1,642,720	2,353,348	14.7	43.3
12	Jute bags and sacks	2,011,386	2,112,879	2,342,476	5.0	10.9
13	Woolen and Pashmina shawls	1,317,065	1,635,629	1,908,766	24.2	16.7
14	Copper and articles thereof	1,620,720	1,677,159	1,691,689	3.5	0.9
15	Tea	1,195,318	1,549,891	1,573,651	29.7	1.5
16	Dentifrices (toothpaste)	721,373	980,850	1,085,598	36.0	10.7
17	Hides & Skins	627,434	801,648	1,039,714	27.8	29.7
18	Medicinal Herbs	440,463	710,593	805,371	61.3	13.3
19	Hats and headgears	343,359	640,270	687,616	86.5	7.4
20	Noodles, pasta and like	675,005	702,567	603,021	4.1	-14.2
21	Cotton sacks and bags	638,505	639,297	568,985	0.1	-11.0
22	Nepalese paper and paper Products	404,977	456,214	566,430	12.7	24.2
23	Ginger	456,014	281,949	507,590	-38.2	80.0
24	Handicrafts (Painting, Sculpture and statuary)	560,991	521,935	397,043	-7.0	-23.9
25	Vegetable fats and oil	224,870	202,454	238,117	-10.0	17.6
26	Articles of silver jewellery	177,852	388,355	226,310	118.4	-41.7
27	Essential Oils	35,905	82,032	76,851	128.5	-6.3
28	Others	4,256,171	4,920,085	6,001,657	15.6	22.0
	Total	60,949,603	64,562,444	74,089,060	5.9	14.8

Source: Trade & Export Promotion Centre

Table 4.1-4 lists major export items to India. Iron and steel products (HS Code 72) rank first and are mainly galvanized iron sheets and wires, as pointed out earlier, together with scraps. The second largest item, man-made filaments (HS Code 54), consists of yarns and textiles, followed by coffee, tea, spices, and textile articles. After them, coffee, tea, spices and textile articles come next. Galvanized iron sheets are exported to India taking advantage of the difference in tariff of zinc coating materials between the two countries; whereas the tariff in India is set at 26.5%, that in Nepal is at 10%.

Table 4.1-4 Major Export Items for India

	S.N.	Product Code	Product Name	Unit	Quantity	Value(USD)	%Value
1	70	72	Iron and steel	Kg.	355,752,330	375,314,596	18.00
2	52	54	Man-made filaments	Kg.	1,224,553,476	232,797,849	11.20
3	53	55	Man-made staple fibres	Kg.	114,146,016	201,460,813	9.70
4	9	9	Coffee~ tea~ mate and spices	Kg.	143,175,460	182,035,822	8.70
5	61	63	Other made up textile articles: sets: worn clothing and worn textile articles: rags	Pcs.	132,797,684	96,744,998	4.60
6	71	73	Articles of iron or steel	Kg.	170,222,796	90,934,488	4.40
7	19	20	Preparation of vegetables~ fruits~ nuts or other parts of plants	Kg.	133,008,245	88,812,905	4.30
8	72	74	Copper and articles thereof	Kg.	11,515,457	71,463,995	3.40
9	38	39	Plastics and articles thereof	Kg.	120,840,564	69,139,378	3.30
10	24	25	Salt: sulphur: earth and stone: plastering materials~ lime and cement	Kg.	1,111,310,980	61,817,034	3.00
11			Other (value total)			613,426,920	29.40

Source: Trade & Export Promotion Centre

From Table 4.1-5 ranking export destinations by item, Nepal's trade pattern including partners and products can be further analyzed. While consumer products such as carpets, readymade garments, jewelry, and Pashmina shawls are mostly exported to industrialized countries, iron and steel products, food, jutes and textiles are chiefly destined to India. Exports of steel products, jute products, and textiles make use of tariff differences, whereas foods are exported to fill the supply shortage in the Indian market. And this trade pattern continues during the past decade.

Table 4.1-5 Export Destinations for Some Products and India's Position

	F.Y. 2010/11		F.Y. 2011/12	
	Quantity Sqm	Value 000 Rs	Quantity Sqm	Value 000 Rs
Woolen Carpet (Total)	**833,409**	**4,920,085**	**684,455**	**6,001,657**
U.S.A.	243,588	1,878,742	259,648	2,569,918
Germany	337,766	1,567,303	229,760	1,571,198
U.K.	39,156	325,748	34,533	422,559
Canada	32,579	235,086	22,630	281,790
Belgium	18,319	116,676	14,703	120,793
Australia	21,904	82,124	10,087	112,560
Netherlands	13,964	81,107	12,511	103,978

	F.Y. 2010/11		F.Y. 2011/12	
	Quantity Pcs	Value 000 Rs	Quantity Pcs	Value 000 Rs
Readymade Garments (Total)	**17,084,925**	**4,084,040**	**13,263,015**	**4,059,964**
U.S.A.	4,000,719	799,582	3,258,247	968,995
U.K.	1,842,137	609,916	1,191,326	543,311
France	2,197,740	677,652	1,434,937	512,517
Germany	1,296,093	359,285	1,291,450	465,796
India	1,002,644	434,625	683,623	332,824
Japan	1,477,744	203,237	1,268,630	217,596
Spain	909,314	133,929	871,855	167,649

	F.Y. 2010/11		F.Y. 2011/12	
	Quantity Sqft	Value 000 Rs	Quantity Sqft	Value 000 Rs
Hides & Skins (Total)	**16,759,063**	**801,648**	**16,653,950**	**1,039,714**
India	9,728,855	368,332	7,108,739	327,375
Itaty	3,299,681	232,478	3,456,582	294,338

	F.Y. 2010/11		F.Y. 2011/12	
	Quantity Kg	Value 000 Rs	Quantity Kg	Value 000 Rs
Lentils (Total)	**37,425,040**	**3,349,101**	**33,151,322**	**2,677,970**
Bangladesh	36,954,792	3,315,567	29,579,700	2,453,246
Tea (Total)	**10,532,633**	**1,549,891**	**9,198,080**	**1,573,651**
India	9,986,216	1,401,147	8,615,256	1,367,656
Germany	66,061	47,574	95,878	64,711
Cardamom (Total)	**4,821,971**	**2,043,716**	**5,311,393**	**3,496,733**
India	4,809,551	2,041,600	5,273,843	3,459,049
Ginger (Total)	**13,238,723**	**281,949**	**23,941,159**	**507,590**
India	13,035,099	277,734	23,885,219	506,082
Flat rolled products of iron or non-alloy steel, of a width of 600 mm or more, plated or coated with corrugated zinc (Total)	**36,678,484**	**3,031,827**	**24,544,535**	**2,409,130**
India	36,678,484	3,031,827	24,544,535	2,409,130

	F.Y. 2010/11		F.Y. 2011/12	
	Quantity Kg	Value 000 Rs	Quantity Kg	Value 000 Rs
Flat rolled product of iron or non alloy steel, of a width 600mm or more plated coated with zinc (Total)	**37,933,605**	**3,251,178**	**36,117,991**	**3,562,484**
India	37,933,605	3,251,178	36,117,991	3,562,484
Wire of iron or non-alloy steel (Total)	**23,972,890**	**1,777,830**	**29,822,341**	**2,459,047**
India	23,952,890	1,776,338	29,822,341	2,459,047
Tubes, pipes and hollow profiles of iron and steel (Total)	**28,901,666**	**1,642,720**	**35,120,788**	**2,353,348**
India	28,886,896	1,641,916	35,120,575	2,353,896

	F.Y. 2010/11 Value 000 Rs	F.Y. 2011/12 Value 000 Rs
Handicrafts (Painting, Sculpture and statuary) (Total)	**521,935**	**397,043**
U.S.A	72,779	69,579
Germany	71,633	71,249
Taiwan	46,743	35,886
India	36,404	33,181
France	28,329	18,888
Japan	25,467	17,131
Italy	21,871	13,182
Articles of silver jewellery (Total)	**388,355**	**226,310**
U.S.A.	244,019	95,408
Japan	25,557	28,217
Canada	24,968	20,209
Germany	13,884	15,383
France	6,718	12,861
Netherlands	11,996	11,929
China P. R.	32,705	11,701
Woolen and Pashmina shawls (Total)	**1,635,629**	**1,908,766**
Germany	305,571	401,789
U.S.A.	254,005	274,804
France	209,072	247,052
U.K.	153,446	204,147
Italy	138,057	149,168
U.A.E.	110,997	147,195
Japan	57,050	82,831
Medicinal Herbs (Total)	**710,593**	**805,371**
India	482,850	408,193
China PR	27,785	189,084
Hongkong	33,390	109,776
Noodles, pasta and like (Total)	**702,567**	**603,021**
India	475,550	413,675
China PR	19,889	47,573

	F.Y. 2010/11 Value 000 Rs	F.Y. 2011/12 Value 000 Rs
Juices (Total)	**1,348,507**	**3,072,512**
India	1,328,424	3,070,866
Jute bags and sacks (Total)	**2,112,879**	**2,342,476**
India	2,073,494	2,287,452
Copper and articles thereof (Total)	**1,677,159**	**1,691,689**
India	1,590,576	1,575,572
Yarns (Polyester, Cotton and others) (Total)	**5,545,075**	**6,320,684**
India	4,782,853	5,899,246
Textiles (Total)	**3,701,384**	**5,217,213**
India	3,659,018	5,175,358

Source: Trade & Export Promotion Centre

4.1.2 Import Trend

Nepal's major import items are petroleum products, basic industrial materials such as iron and steel and machinery, as well as transport vehicles and electronic and electrical equipment (Table 4.1-6). Note that Indian people, like people in other South Asian countries, purchase gold for investiment as well as for ornamental purpose. Gold is ranked high, partly because they import gold from Nepal, instead of directly importing from other countries, taking advantage of the tariff difference set for gold between the two countries. Then, Nepal imports a wide range of food and consumer goods to support daily life. The recent growth of imports of transport vehicles, motorcycles, television sets, and personal computers seems to reflect the increasing number of the middle class as well as the increase in remittance by overseas workers. Also, it is said that consumption of the Nepalese people is driven by Indian TV advertisements on Indian products which are widely viewd by the Nepalese.

Table 4.1-6 Nepal's Major Import Items

In '000 Rs.

S.N	Commodities	F.Y. 2009/10	F.Y. 2010/11	F.Y. 2011/12	Annual Change % compared to previous year	
					F.Y. 2010/11	F.Y. 2011/12
1	Petroleum Products	55,663,601	75,758,276	97,039,163	36.1	28.1
2	Iron & Steel and products thereof	33,895,505	42,173,356	49,644,704	24.4	17.7
3	Machinery and parts	28,105,277	26,650,497	26,340,288	-5.2	-1.2
4	Gold	41,457,722	10,720,989	25,773,887	-74.1	140.4
5	Transport Vehicles and parts thereof	30,462,257	24,228,688	23,916,218	-20.5	-1.3
6	Electronic and Electrical Equipments	19,343,711	19,292,154	21,307,024	-0.3	10.4
7	Pharmaceutical products	11,971,280	11,725,083	13,718,169	-2.1	17.0
8	Cereals	4,194,810	5,030,478	13,413,363	19.9	166.6
9	Polythene Granules	4,372,905	6,367,676	10,897,876	45.6	71.1
10	Telecommunication Equipment and parts	12,962,727	10,672,175	10,188,830	-17.7	-4.5
11	Crude soyabean oil	5,963,420	8,115,443	10,131,122	36.1	24.8
12	Fertilizers	2,919,068	6,192,188	9,503,137	112.1	53.5
13	Man-made staple fibres (Synthetic, Polyester etc	1,766,098	4,767,580	8,010,800	169.9	68.0
14	Articles of apparel and clothing accessories	4,956,394	6,372,824	7,852,395	28.6	23.2
15	Cement Clinkers	8,039,139	8,066,303	6,904,343	0.3	-14.4
16	Chemicals	4,142,206	4,807,676	6,159,903	16.1	28.1
17	Copper and articles thereof	1,692,762	2,713,827	3,935,748	60.3	45.0
18	Crude palm Oil	3,756,036	3,982,498	3,698,380	6.0	-7.1
19	Rubber and articles thereof	2,188,261	2,630,139	3,643,026	20.2	38.5
20	Aluminium and articles thereof	2,224,254	2,930,103	3,626,370	31.7	23.8
21	Cotton (Yarn and Fabrics)	2,407,303	2,771,162	3,547,604	15.1	28.0
22	Cement	4,456,126	4,639,161	3,471,213	4.1	-25.2
23	Low erucic acid rape or colza seeds	1,537,398	2,415,852	2,696,172	57.1	11.6
24	Zinc and articles thereof	1,220,565	1,885,275	2,668,535	54.5	41.5
25	Wool, fine or coarse animal hair	2,037,771	2,090,309	2,524,017	2.6	20.7
26	Industrial monocarboxylic fatty acid	1,548,283	1,968,142	1,857,906	27.1	-5.6
27	Betelnuts	3,352,626	2,059,767	1,660,993	-38.6	-19.4
28	Aircraft and parts thereof	2,931,786	1,916,311	1,632,262	-34.6	-14.8
29	Others	76,036,579	94,592,010	122,397,626	24.4	29.4
	Total	375,605,870	397,535,942	498,161,074	5.8	25.3

Source: Trade & Export Promotion Centre

Exports from India to Nepal exactly follow the above general composition (Table 4.1-7). In particular, India is a major source of products to support the foundation of the Nepali economy, such as petroleum products and basic industrial materials, and thus it virtually controls the lifeline for the national economy. It is said that Nepal plans to import petroleum products from Malaysia, and yet they have to be shipped through India. For Nepal which has no ports, India is an indispensable trade partner in every aspect.

Table 4.1-7 Major Import Items from India

	S.N.	Product Code	Product Name	Unit	Quantity	Value(USD)	%Value
1	27	27	Mineral fuels~ mineral oils and products of their distillation: bituminous substances: mineral waxes	Kg.	2,771,217,804	3,436,294,815	29.10
2	72	72	Iron and steel	Kg.	2,497,360,555	1,560,779,498	13.20
3	86	87	Vehicles other than railway or tramway rolling-stock~ and parts and accessories thereof	Pcs.	177,308,109	1,059,972,643	9.00
4	25	25	Salt: sulphur: earth and stone: plastering materials~ lime and cement	Kg.	8,262,960,197	635,463,268	5.40
5	83	84	Nuclear reactors~ boilers~ machinery and mechanical appliances: parts thereof	Kg.	101,273,947	594,622,771	5.00
6	30	30	Pharmaceutical products	Kg.	199,302,731	434,781,147	3.70
7	84	85	reproducers~ television image and sound recorders and reproducers~ and parts and accessories of such articles	Pcs.	254,364,032	353,139,790	3.00
8	39	39	Plastics and articles thereof	Kg.	537,668,327	294,510,183	2.50
9	10	10	Cereals	Kg.	1,304,516,080	286,703,230	2.40
10	12	12	Oil seeds and oleaginous fruits: miscellaneous grains~ seeds and fruit: industrial or medicinal plants: straw and fodder	Kg.	491,646,887	174,232,513	1.50
11			Other (value total)			2,995,775,075	25.20

4.2 Promotion of International Trade and Major Issues

4.2.1 Policies and Programs relating to Trade Promotion

(1) Three Year Plan Approach Paper (2009/10 – 2012/13)

The promotion of trade is taken up as a priority in the NPC's latest three-year development plan, in which NPC recognizes that Nepal's products have yet to be competitive in the international market and that even traditional export items including carpets, pashmina, and textile products fail to meet internationally acceptable quality standards. NPC also points out that Nepal's industry has not found niche products and areas that have export potential, while exports rely heavily on sectors using imported parts and products rather than those using domestic resources and suppliers. In this recognition, the three-year development plan sets forth a variety of development strategies, including the enhancement of added value and productivity for export goods and services, development of new export items, promotion of import substitution and export diversification, and the improvement of competitiveness of export industries under support from international donor organizations. Based on these strategies, Trade Policy 2009 has been announced as a more detailed development policy guideline.

(2) Trade Policy 2009

With the country's political shift toward democracy, marked by the promulgation of the new constitution in 1990 and the opening of the national assembly in 1991, the government has adopted a new economic policy approach that focuses on liberalization. Trade Policy 1992 was established in line with the economic liberalization process. It was formulated by the Ministry of Commerce and Supplies and aims to build and reinforce systems and institutions to vigorously promote the country's trade within the present international framework so as to make most use of benefits from the free trade system. Then, in 2004, Nepal became a member of WTO within the framework of a bilateral agreement. Now, the country is working toward the signing of free trade agreements such as SAFTA. It should be noted, however, that Trade Policy 1992 failed to become an engine to develop the environment for trade promotion because the enhancement of the customs system and sanitary and photo-sanitary systems were unsuccessfully called for due to an insufficient budget and organizational backup.

Then, Trade Policy 2009 has been formulated to replace Trade Policy 1992. It is linked to the three-year development plan and sets forth policy to promote trade as a backbone of the national economy and as an effective means to achieve the national goals of rural industrial development and reduction of poverty. Also, it aims to implement policy measures to improve industry's export competitiveness by building on the implementation status of the action plans in Trade Policy 1992. In particular, Trade Policy 2009 sets forth the following 13 working policies.

1) Enhancing the role and professional capacity of government and private sector entities.

The government sector will fulfill its roles relating to international cooperation on free trade, the enactment of related laws and regulations, and financial policy, whereas the private sector will work to help build a more efficient trade promotion system, including networking of the Nepalese living overseas, by strengthening their professional capacity.

2) Reducing transaction costs through procedural simplification and institutional strengthening.

Comprehensive measures will be undertaken in the areas of customs clearance, freight inspection, tax reimbursement, and compliance with international standards and inspection so as to simplify and modernize related procedures, systems and institutions, and thereby to reduce related costs.

3) Developing policy, institutional and physical infrastructures relating to foreign trade.

Institutions relating to foreign trade include colleges and universities that offer trade related programs.

4) Strengthening and promoting intellectual property rights under the collaboration between related organizations and the Nepalese living abroad.

Trade Promotion Institute will be established based on existing organizations and resources of the Trade and Export Promotion Center and networks for strengthening intellectual property rights of traditional products and handicrafts will be exploited to raise awareness about them

5) Providing additional incentives to export oriented industries.

Incentives to export oriented industries will be enhanced, by reviewing the tax system and developing an export finance system.

6) Expanding overseas markets through utilization of opportunities available under bilateral, regional and multilateral trade agreements.

Efforts will be made to expand export markets by concluding trade agreements with countries other than South Asia.

7) Establishing Special Economic Zones for export promotion.

SEZs will be established in Bhairahawa, Birgunj, Rajbiraj, Butwal, and Nepalgunj to streamline export and import procedures and improve physical infrastructure.

8) Cultivate human resources in trade sector.

Human resource development initiatives will be taken using the Export Promotion Fund and new technologies, together with cooperation of educational institutions, with an emphasis on

certification of agricultural products, dissemination of contract farming, and the fostering of entrepreneurs.

9) Increasing income and employment opportunities through promotion of trade in services.

Public support will be provided for developing areas of services with high growth potential in tourism, education, health and information sectors, to earn foreign currencies. For that purpose, the establishment of the Service Trade Promotion Council will be promoted.

10) Developing special thrust areas.

Public assistance and support will be provided to develop handicrafts and agricultural and forestry products with high export potential.

11) Promoting identification, selection, production and trading of new exportable goods of comparative advantage.

Technical, transport support will be provided to improve comparative advantage of selected products in the areas of handcrafting, agriculture and forestry by using the Export Promotion Fund.

12) Linking export oriented industries with domestic markets.

General growth of the export sector will be promoted by shipping products made in SEZs as well as export oriented items to local markets.

13) Encouraging exports of goods or services produced for domestic consumption.

Efforts will be made to explore export opportunity for products and services traditionally provided for domestic consumption.

Trade Policy 2009 analyzes the current state of Nepal's international trade well, and the directions and working policies set forth likely major measures and actions necessary for trade promotion. Yet, its implementation is very slow. While National Trade Integration Strategy 2010, which is described below, specifies key products and some actions are taken accordingly, Trade Policy 2009 is considered just as a policy guideline. Bills relating to institutional development specified in Trade Policy 2009 –the Board of Trade, the Trade Promotion Institute, the Special Economic Zones, and the Export Processing Zones – are waiting for parliamentary deliberation. However, it is not clear when they are going to enacted, because there is currently no parliament to be convened in Nepal.

(3) Nepal Trade Integration Strategy 2010

National Trade Integration Strategy 2010 (NTIS 2010), as same as Trade Policy 2009, was formulated by the Ministry of Commerce and Suppliers and contain capacity development actions relating to export promotion in the next 3-5 years and short- to medium-term priority

products and areas. It is designed to serve as a more specific trade promotion plan on the basis of the survey results under Nepal Trade and Competitiveness Study published in 2004. As for the capacity development actions, NTIS proposes a wide range of actions similar to those shown in Trade Policy 2009, including the promotion of bilateral and multilateral economic partnerships and the provision of diverse support programs and systems.

At the same time, NTIS 2010 designates 19 products and areas (including services) as short- and medium-term priorities, conducts their SWOT analysis, and proposes action plans. The 19 priority products and areas are roughly divided into three categories: agricultural products (7 items); handicraft and industrial products (5 items); and services (7 areas). In fact, they are widely exported and many interviewees in the Study actually listed them as prospective export items. Table 4.2-1 shows export records of the 12 items (agricultural and handicraft/industrial products) in the recent three years, and they have already accounted for a combined share of 47.5% of Nepal's total exports. The Study is designed to identify prospective export items, which should likely include these items.

Table 4.2-1 High Prospected Export Items of NTIS 2010

Value: Rs.1,000

Products	F.Y.2008/09	F.Y.2009/10	F.Y.2010/11	% share
Iron and steel products	9,227,928	10,016,265	10,120,304	15.67%
Woolen products	5,658,745	4,445,933	5,240,782	8.11%
(Readymade garments)*	4,350,915	3,758,161	4,084,040	6.32%
Lentils	5,660,781	3,744,922	3,349,101	5.18%
Cardamom	1,343,571	1,171,597	2,043,716	3.16%
Pashmina products	1,818,891	1,317,065	1,635,629	2.53%
Tea	1,240,864	1,195,318	1,549,891	2.40%
Medical herbs/essential oils	813,235	476,368	792,625	1.22%
Instant noodles	835,314	675,005	702,567	1.08%
Paper and handmade paper	560,806	404,977	456,214	0.70%
Silver jewelry	620,148	227,534	406,269	0.62%
Ginger	403,468	456,014	281,949	0.43%
Honey	2,438	230	7,667	0.01%
Others	36,059,748	33,060,214	33,891,690	52.49%
Total	68,596,852	60,949,603	64,562,444	100.00%

Remark: * Readymade garments are not listed as export potential products
Source: A Glimpse of Nepal's Foreign Trade, Trade & Export Promotion Center, Oct. 2011

NTIS 2010 makes in-depth analysis of the 19 priority items and areas in terms of their socioeconomic impacts and resource burdens (electricity and water) to rate them according to an overall level of priority. Table 4.2-1 tabulates priority levels of the items and areas on the basis of the relevant indicators. Although no ranking is made, the table indicates that 4 items (cardamom, lentil, instant noodles, and iron and steel products) and 2 areas (tourism and labor service) have relatively high levels of priority.

Table 4.2-2 Export Potential and Socio-Economic Impact of 19 Products and Service (NTIS 2010)

No.	Sector	Nepali exports, 2008 (US$1,000)	Index 1: Export performance	Index 2: World market conditions	Index 3: Domestic supply conditions	Overall export potential
	Agro Food					
1	Large cardamom	21,329	high	low	high	high
2	Ginger	8,130	medium	low	medium	medium
3	Honey	500	low	medium	medium	medium
4	Lentils	22,258	medium	high	high	high
5	Tea	16,805	high	low	medium	medium
6	Instant noodles	10,390	high	medium	high	high
7	Medicinal herbs/essential oils	11,000	low	medium	high	medium
	Craft and Industrial Goods					
8	Handmade paper	4,000	low	low	high	high
9	Silver jewelry	9,519	low	high	medium	medium
10	Iron and steel products	149,394	high	high	high	high
11	Pashmina products	22,074	medium	medium	high	medium
12	Wool products	16,540	medium	high	medium	medium
	Services					
13	Tourism	352,000	high	high	high	high
14	Labour services	2,448,000	high	high	medium	high
15	IT & BPO services	10,000	medium	medium	medium	medium
16	Health services	n/a	low	medium	low	low
17	Education services	10,000	medium	low	low	low
18	Engineering services	n/a	low	medium	medium	medium
19	Hydro-electricity	0	low	high	medium	medium

Source: Export Potential Assessment (NTIS, Chapter 2)

Although NTIS 2010 does not specify action plans for the priority items and areas, the MoCS indicates that action plans have been made for all of them and several plans are already underway. For example, a quality improvement program for cardamom producers is carried out in cooperation of the Ministry of Agricultural Development (under the budget of Rs.5 million). A cleaning plant for gingers (involving investment totaling Rs.25 million) has been constructed and is under operation as a joint project with FAO in an eastern area near the Indian border. Similar action plans for tea and honey are currently in the coordination process and will be carried out under the support of international donor organizations.

(4) Multi and Bilateral Trade Agreements

Multilateral and bilateral trade agreements Nepal is the first LLDC that has become a WTO member nation. As for multilateral and bilateral trade agreements, which are discussed in 2.4, progress has been rather slow about bilateral agreements, which have been signed with less than 20 countries. As for the trade agreement with Japan, negotiation has not yet been brought up as agenda. Nepal participate in or negotiate various multilateral trade arrangements, mainly those covering South Asia, but actions such as the lowering of tariff rates are not undertaken as intended due to dominant power of the Indian economy in the region and large differences between India and other member nations.

(5) Nepal International Trade Fair (NITF)

Nepal International Trade Fair (NITF) is an international trade fair hosted by the Federation of Nepalese Chamber of Commerce and Industry (FNCCI). It was first held in 2012 and preparation is currently underway for the second NITF that is scheduled to be held in March 2013. The first NITF exhibited products from many countries including India, Bangladesh, Bhutan, Pakistan, China, and South Korea, not to mention Nepal. For the second NITF, buyers are expected to come from the U.S. Europe, the Middle East, Japan, and Australia. The FNCCI and the Nepal government as the main sponsor greatly hope for the trade fair as a major vehicle for export promotion.

At the first NITF, Nepal companies representing the following fields made exhibitions.

- Handicraft
- Tourism
- IT and BPO
- Processing of agricultural products
- Hydroelectric power generation
- Construction materials
- Education
- Medical and pharmaceutical products

Among them, handicrafts, agro-processing products, construction materials accounted for a large part of the exhibited products. Clearly, these products and areas are considered to be highly promising in terms of investment and export.

4.2.2 Nepal's International Trade System and Custom Clearance Procedures

Nepal's international trade system generally conforms to international standards as a result of participation in WTO and the introduction of an electronic customs clearance system (ASYCUDA++), and there are no special rules relating to import and export procedures. Nevertheless, as the country still imposes tariff on over 1,000 items and one of the distinct trade patterns is imports of raw materials and parts and exports of final products made by processing or assembly of imported materials, there are special regulations and procedures relating to the bonding of imported materials, which are described below.

(1) Taxation relating to exports and imports

In Nepal, government revenues mainly come from three taxes, namely customs duties, excise tax, and value added tax (VAT), which hold a combined share of 64.3% in 2011/12. Notably, Department of Customs plays an important role in collection of the three taxes imposed on export and import items. In addition to collection of customs duties, which is the department's primary responsibility, it collects 80% of excise tax and 65% of VAT. In total,

the department collects 42-45% of the country's tax revenues. This means that these three taxes are imposed and collected in the course of customs clearance. The system thus becomes fairly tricky when goods imported in bond are re-exported. It should be noted that the excise tax, which accounts for 13-14% of total government revenues, was previously applied to a limited number of products, such as liquors and tobaccos, and its share was very small. After the participation in WTO, however, the government has started to impose it on an increasing number of items, including imported goods, as the means to compensate for reduced tariff revenues. Because the excise tax is imposed simultaneously with collection of customs duties (for the good's value including customs duties), it becomes substantial in amount for expensive items.

(2) Use of the electronic customs clearance system

Customs clearance in Nepal can be made online by using the electronic system "ASYCUDA++." When a broker (exporter) inputs and sends data to the customs office, the application is processed through the Risk Management Screening system and a response is sent to the applicant with a color code, i.e., blue, yellow or red. The broker then brings documents to the customs office for clearance. The blue color marking means that the application can be processed for clearance and payment of fees and expenses, while the yellow marking signifies the need for revision or correction of documents and reapplication and the red marking requires the submission of additional documents and visual inspection on goods. The application with the blue marking generally completes customs clearance within two hours, and 85-90% of applications are cleared under the blue marking. Clearly, the electronic system has reduced the time required for customs clearance significantly, and few complaints about the system were heard from brokers. Instead, they complain more about the customs office and clearance procedures in India.

(3) Major features of Nepal's export and import tariffs

At present, Nepal exempts from customs duties a relatively small number of imported goods, mainly what are considered to be essential in Nepal's economic and social activity and service, such as communication equipment, portable telephones, PCs, printers, copiers, and other electronic equipment, as well as pharmaceutical products, medical equipment and fertilizers.

On the other hand, high tariff (80%) is imposed on passenger automobiles (up to 10 passengers) and fire arms. Together with the excise tax and VAT, the total tax rate reaches 225.44% of the invoice value (for assembled motorcycles, customs duties 30%, excise tax 40%, and VAT 13%).

Most items are subject to 1-30% tariff. Analysis of the tariff rates indicates that some of them strongly reflect the government's clear intention relating to industrial development policy. For instance, all fibers (cotton, wool and synthetic fiber) used by the textile industry (the

country's major industry) are exempted from import duty and VAT (while cashmere is subject to 1% import tariff and 13% VAT). On the other hand, cotton, woolen and synthetic fiber yarns are subject to around 5% import duty and 13% VAT, whereas the country produces these yarns, which are then used to make fabrics and garments for export. Meanwhile 15% tariff and 13% VAT are imposed on imported garments. Instant noodles are also considered as a key export item, and imported ones are subject to very high rates of taxes (30% tariff, Rs.7.5/kg for excise tax, and 13% VAT) – as high as those applied to motorcycles – to form a formidable barrier for foreign products.

As for other industrial materials, 10% import duty is imposed on plastics materials and 15% on machine parts. Industrial products including processed food are generally subject to 5-10% import tariff. Import duty for agricultural products is set at 5% for those coming from India and 10% for those from other countries[1]. Note that VAT is not applied to agricultural products including imports.

More importantly, imported goods used as input for exports are basically tax exempted, and there are three systems to assure tax exemption in the form of bonding or reimbursement, as follows.

- Bank guarantee system based on the bonded good status
- Provisional payment of customs duties and other taxes in the course of clearance procedures
- Tax reimbursement claim to the One Window Committee

Of the three systems, the first one is most widely used. Under the system, a company's warehouse or stockyard is treated as a bonded warehouse upon application and the company is relieved from lump sum payment. A company that intends to use the system is required to notify the customs office of a warehouse or stockyard intended for the bonding purpose and to receive inspection. After the second application, the approval is given upon document review only.

There are a small number of items subject to export tariff, mainly natural resources (e.g., wood, grabble and sand) and herbs (subject to 1% tariff or Rs.5/kg). Naturally, goods exported from Nepal are subject to import duties in importing countries.

In addition to tariffs, a customs service fee is collected at the rate of Rs.500 for imports and Rs.600 for exports per consignment (the latter case is limited to re-exports of bonded goods).

[1] Note that agricultural products imported from Tibet were previously subject to the agricultural reform fee (5% of invoice value) as substitute for customs duty), but they are now exempted.

Finally, many goods cross the border in the form of informal trade, i.e., without the customs office's inspection. The law requires goods carried by a person to be applied for customs clearance if they total value exceeds Rs.1,000. To deal with informal trade practice, Department of Customs has introduced strict customs control measures, such as registration of persons who frequently cross the border, introduction of a simplified application, and crackdown by armed police force.

4.3 Trade Promotion System and Human Resource

4.3.1 Systems and Institutions for International Trade Promotion

The Trade and Export Promotion Center under the MoCS is charge of promoting the country's exports and imports. It was established in November 2006 as a national trade promotion organization by merging three different organizations that had been separately engaged in trade promotion activity, namely the Trade Promotion Center, the Export Promotion Board, and the Carpet & Wool Development Board. Organization and activities of TEPC are outlined below.

(1) Organization

TEPC has around 70 staff members, although its full quota is 124. It has not hired new employees since 2006, partly due to the influence of the early retirement system introduced by the government. Originally, it had four regional offices. Now it maintains only two offices in Biratnagar and Neplalgunj, with a few staff members assigned to each office. The Biratnagar office is in charge of the eastern development region, the head office in the central region, and the Nepalgunj office the three west regions. The head office in Kathmandu consists of four sections, namely Business Promotion, Business Information, Product Development, and Administration. The annual budget amounts to around Rs.50 million.

(2) Activity

TEPC's activities are divided into gathering and provision of trade related information, support for trade promotion, and technical support for export promotion.

1) Collection and provision of trade related information

TEPC mainly compiles trade statistics, while providing information on export and import procedures and tariff rates. In 2011, TEPC established a Web site called "Export and Import Data Bank" under USAID's support, from which trade statistics and related information are made available. In addition, it has a library at each office, which contains reference books and documents, including those maintained by the Trade Promotion Center. The libraries are mainly used by students, rather business people, because their books and information are relatively old. As companies and individuals are increasingly accessible to a variety of information sources via the Internet, TEPC is expected to provide service in new fields and styles, such as support for development of foreign potential customers and collection of foreign market information, which are available from TEPC on a regular basis.

2) Support for trade promotion

TEPC's major activity in this area is the planning of and participation in domestic and foreign trade fairs, and support for companies that participate in such events. In December 2012, TEPC held its first trade fair in Kathmandu (SAARCH Fair), but its activity is limited to

the sending (or assistance in sending) of Nepal trade missions to foreign trade fairs a few times annually. In addition, it provides services including support for linking foreign buyers to Nepalese exporters (introducing a trade association upon request, etc.) and the publication of inquiries from foreign customers on its periodicals. TEPC's annual program budget is around Rs.16 million, of which estimated Rs.6 – 7 million are spent as subsidy relating to participation in trade shows.

3) Technical support for export promotion

TEPC's export promotion scheme is carried out in collaboration with other organizations. Recent projects include construction of a ginger cleaning plant, financial assistance for purchase of vegetable seeds, procurement of cardamom dryers, and training for farms growing jutes and coffee. It should be noted that TEPC is involved in these projects as an export promotion organization, which are initiated by other ministries or organizations.

(3) Human resource and capacity

As pointed out earlier, TEPC's workforce has been decreasing and no hiring has been made. Of the current workforce of 70 persons, full-time staff accounts for only one half and is not clearly sufficient to carry out activities expected for TEPC. On the other hand, there is no regular training to improve skills and capacity of staff members, except for that conducted under support of a donor organization. While the current staff members include those who previously worked at the Trade Promotion Center or the Export Promotion Board, few of them have expertise in related fields, such as needs analysis on foreign markets, development of overseas markets, and problem solving relating to customs clearance. Clearly, TEPC needs to build capacity relating to not only trade practice but also latest information and knowledge on foreign markets other than India.

4.4 Issues Relating to Trade Promotion

4.4.1 Major Issues

The following issues have been identified as to Nepal's trade promotion, especially export promotion.

(1) Insufficient promotional activity for use of the electronic customs clearance system

The study team's survey results indicate that many companies see no significant problem relating to the country's customs clearance system and procedures, except for lack of transparency in some areas. On the other hand, smaller companies that plan to start international trade feel difficulty in using the electronic system because of poor understanding. In Nepal, medium-sized and large enterprises use agents (brokers) that handle customs clearance and other tasks. Smaller companies cannot afford to hire brokers but do not have knowledge or skills to go through necessary procedures. Some of them do not use a PC, and for most of them, it takes considerable time to prepare documents required for customs clearance, together with additional cost (e.g., bribe). To disseminate use of the electronic system (ASYCUDA++) among smaller companies, efforts should be made to provide support for smaller companies, such as FNCCI's training program.

(2) Lack of a customs inspection system to check foods and compliance with international standards

In Nepal, the customs office is required to quarantine foods, such as farm products, meats, and dairy products, but it does not sufficient inspection facilities and equipment and fails to conduct effective inspection. For instance, gingers exported from Nepal to India have been loaded to trucks after harvesting and without cleaning. Although they are cleaned at a plant in India, it is clear that the Nepalese customs office has neglected cross-border inspection because strict hygienic control is not demanded in the market. Furthermore, Nepal does not issue the certificate of compliance with international standards for many processed foods and industrial products, simply because there is no inspection organization accredited to make certification according to relevant international standards. Only recently, the Central Food Laboratory under the Department of Food Technology and Quality Control has been accredited by an Indian organization. The country also lacks a proper quality inspection and certification system for industrial products; even Nepal Bureau of Standards and Metrology does not have sufficient resources including equipment and human resource. In promoting exports of processed foods and industrial products, it is imperative to establish or improve capacity for inspection and certification according to international standards.

(3) Lack of a strategic approach to export promotion

The latest export strategy paper - "Nepal Trade Integration Strategy 2010 (NTIS2010)," announced by the MoCS in 2010 - analyzes products and services having high export prospects and select 19 export potentials. However, it does not set forth promotional strategy for the potential export items. The most important export strategy for Nepal is to create a "champion" product or two that serve as a success story for the country's export promotion activity. For instance, Nepal intends to register "Chayangra Pashamina" as trademark in various countries, but it does not become a champion product unless strategy to promote and sell pashamina products in the global market is established and implemented. While Nepal's pashamina products have high quality, there is no sufficient production capacity to meet demand in the world market. The similar situation is observed about products that have high potential to substitute imports. A strategic approach to export promotion should cover the development of the entire production system from raw materials to processing and inspection, public support in terms of tax incentive and technology transfer, and promotional activities targeting different foreign markets. In this connection, it may be desirable to establish government organizations according to specific expert items. The strategic approach should thus focus on the fostering of "champion" products. The same approach is necessary to promote OVOP and new tourism activities outside Kathmandu, Pokhara and Chitwan (adventure tourism, eco-tourism and etc.).

(4) Need for TEPC's capacity building

As discussed earlier, TEPC has still to play an expected role as the trade promotion organization. To achieve the goal, TEPC needs to enhance its organizational abilities to meet the actual needs of Nepalese companies. In doing so, it is important to clarify the role of TEPC in trade policy making and implementation, rather than just adding staff and increasing the program budget. The study team's analysis indicates that the highest priority in relation to the development of Nepal's export industries (and products) should be placed on the achievement of international quality standards. Many companies complain about insufficient technology, equipment or raw materials, what they need to do is to make innovative efforts to achieve the goal by using currently available resources and to learn the actual needs of foreign customers. And TEPC is expected to provide adequate advice and information to help Nepalese industries to make products that meet international quality standards and the market needs. TEPC's current information service is limited to Nepal's trade statistics and domestic information and does not serve the purpose. Instead, TEPC needs to expand its activities, such as the use of resources available from the UNCTAD's Trade Point and International Trade Center, together with the promotion of collaboration and partnership with foreign trade promotion organizations and chambers of commerce and industry.

Chapter 5 Current State of Investment in Nepal

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5.1 Investment Trend

5.1.1 Recent Trend

(1) Definition of foreign investment

In Nepal, investment promotion has traditionally referred to promotion of foreign direct investment. The government agency in charge of investment promotion is Department of Industry (DoI) under the MoI. It should be noted that the DoI is responsible for business registration and management relating to investment projects (excepting commerce), both domestic and foreign investors, including prior consultation for potential investors. Thus, the DoI does not distinguish investment consultation and promotion services for foreign investors from those for local investors. Legally, however, investment by local companies is primarily regulated by Industrial Enterprises Act 1992 (IEA), whereas foreign investors are largely regulated by Foreign Investment and Technology Transfer Act 1992 (FITTA).

Under FITTA, foreign investment is classified into the following four forms, regardless of industry and trade.

1. Investment in share
2. Reinvestment of the earnings derived from the clause (1) above
3. Investment made in the form of loan or loan facilities
4. Invetsment in kinds, e.g. machineries and equipment

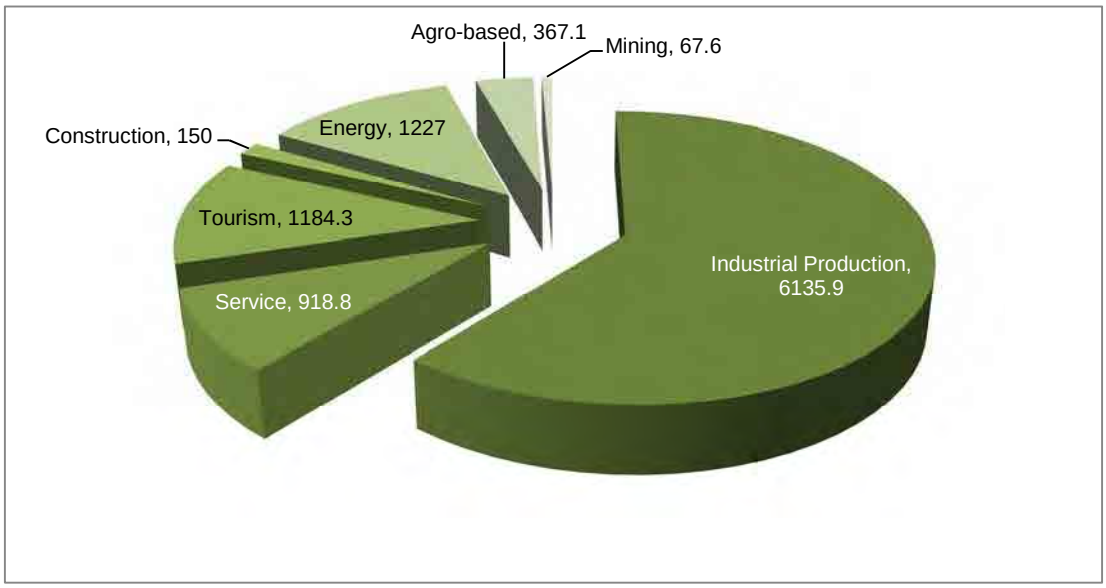
Along the guideline, the DoI publishes the number of company registrations and the number of foreign investment projects approved each year. The former means the number of companies capable of conducting actual business on the basis of investment, including foreign companies. The latter refers to the number of investment projects approved by the DoI, not necessarily accompanied by incorporation. Note that local companies generally do not require an investment approval (except for infrastructure and other projects that require the review and assessment) and are registered once an investment decision is made. Also, foreign investment includes a joint venture with a local company.

While a general trend in corporate registration is analyzed in 3.2, and that in foreign investment is analyzed below.

(2) Foreign investment trend

In Nepal, private investment has been growing at an annual average rate of 8.2% (dollar basis) since 1991 (after liberalization of investment). The growth rate far exceeds 5.4% between 1975 and 1990, clearly indicating positive impacts of the liberalization policy on

attraction of foreign investment. Similarly, private investment as share of GDP has grown significantly from an average 10.1% before the liberalization to 13.2% thereafter. Foreign direct investment in Nepal started in the early 1980s, but it was very limited between 1980 and 1989, at an annual average of around $500,000. It began to grow rapidly in the 1990s and reached an annual rate of $1.1 million between 1990 and 2000.



(Unit: Number of FDI)
Source：Department of Industry

Figure 5.1-1 Number of Approved FDI Proportion in Fiscal Year 2010/2011

Tables 5.1-1 and 5.1-2 summarize the foreign investment trend in the recent 5 years (2007 – 2012). During the period, over 200 investment projects were approved annually, albeit a sharp drop in 2010. In terms of category, service and tourism hold significant shares. It should be noted that the total value of investment increased in 2010 probably because of the increase in hydropower projects as seen in the “energy-based” category. On the other hand, the value of investment relating to service and tourism is not large in comparison to the number of projects. This may reflect the fact that these investment projects are intended to establish an activity base in Nepal, although further analysis of individual projects is required.

Table 5.1-1 Numbers of Category-based FDI

(Unit : Number of Investment)

	category	Fiscal Year					
		06/07	07/08	08/09	09/10	10/11	11/12
1	Agro Based	1	11	8	2	23	15
2	Construction	5	13	1	1	1	0
3	Energy based	1	8	9	5	6	4
4	Manufacturing	44	51	48	37	39	31
5	Mineral based	1	7	17	4	5	7
6	Service	81	55	78	72	88	106
7	Tourism	55	67	69	50	47	64
	Total	188	212	230	171	209	227

Source: `Trend of Foreign Investment in Nepal`, Department of Industry

Table 5.1-2 Financial Value of Category-based FDI

(Unit : Million Rupees)

	category	Fiscal Year					
		06/07	07/08	08/09	09/10	10/11	11/12
1	Agro Based	5	127	619	10	473	174
2	Construction	83	2,119	89	20	150	0
3	Energy based	111	7,346	3,520	8,061	2,018	5,009
4	Manufacturing	1,911	3,029	1,464	3,752	6,269	3,537
5	Mineral based	10	3,630	479	100	114	172
6	Service	991	3,370	2,274	976	1,021	2,115
7	Tourism	315	783	964	1,035	1,205	905
	Total	3,426	20,404	9,409	13,954	11,250	11,912

Source: `Trend of Foreign Investment in Nepal`, Department of Industry

Table 5.1-3 summarizes the ratio of foreign investment to the total project cost. While generalization is difficult, foreign investment does not necessarily hold the majority share.

Table 5.1-3 Proportion of Domestic Capital in Approved Investment Projects

Investment Breakdown	Fiscal Year					
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Total Project Cost	3,426	20,404	9,409	13,954	11,250	11,912
Total Foreign Investment	3,226	9,811	6,245	9,100	10,051	7,141
Total Home Capital	200	10,593	3,164	4,854	1,199	4,771
Home Capital Share (%)	6.1	107.9	50.6	53.3	11.9	66.8

Source:`Trend of Foreign Investment in Nepal`, Department of Industry

By country of origin, China ranked first in the five consecutive years, followed by India, the U.S., and South Korea (Table 5.1-4). On a value basis, however, India dominates throughout the period to indicate that Indian companies have mainly been investing in industrial sectors that accompany a substantial level of business activity (Table 5.1-5).

Table 5.1-4 FDI Country of Origin (Number of FDI)

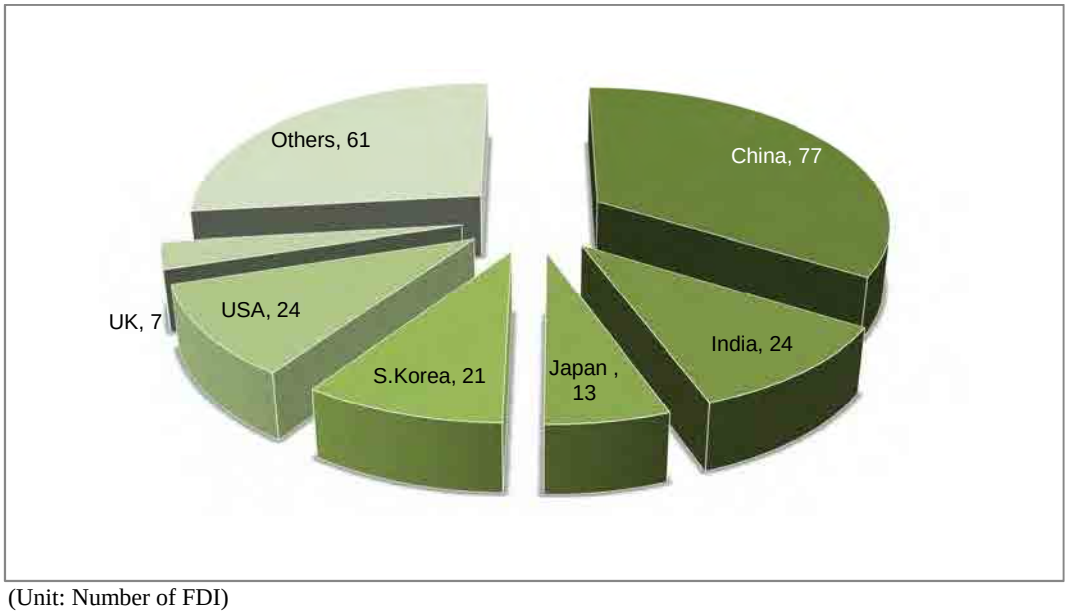
Country	Fiscal Year					
	06/07	07/08	08/09	09/10	10/11	11/12
China	38	39	70	58	69	77
India	28	37	34	27	38	24
Japan	15	5	10	4	8	13
S.Korea	15	23	11	20	18	21
USA	23	13	18	10	8	24
UK	14	19	11	6	9	7
Others	55	76	76	46	59	61
Total	188	212	230	171	209	227

Source: Department of Industry, 2012

Table 5.1-5 FDI Country of Origin (Million Rupees)

Country	Fiscal Year					
	06/07	07/08	08/09	09/10	10/11	11/12
China	497	449	1,141	715	1,187	986
India	2,046	4,553	2,500	3,993	7,007	2,298
Japan	63	11	64	20	31	49
S.Korea	87	2,928	90	174	76	101
USA	116	96	86	51	61	182
UK	64	397	167	22	81	42
Others	354	1,377	2,198	4,125	1,608	3,483
Total	3,227	9,811	6,245	9,100	10,051	7,141

Source: Department of Industry, 2012



(Unit: Number of FDI)
Source：Department of Industry

Figure 5.1-2 Number of FDI Proportion among Countries of Origin in Fiscal Year 2010/2011

Table 5.1-6 shows geographical distribution of foreign investment projects by district. Note that the figures represent the number of projects approved by the DoI, the total project cost, the total fixed cost, and total employment in each district. This is a detailed breakdown of investment projects.

Table 5.1-6 FDI Projects Approved in 75 Districts （Unit：Million Rupees）

	Development Region	Zone	District	2009/2010					2010/2011				
				No. of Industries approved	Total Project Cost	Total Fixed Cost	Foreign Investment	Total No. of Employment	No. of Industries approved	Total Project Cost	Total Fixed Cost	Foreign Investment	Total No. of Employment
1	Eastern	Mountain	Taplejung	1	2.1	1.04	1.9	0	2	12.1	10.14	11.9	44
2			Sankhuwasabha	1	500	488	500	250	1	500	488	500	250
3			Solukhumbu	9	2959.17	2856.59	926.13	198	9	2959.17	2856.59	926.13	198
4		Hill	Panchtar	0	0	0	0	0	0	0	0	0	0
5			Ilam	0	0	0	0	0	2	145	117.9	145	188
6			Dhankuta	1	46.62	37.62	0	120	1	46.62	37.62	0	120
7			Terhathum	0	0	0	0	0	2	181.7	170.85	0	76
8			Bhojpur	0	0	0	0	0	0	0	0	0	0
9			Okhaldhunga	1	250	245	19	122	1	250	245	19	122
10			Khotang	0	0	0	0	0	1	30	28	20.4	40
11			Udayapur	0	0	0	0	0	0	0	0	0	0
12		Terai	Jhapa	11	986.14	631.9	228.35	3096	13	1036.14	663.9	278.35	3284
13			Morang	23	2088.85	1507.48	346.48	4733	26	3403.83	2687.41	1661.47	4795
14			Sunsari	15	2114.17	1559.77	1047.25	2897	20	2324.17	1693.97	1252.25	3111
15			Saptari	2	410	384	282.4	144	2	410	384	282.4	144
16			Siraha	3	694	660.07	113.2	508	4	2494	2230.07	1913.2	702
	Eastern Development Region Total			67	10051.05	8371.47	3464.71	12068	84	13792.73	11613.45	7010.1	13074
	Eastern Development Region %			0.2%	0.5%	0.5%	0.2%	0.4%	0.2%	1.6%	1.6%	2.9%	0.5%
17	Central	Mountain	Dolakha	4	5600.2	5086.03	1305.73	225	5	5800.2	5281.03	1505.73	325
18			Sindhupalchok	8	6832.73	6603.59	1292.08	2892	8	6832.73	6603.59	1292.08	2892
19			Rasuwa	5	2622.4	2522.28	1236.43	176	5	2622.4	2522.28	1236.43	176
20		Hill	Sindhuli	1	9	7.7	9	105	1	9	7.7	9	105
21			Ramechhap	1	291.34	237.89	262.21	200	1	291.34	237.89	262.21	200
22			Kavrepalanchok	1	30	28	20.4	40	1	30	28	20.4	40
23			Lalitpur	226	9651.62	7599.6	6615.82	12479	261	10250.57	8047.69	7101.97	14422
24			Bhaktapur	40	1824.48	1096.52	696.91	3581	46	1958.25	1213.12	762.23	3739
25			Kathmandu	1051	49248.81	40663.21	19848.52	61850	1176	53018.67	43890.58	23477	67891
26			Nuwakot	8	220.58	193.65	110.7	665	7	210.58	184.75	105.7	631
27			Dhading	9	2405.89	2351.7	2171	721	9	2405.89	2351.7	2171	721
28			Makwanpur	45	4405.88	3357.3	2007.23	4087	49	4720.38	3594.07	2321.73	4355
29		Terai	Dhanusha	2	84.56	61.7	62.28	167	3	291.04	249.71	165.52	292
30			Mahottari	0	0	0	0	0	4	996.6	842.77	0	767
31			Sarlahi	13	1489.77	1200.32	0	1531	13	1489.77	1200.32	0	1531
32			Rautahat	1	559.18	509.18	44.06	589	1	559.18	509.18	44.06	589
33			Bara	42	7257.05	5747.2	2063.78	4401	43	7265.35	5752.7	2072.08	4424
34			Parsa	39	2831.77	2137.75	1491.35	5532	41	3393.32	2387.5	2052.85	5586
35			Chitwan	47	3430.17	2743.25	1118.36	7545	48	3440.17	2752.25	1128.36	7581
	Central Development Region Total			1543	98795.43	82146.87	40355.86	106786	1722	105585.44	87656.83	45728.35	116267
	Central Development Region %			83.6%	68.7%	68.0%	68.8%	76.2%	83.1%	66.5%	64.7%	68.4%	76.2%
36	Western	Mountain	Manang	1	75	69.75	47.01	635	2	915	898	203	289
37			Mustang	2	461.74	449.11	1.07	115	2	461.74	449.11	1.07	115
38		Hill	Gorkha	4	704.09	648.32	75.23	758	4	704.09	648.32	75.23	758
39			Lamjung	5	343.93	311.25	124.15	513	5	234.93	311.25	124.15	513
40			Tanahun	3	89.02	73.2	37.5	237	3	89.02	73.2	37.5	237
41			Syangja	0	0	0	0	0	0	0	0	0	0
42			Kaski	108	12226.56	11593.96	4054.58	4876	116	12308.46	11665.9	4130.58	5145
43			Myagdi	0	0	0	0	0	0	0	0	0	0
44			Parbat	1	1100	1089	1.5	2614	1	1100	1089	1.5	2614
45			Baglung	0	0	0	0	0	0	0	0	0	0
46			Gulmi	0	0	0	0	0	0	0	0	0	0
47			Palpa	1	30	23.38	4.9	24	2	330	183.38	304.9	136
48			Arghakhanchi	2	1324.09	199.27	449.6	331	2	1324.09	199.27	449.6	331
49		Terai	Nawalparasi	20	2762.28	2366.76	505.4	2884	21	2781.18	2373.76	513.4	2904
50			Rupandehi	29	5630.09	4603.14	2958.59	3104	29	5630.09	4603.14	2958.59	3104
51			Kapilbastu	8	411.71	197.32	297.81	269	9	421.71	206.42	307.81	300
	Western Development Region Total			184	25158.51	21624.46	8557.34	16360	196	26300.31	22700.75	9107.33	16446
	Western Development Region %			10.0%	17.5%	17.9%	14.6%	11.7%	9.5%	16.6%	16.7%	13.6%	10.8%
52	Mid Western	Mountain	Dolpa	0	0	0	0	0	0	0	0	0	0
53			Jumla	0	0	0	0	0	0	0	0	0	0
54			Kalikot	1	1900	1800	1520	125	1	0	1800	1520	125
55			Mugu	0	0	0	0	0	0	0	0	0	0
56			Humla	5	41	37.2	19.24	96	5	41	37.2	19.24	96
57		Hill	Pyuthan	0	0	0	0	0	0	0	0	0	0
58			Rolpa	3	32.22	28.31	29	156	3	32.22	28.31	29	156
59			Rukum	0	0	0	0	0	0	0	0	0	0
60			Salyan	0	0	0	0	0	1	6200	6000	0	273
61			Surkhet	2	3587	2819.4	2187	229	2	3587	2819.4	2187	229
62			Dailekh	0	0	0	0	0	0	0	0	0	0
63			Jajarkot	0	0	0	0	0	0	0	0	0	0
64		Terai	Dang	7	257.5	216.45	197.5	1057	8	259.9	218.4	199.9	1078
65			Banke	16	513.83	404.44	152.43	1393	16	513.83	404.44	152.43	1393
66			Bardiya	6	51.88	45.56	23.14	234	7	57.88	50.96	29.14	264
	Mid-Western Development Region Total			40	6383.43	5351.36	4128.31	3290	43	10691.83	11358.71	4136.71	3614
	Mid-Western Development Region %			2.2%	4.4%	4.4%	7.0%	2.3%	2.1%	6.7%	8.4%	6.2%	2.4%
67	Far Western	Mountain	Bajura	0	0	0	0	0	0	0	0	0	0
68			Baiha NG	0	0	0	0	0	0	0	0	0	0
69			Darchula	0	0	0	0	0	1	34	32	2.94	60
70		Hill	Achham	4	571.18	550.68	418.18	411	4	571.18	550.68	418.18	411
71			Doti	1	10	7.2	10	33	1	10	7.2	10	33
72			Dadeldhura	0	0	0	0	0	0	0	0	0	0
73			Baitadi	2	20	16.8	20	202	4	80	71.8	65	365
74		Terai	Kailali	3	919.04	868.81	192.8	929	3	919.04	868.81	192.8	929
75			Kanchanpur	1	1900	1800	1520	125	13	776.37	695.11	147.72	1466
	Far Western Development Region Total			11	3420.22	3243.49	2160.98	1700	26	2390.59	2225.6	836.64	3264
	Far Western Development Region %			0.6%	2.4%	2.7%	3.7%	1.2%	1.3%	1.5%	1.6%	1.3%	2.1%
	Nepal Total			1845	143808.64	120737.65	58667.2	140204	2071	158760.9	135555.34	66819.13	152665

Source: Deapartment of Industry, 2012

Then, Table 5.1-7 summarizes breakdown by region and zone, as calculated from the data presented in Table 5.1-6.

Table 5.1-7 FDI in each Zone and Development Region in Nepal

(Unit : Million Rupees)

		Eastern	Central	Western	Mid- Western	Far-Western	Total
Mountain	Project Cost	6,826.00	15,255.33	1,376.74	1,376.74	34	24,868.81
	% in Mountain	27.40%	61.30%	5.50%	5.50%	0.10%	100.00%
	% in Total	4.10%	9.20%	0.80%	0.80%	0.00%	15.00%
Hill	Project Cost	3,471.27	72,894.68	16,090.59	9,819.22	661.18	102,936.94
	% in Hill	3.40%	70.80%	15.60%	9.50%	0.60%	100.00%
	% in Total	2.10%	43.80%	9.70%	5.90%	0.40%	61.90%
Terai	Project Cost	9,668.14	17,435.43	8,832.98	831.61	1,695.41	38,463.57
	% in Terai	25.10%	45.30%	23.00%	2.20%	4.40%	100.00%
	% in Total	5.80%	10.50%	5.30%	0.50%	1.00%	23.10%
Total	Project Cost	19,965.41	105,585.44	26,300.31	12,027.57	2,390.59	166,269.32
	% in Total	12.00%	63.50%	15.80%	7.20%	1.40%	100.00%

Source: Department of Industry, 2012

It is reasonable to expect that investment is concentrated in Kathmandu, the capital region, while little investment is made in the mountain zone. In particular, investment is limited to central and eastern regions, mainly consisting of hydropower projects and investment relating to tourism and service along the highway connected to Tibet and China. In the hilly zone, investment is mainly made in the regions other than far-west and east, and the central region including Kathmandu receives 43.8% of the total. On the other hand, the western region seems to attract investment in recent years, relating to excavation of limestone for cement production. In the Tarai region that is mainly the plain, investment projects are mainly undertaken in the eastern region including Biratnagar, the central region (Birganj and Chitwan), the western region (Bhairahawa), and the mid-western region (Nepalganj).

Finally, Table 5.1-8 summarizes foreign investment projects made up to 2012, by category. The total number of projects is 2,335, with employment of 164,482 persons and the total cost of Rs.164.1 billion.

Table 5.1-8 Accumulated FDI in Nepal (until 2012)

(Unit : Million Rupees)

Category	Number	Total Project Cost	Total Fixed Investment	Foreign Investment	Employment No.
Agriculture	75	1,848.62	1,246.61	1,055.49	3,994
Construction	42	3,605.34	2,683.10	2,762.81	3,016
Energy Based	51	45,768.74	45,213.52	17,516.27	8,537
Manufactureing	743	58,151.87	43,372.78	26,543.57	80,180
Mineral	43	5,334.32	4,354.34	3,061.94	6,104
Service	756	28,070.20	23,041.28	14,972.10	35,942
Tourism	625	21,321.17	19,946.12	9,237.79	26,709
Total	2335	164,100.26	139,857.75	75,149.97	164,482

Source: Department of Industry, 2012

5.2 Investment Climate and Policy

5.2.1 Investment Promotion Policy and Procedure

The Nepali government strives to develop a transparent and fair environment to attract investment, both domestic and foreign, in a belief that foreign direct investment bolsters sustainable GDP growth, creates employment opportunity for young people, and helps local industries to absorb modern technologies. Despite the government's intention and efforts, however, foreign direct investment in Nepal remain at a lower level than other developing countries, This can be mainly attributed to insufficient infrastructure, electricity shortage, troublesome labor relations, unsteady transition of the political system, and poor governance. To address these issues, the government has announced the following improvement measures.

The government proposes the amendment of the Special Economic Zone Bill and the establishment of the Board of Investment as an engine to attract investment, provision of one-stop professional support service at the Board of Investment for investors and follow-up made after investment through the Nepal Business Forum. The Board of Investment leads capacity building for effective attraction of investment and formulates investment promotion activity plans on the basis of clear-cut industrial policy.

The common feature of these government action is "FDI - led economic growth" and "Public Private Partnership." These concepts are reasonable, but we should recognize that these methods do not automatically lead to the successful results. The future should be visualized in a clear manner through the dialogue between public and private sectors. Regretfully, the lack of real dialogue between these two sectors caused the reverse movement against the economic liberalization. Political effots to stop the economic liberalization and uncoordinated industrial policy twisted the domestic industry and the domestic market. As a result, high economic growth in 1994 did not last long, and low economic growth rate continued until now. We should learn the lesson from this bitter experience[1].

At present, Nepal approves foreign investment projects under the 100% foreign ownership in most areas, while businesses specified in the negative list are limited to local investors, namely cottage industry, artisan services (such as barbers, hairdressers, tailors, and driving instructors), industries making or handling fire arms, bullets, explosives, ammunition, and radioactive materials, real estate industry including construction), movie industry (film making in the local language), security printing, paper money and coin making, retail trade, travel agents, trekking agents, rafting, pony trekking and horse riding services, tobacco and bidi, alcohol making (except companies that export 90% or more of its total production), local courier service, nuclear power generation, tourist lodges, poultry farming, fishery, beekeeping, consulting services (e.g., management, accounting,

[1] `Unleashing Nepal; Past, Present, Future of Economy`, Sujeev Shakya also criticize these issues.

engineering, and legal). Note that these items are reviewed, deleted and/or added by a parliamentary resolution or a government ordinance.

Foreigners cannot own land in Nepal but a company owned by a foreigner is allowed land ownership. Foreign investors are subject to ad hoc restrictions, including the maximum permitted percentage of corporate shareholding up to 67% of total paid-up capital for financial institutions, and up to 80% for commercial banks.

Investment approval procedures are under jurisdiction of the Board of Investment, the Department of Industry, and Industrial Promotion Board, which divide up responsibilities according to the value, field and form of investment, as follows.

(1) The Board of Investment is responsible for investment projects specified in subparagraphs (a) to (m) of the first paragraph of Article 9, the Board of Investment Act, regardless of size of investment.

   (a) fast track road, tunnel, raikway, ropeway, trolly bus
   (b) construction of international as well as regional level airport and in modernization and management of running airport
   (c) management and refinement plant of dump
   (d) chemical fertilizer plant
   (e) plant of petroleum refinery
   (g) bank and financial institution with foreign investment having more than 51 %, establishment or operation of insurance or reinsurance company
   (h) medical college as well as hospital or nursing home having more than 300 beds
   (i) hydropower project having the capacity of 500 or more than 500 MW
   (j) establishment of Special Economic Zone, Export Promotion or Refinement Zone, Special Industrial Zone or Information Technology Park
   (k) any infrastructure or service industry having fixed capital of 1,000 million rupees or having more than 1,000 million rupees of project cost (concretely, construction industry, mine industry, tourism industry, or air industry)
   (l) any productive industry having more than 1,000 million rupees or having more than 1,000 million rupees project cost.
   (m) priority sector having the nature referred to in from these Clause (a) to (m)

(2) As for investment projects specified in subparagraphs (k) and (l) of the first paragraph of Article 9, the Board of Investment Act, the Board of Investment is responsible for investment projects valued at Rs.10 billion or more, while DoI has jurisdiction over investment projects of less than Rs.2 billion (as previously done) and IPB deals with those of over Rs.2 billion and less than Rs.10 billion. (Note that IPB was established pursuant to

Article 12 of Industrial Enterprise Act 1992 and is primarily responsible for coordination relating to industrial policy within the government.

(3) As for other industries (those not specified in the Board of Investment Act), DoI continues to handle investment projects of less than Rs.2 billion, and IPB larger projects.

(4) Note that BOI grants an investment approval for projects relating to industries under its jurisdiction by taking over the role of DoI, but investors need to go through related procedures such as corporate registration, industry registration, and tax registration by contacting the Office of Company Register, DoI, and tax office, respectively. In addition, certain types of industries or businesses require licenses that have to be obtained from responsible ministries.

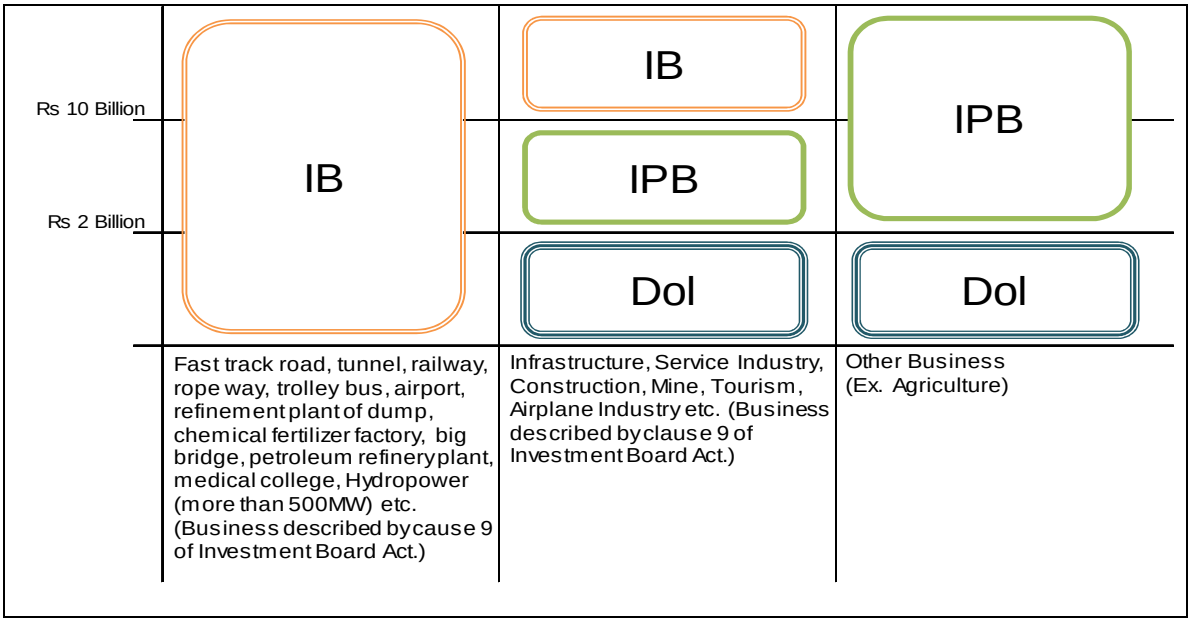


Figure 5.2-1 Demarcation of relevant institutions to be responsible for the investment

The deposit required for a new foreign investment project is determined in the range between Rs.1,000 and Rs.20,000, depending on the value of fixed assets. The approval or disapproval for an application is notified within 30 days after the acceptance of the application. A company who has received the notice of approval should be registered with the Office of the Company Register within 35 days after the receipt of the notice. The Company Act requires corporate registration to be completed within 15 days after the receipt of an application.

To make investment in Nepal more attractive for investors, the BoI is taking two measures. The first is the establishment of the Umbrella Investment Act, which is designed to ensure streamlined procedures for investors by reducing time and effort currently required to confirm and coordinate consistency and conflict between related laws, such as those relating to environmental protection and electricity supply.

The other measure is concerned with the improvement of the legal system. At present, laws in Nepal contain a number of duplications and ambiguous definitions, which cause a delay in administrative procedures. It takes as long as six months to make coordination among related ministries within regard to a specific law.

In addition, the BoI proposed the Operation Policy for Board of Investment three months ago, which has recently been approved by the cabinet. The BoI's policy can be enforced as an executive order upon the cabinet's approval. The policy sets forth clear demarcation of investment related responsibilities among ministries, the rule for distribution of investment-related revenues, and conflict resolution procedures relating to an investment agreement among related ministries.

In Nepal, most of foreign direct investment projects are very small in scale. To promote larger projects, the government raised the minimum amount of investment from Rs.1.6 million ($20,000) to Rs.5 million in October 2012[2]. To achieve the goal, however, it is important to establish an evaluation system to analyze projects from professional point of view, while eliminating political consideration in the evaluation process. At present, however, there is the shortage of staff who has expertise in assessment of investment projects. In particular, there is no expert having good experience in evaluating investment projects in the context of the present legal system.

Investment projects are evaluated by three agencies, namely the BoI, the IPB, and the MoI. Their demarcation of responsibilities is set forth under the Board of Investment Act[3], according to the type of project and the total cost. In addition, the BoI is authorized to get involved in important projects, regardless of value. Such ambiguous rule seems to make the country's investment procedures hard to understand.

5.2.2 Investment Climate in terms of Global Ranking

According to the World Bank's "Doing Business 2013", which assesses the business environment of all countries including the investment climate, Nepal ranked 108th among 185 countries, one rank down in comparison to the previous year. In South Asia, it ranked with Pakistan (107th) but fell way behind Sri Lanka (81st). Rather surprisingly, it was ahead of India (132nd) and Bhutan (148th).

2 http://www.investnepal.gov.np/portal/index.php?p1=content&p2=11

3 In addition, the DoI published the Procedure Manual for Foreign Investment in Nepal in 2005. It should be noted, however, that the procedures are constantly revised and it is imperative to obtain the latest information. Also, there are a number of duplications and conflicts between the manual and other investment related laws, so that it is advisable to make inquiry and confirmation to various government authorities.

The results of assessment on Nepal are analyzed in more detail for each area of regulation to identify major issues relating to the business environment, which is largely overlapped with the investment climate.

First of all, in "starting up business," the country's rank fell from 102nd in 2012 to 105th in 2013, largely because the number of days required to obtain construction permits has increased from 88 to 97. On the other hand, the cost factor has improved and other factors remain unchanged from the previous year. As the country has failed to improve startup procedures (numbers of steps and days required) in the recent few years, it more than compensated from the steady decrease in the startup cost.

In "construction permits," Nepal also fell from 88th to 97th. Yet, it ranked highest in South Asia because the permit can be obtained within the shortest period among other countries. The ranking is negatively influenced by a significant increase in cost required to obtain the permit in 2011. In particular, in the stage of a provisional permit, the cost has increased by Rs.282,000 (including tax).

In "getting electricity," it is rather surprising to see that the rank is higher than that for "starting up business," while it remains unchanged from the previous year (96th). It takes five steps and 70 days to get electricity in Nepal. Again, the country ranked highest in South Asia. On the other hand, payment of Rs.754,005 is required for testing and connection of a transformer by NEA.

In "registering property," the country ranked relatively high and rose from 23rd to 21st between 2012 and 2013. It takes three steps and three days to complete registration.

In "getting credit," the country retreated from 67th to 70th. It can be said about South Asia as a whole, including Nepal, that there is no formal mechanism to share credit information (constituting the infrastructure for the financial industry) to require considerable time for decision making and to result in high interest rates. Also, there is no effective legal protection for depositors.

In "protecting investors," the country has slipped from 79th to 82nd to reflect the fact that no improvement has been seen in the recent few years with regard to key indices, i.e., "information disclosure," "management accountability," "shareholder lawsuit," and "protection of investors."

In "paying tax," the country ranked down from 109th to 114th, although it is placed higher than other South Asian countries except for Bhutan. The total tax in Nepal is equivalent to 31.4% of profits and it takes 326 hours for taxation procedures.

In "trading across borders," the rank almost leveled off (from 170th to 171st), second lowest in South Asia (Bhutan in 172nd place). This is the lowest level in the world ranking of 185 countries. One implication is that the country fails to take advantage of its geographical location

bordering China and India. In terms of time and cost required for export and import, the country ranked lowest in the region.

In "enforcing contracts," the country also hovered low, from 119th to 121st. Little progress has been made in this area partly due to the absence of the bankruptcy law. When a company withdraws from Nepal, only 24.5% of assets can be recovered. It takes around 5 years to complete exit procedures.

All in all, the business environment including the time and cost required from startup to withdrawal has still to be improved significantly. In doing so, it is essential to amend business laws and regulations and build up capacity of government organizations.

In particular, it was confirmed from the field survey that imperfection of the legal system relating to business law unduly creates a high business risk. For instance, the bankruptcy law is said to have been enacted in 2009, but its enforcement depends on the appointment of judges specialized in business law. As of January 2013, however, no appointment was made and the bankruptcy law was not enforceable. As for investment-related laws, there are a number of inconsistency and duplication but no correction has been made. In principle, the drafting and amendment of business laws should be made by the leading agency (ministry) in consultation with related ministries, under the leadership of their legal departments. However, as the national assembly is dysfunctional, such legal procedures are blocked. It is difficult to make things move by the cabinet decision or a presidential decree.

Finally, many of business-related procedures take considerable time and cost. To reduce them, it is imperative to streamline government procedures and strength administrative ability, in addition to the enactment or amendment of related laws. As it is not realistic to increase the budget to achieve the goals - when the government is required to cut off expenditures to reduce the fiscal deficit, donor organizations should make contribution to the improvement of public service quality by means of capacity building. In addition, simplification of administrative procedures should be approached from a better work sharing between the public and private sectors. InvestNepal (sharing of investment information), which was founded jointly by the MoI's Industrial Promotion Division and CNI under USAID's assistance, is a case in point. Clearly, the improvement of the investment climate requires innovative efforts to use the private sector's vitality for government's advantage.

5.3 Investment Promotion System and Human Resources

5.3.1 Investment Promotion System

The government system relating to promotion and acceptance of investment in Nepal is founded upon the Industrial Enterprise Act of 1992 (as amended), Foreign Investment and Technology Transfer Act of 1992 (as amended), and Investment Board Act of 2010. Based on the Industrial Enterprise Act, the One-Window Committee was established under the jurisdiction of Director General of the Department of Industry. The committee is composed of members representing related ministries, the private sector and Federation of Nepal Chambers of Commerce and Industry (FNCCI).

Under the framework, inquiries by investors and applications for foreign direct investment are to be processed by related ministries in an integrated manner. For instance, the MoI handles applications for work permit and visa as well as foreign currency management relating to investment, and it is important for related ministries to confirm the certificate of the application (bona fides)

5.3.2 Human Resources relating to Investment Promotion

The government's investment promotion activity is expected to be spearheaded by the BoI, the DoI, and the MoI's Industrial Promotion Division.

Board of Investment

(1) Organization

The BoI has two offices, part of the Prime Minister Office and an outside office. Each office is staffed by five persons. While the office inside the PM office deals with related ministries, the outside office communicates with potential investors and other related parties. To play the dual role, the PM office staff is familiar with bureaucratic work, whereas the outside office staff has expertise in business and investment fields. The BoI's intention is to become financially independent from the government by earning own revenues from a service fee to finance its operation.

(2) Activities

Actually, Board of Investment focuses on the attraction and implementation of big national infrastructure projects, especially hydropower plant projects. Their principal role is FDI promotion, but BoI lacks resources now to complete it.

(3) Human Resources

It also intends to hire persons at the outside office, who possess competence at the international level, by paying good salary and other attractive working conditions[4]. At present, however, the BoI is fully occupied in implementing investment projects decided by the government and has no additional budget or human resource to conduct investment promotion activity, which thus remains the BoI's medium- or long-range goal.

Department of Investment

(1) Organization

Promotion of foreign investment by the DoI is undertaken by Foreign Investment Section. According to the section chief interviewed by the study team, the section has 8 staff members (including the chief), and the chief reports to the director of the DoI. The annual budget is allocated to the DoI and further allocation to sections is not determined in a planned manner. For the DoI as a whole, the recurrent expenditure including salaries for 35 staff members (including the director) amounts to Rs.23,896,376, of which the program cost accounts for Rs.3,127,372.

(2) Activity

Main activities conducted by Foreign Investment Section in 2012 are as follows:

1) Intellectual property seminar (with emphasis on industrial property rights): 5 times throughout the country;
2) Seminar to promote foreign direct investment: Once in Katmandu
3) Inspection and monitoring of registered companies
4) Survey of companies in Bara District (conducted by an outside consultant)

Note that the section's activity to promote foreign direct investment is limited to one seminar, which was held for the first time. The seminar was planned and managed in cooperation of FNCCI. It was expected to attract foreign investors and FNCCI was asked to invite foreign companies. However, most of participants were local investors; there were 50 participants including 3 foreign investors.

(3) Human Resources

As educational background of the section's staff, three persons hold the master's degree, three bachelor's degree, and two high school diploma.The section makes various efforts to improve service relating to promotion of foreign direct investment. For instance, it previously took one month to approve a foreign investment project, which has now reduced to 10 days.

[4] Based on the interview with CEO Pant of the BoI on January 11, 2013.

Similarly, License and Registry Section has reduced the period required for corporate registration from 21 to 7 days.

In these examples, the section chief discussed with staff to revise the work process relating to decision making, i.e., a task that had required multiple decisions by different persons in different sections was redesigned to allow them to gather and make a collective decision, thereby to reduce the time required for each decision significantly. It should be noted, however, these improvements were made by the bottom-up approach and are far from making up for apparent weakness of the department or section in relation to implementation of investment promotion activity due to budget and institutional capacity constraints.

Industry Promotion Division

(1) Organization

In the Industrial Promotion Division of Ministry of Industry, three permanent officers are involved in the formulation of investment promotion policy.

(2) Activity

Recently, this unit corroborated with the Confederation of Nepali Industry (CNI) and USAID to launch the Investment Nepal[5] website to provide the investment related information on line. Furthermore, they promote policy dialogue between public and private sectors. Special Economic Zone is another related field of this unit.

(3) Human Resources

Three permanent staffs are appointed to promote the investment. However, the degree of commitment varies among them. More interested officer proactively engages in the information collection from the private sector and requests the capacity development support to be competitive in terms of FDI attraction policy making. However, unmotivated officer is observed on the other hand and their outputs are invisible.

Finally, Industrial Promotion Division has three full-time staff members to be engaged in investment promotion policy. Most recently, the division has established a Web site "Invest Nepal[6]," in cooperation of CNI and under USAID's assistance.

[5] http://www.investnepal.gov.np/portal/index.php
[6] http://www.investnepal.gov.np/portal/index.php

5.4 Issues relating to Investment Promotion

The study team's survey has revealed that the Nepalese government has still to secure sufficient budget and manpower in the area of investment promotion. Investment promotion activity is conducted by the DoI, but there is no specialized division. The budget is too small to conduct effective promotion activity.

Furthermore, there are a lot of legal and administrative obstacles and restrictions that prevent responsible ministries and agencies from implementing investment promotion policies and programs in an efficient and consistent manner. For instance, various business-related laws have duplications and conflicts that need to be clarified or resolved by related ministries, generally under the leadership of the MoF. One way to achieve the goal is to establish or amend a law, but the national assembly is in suspension, necessitating other solutions, i.e., the cabinet decision or the presidential decree. However, many proposals have already been submitted to the government and have to wait for at least six months before approval. Meanwhile, they are subject to direct or indirect pressure from political parties or labor unions and some of them are blocked in the approval process.

At the same time, the program budget relating to investment promotion is apparently insufficient. The annual budget of the DoI is around Rs.3.13 million. If it is equally divided among 6 sections, each section spends slight more than Rs.500,000, which should fiancé promotion of foreign direct investment, together with public education on intellectual properties and industrial surveys. It is therefore no surprise that only one seminar is held each year to promote foreign direct investment.

Also, budget restraint at the division level makes difficult to communicate or negotiate with other ministries and private organizations in a flexible manner. There is no vehicle available to visit a remote location and no budget to cover the travel expense, while staff members earning Rs.15,000 cannot afford to bear such cost.

As for the workforce, there is no full-time staff in charge of foreign investment promotion, which is carried out by eight staff members of Foreign Investment Division as part of multiple tasks that they handle, including corporate registration. The condition also makes it difficult to formulate and implement investment promotion plans in a consistent and continuous manner.

At present, the sending of investment promotion missions and the receiving of foreign business missions are carried out under the sponsorship of private organizations such as FNCCI and CNI. To ensure promotion of foreign investment in an efficient manner, the government's role should be clearly separated from the private sector's so that one can be complementary to the other, rather than the public and private sectors compete in every field.

For instance, critical factors for the improvement of the investment climate include the improvement of public service efficiency through capacity building and close cooperation among ministries, such as the streamlining of application procedures, information disclosure, and the establishment of one stop service. Meanwhile, the Nepalese government is mandated to improve public finance by slashing debts and has thus no room for budget increase and significant addition of workforce. Under these circumstances, what the government can and should do is to make efforts to shorten the time required for investment-related approvals and permits by means of process innovation and deregulation, while introducing a formal mechanism to monitor the progress of such efforts.

On the other hand, the private sector needs to reach an agreement on what they expect from the government's policies and programs relating to the improvement of the business environment and the investment climate; they have only agreed to demand the amelioration of electricity supply and the start of projects in that direction, but beyond that, different sectors have different requests, which need to be sorted out. In particular, the private sector needs to make proposals relating to public investment and industrial development policies covering specific industries and areas by using their expertise and information.

Chapter 6 Prospective Industries from Perspectives of the Indian Market

Chapter 6 Prospective Industries from Perspectives of the Indian Market

Nepal borders India along an approximately 1,690km borderline and the two countries have been maintaining close relationships historically and culturally. Notably, in the Terai plain in the south of Nepal and the Indian states of Uttar Pradesh (UP), Bihar, and West Bengal, people and goods move freely over the border thanks to the absence of natural barriers and many people in these areas live without realizing the boundary line. A large volume of goods are exported from and imported to Nepal over the open border, both formally and informally, and such trade holds a very important position in the Nepalese economy.

According to the 2011 census, India's population is 12.1 billion and is still growing. In 2025, it is expected to surpass China and become the world largest[1]. The Indian economy, which is slowing down since 2011, has also maintained high growth at an annual average rate of over 8% in the 2010s. As a result, the middle income class is increasing rapidly to stimulate the consumer market growth accordingly. In response, Japanese companies including automakers such as Suzuki and home appliance manufacturers have been stepping up investment in India. As of the end of 2012, 926 Japanese companies are operating in India.

While India and Nepal are in close relations, there is a substantial difference between the two countries in terms of population, economy, and national strength. As a result, the countries have significantly different perspectives about trade and investment between them in terms of importance, weight, and role. For India, trade with Nepal accounts for a minuscule share of the total, less than 0.7% of exports and 0.1% of imports. In contrast, India is the largest trade partner of Nepal. As India's economic power and gigantic market cannot be neglected when one thinks about development of Nepal's private sector, this chapter analyzes and identifies Nepal's prospective industries as viewed from the Indian market, together with major issues and challenges, on the basis of the analysis of the northern India (the National Capital Region of Delhi, UP and Bihar) that is closely related to Nepal.

6.1 Current State of the Economy in Northern India

The northern India consisting of the National Capital Region and states of UP and Bihar has the land area about the same as Japan but its total population exceeds 300 million. The Delhi region, where the federal government is located, is a political, industrial and commercial center of India. Neighboring states of UP and Bihar have the largest population among Indian states and are the poorest states. As shown in Table 6.1-1, the region's economy has been growing at an

[1] The United States Census Bureau website (2009)
(URL: http://www.census.gov/newsroom/releases/archives/international_population/cb09-191.html)

annual average rate of over 15% during the past five years, which is outstanding even in the fast-growing country. At the same time, there is a very large economic disparity between the National Capital Region and the poorest state of Bihar, at the ratio of 7 to 1 in terms of Gross State Domestic Production (GSDP) per capita. Also, difference in the literacy rate in the two areas differ by 20 percentage points, indicating a sizable disparity in social development.

Table 6.1-1 Overview of north India (2010/11)

	Delhi	UP	Bihar
Area (Km^2)	1,438	240,928	94,163
Population (10 thousand)	1,670	19,950	10,300
Population density (per $1Km^2$)	11,297	828	1,102
GSDP growth rate (%、average past 5 years)	17.5	14.7	18.7
GSDP per capita (US$)	3,491.8	655	491.7
FID ($ 100million, 2000～2012)	322	3	NA
Literacy rate (%)	86.3	69.7	63.8
Infant mortality rate (every 1,000 birth)	30	61	61
Poverty rate	-	37.7	53.5

Source India National Census 2011、Bureau of Statistics "Statistical Handbood2011"、Website of each state government、UNDP "Economic and Human Development Indicator 2011"

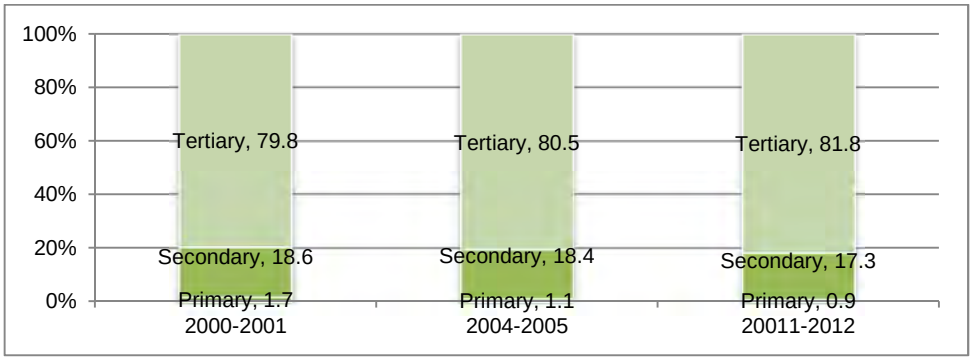
6.1.1 National Capital Region of Delhi

The Delhi region is the center of India, and together with the surrounding states of Haryana and UP, boasts the world largest population of over 20 million. The Delhi region is divided into New Delhi and Old Delhi and the former accommodates federal government functions. The region's GDSP per capita has been growing rapidly and approached $4,000 in 2011/12, which is around three times the national average, which indicates concentration of wealth in the region.

(1) Major industries

In Delhi, the tertiary industry grows explosively in recent years, including finance, information and communication, insurance, real estate, and tourism, and it accounts for a predominant share in the region's industrial structure. In terms of value added by the sector (based on preliminary figures in 2011/12), finance, insurance and real estate industries represent a combined share of 48%, followed by hotels and restaurants 23%, transportation and communication 9%, and other services 20%.

On the other hand, the manufacturing sector does not show much presence in Delhi because many manufacturers operate in industrial estates developed in suburbs, namely Gurgaon (Hayana) and Noida (UP). These industrial estates and surrounding areas constitute the largest concentration of manufacturing activity in the country, with a vertical structure made up of leading foreign assembly companies and their supplier bases in various fields such as automobiles and electrical home appliances.



Source: Delhi Statistic Office "Delhi Statistical Handbook 2011"

Figure 6.1-1 Percentage distribution of GSDP

(2) Current state of economic and social infrastructure

Delhi is the most advanced area in infrastructural development in India.

1) Electricity: The total installed capacity in 2011/12 is 6,447.2KW, which nearly doubled from that in 2008/09 and ensures stable supply within the city. Thermal power accounts for 66% of energy sources, gas 21.5%, and hydropower the rest. Power consumption per capita is 1,651KWh, which is the largest in the country.
2) Transportation: Delhi has the largest international airport in the country. It inaugurated the second subway system in 2002, next to Kolkata, with total line length of 190km. It has 142 stations and consists of 6 lines. There is a plan for expansion.
3) Industrial Area: In Delhi, there are 24 industrial estates housing traditional SMEs, such as Wasipur and Okhla, which are considered to be inferior, in terms of efficiency and productivity, in comparison to industrial estates built in suburbs to accommodate foreign companies. Programs are underway to develop industrial clusters in the form of PPP so as to construct infrastructure that are commonly used by the entire industrial estate as well as to improve pollution control. In addition, two SEZs specialized in the IT industry and one SEZ for jewelry manufacturers are in the process of establishment.
4) Education: Adult literacy rate in Delhi is 86.3%, far exceeding the national average. There is a large number of topnotch universities and research institutes, including University of Delhi.
5) Public health: There are 807 medical facilities, and the city is considered to be best equipped in the country.

(3) Regional development policies and tax incentives

The following regional development policies have been announced to make Delhi a clean city and a high-tech center in the country by 2021.

- Industrial policy (2010): It aims to promote non-polluting industries, prohibit construction and operation of industrial facilities in residential area, and to simplify the industrial zone management system.

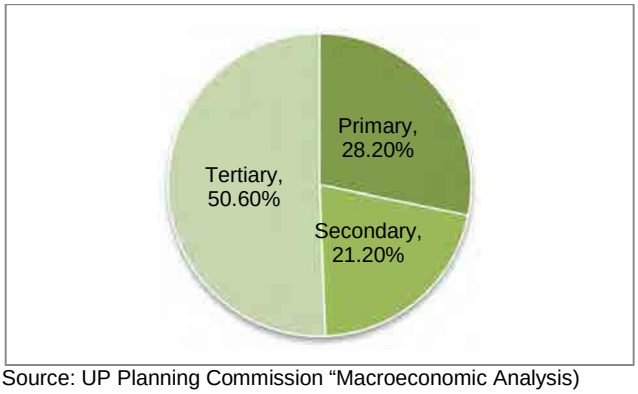
- IT policy (2000): It focuses on development of the IT industry in Delhi under six key words starting with "E" (electronic government, equal opportunity for IT, education on IT, entrepreneurship development, and economic development). Accompanying programs include expansion of IT kiosks, enhancement of IT educational institutes, opportunity creation for low income communities, development of online government service systems, and exemption of excise tax on IT hardware and software.

6.1.2 State of Uttar Pradesh (UP)

The state of Uttar Pradesh has the largest population in the country and is one of the poorest states. Its population alone is one and a half times as many as Japan's and accounts for one sixth of the country's total population. It has a variety of geographical features and is endowed with natural resources including minerals and forests. It also has a number of historical sites that symbolize the country's prosperity, including Taj Mahal. Its economic base is agriculture, in which more than 60% of people are engaged. At the same time, industrial activity is developing as seen in the Noida industrial area where multinational corporations and IT and other high-tech industries are operating.

(1) Major industry

The primary industry has traditionally been playing a leading role in the state's economy, accounting for around 35% of SGDP between the 1990s and the mid-2000s. Recently, however, the manufacturing and service sectors show substantial growth and the primary sector's share has declined to around 20% (Fig.6.1-2).



Source: UP Planning Commission "Macroeconomic Analysis)

Figure 6.1-2 Percentage distribution of GSDP (2011/12)

The state is a country's granary and has the most thriving farming sector. It is the largest producer of wheat, sugarcane, maize, to name a few. Taking advantage of fertile land and diverse climate, the state accounts for around 20% of crop production in India. Other crops including potatoes, beans, peanuts and mangos are produced in volume. It boasts the largest

agricultural export in the country. Naturally, the state government positions food processing of a variety of crops as one of its major industry.

Table 6.1-2 UP agro production and share

	Food grain*production (10 thousand ton)	Share in India (%)	Sugarcane production (10 thousand ton)	Share in India (%)
2001	4,271	21.60	10,606	35.80
2004	4,425	20.73	11,275	48.16
2008	4,209	18.23	12,466	35.80
2011	4,724	19.54	12,055	35.54

*General term for rice, wheat, cereals, maize, pulse in India
Source: Department of Agriculture, State Government of UP

Other than agriculture, small-scale cottage industries are considered important in terms of job creation and foreign currency revenue accumulation, and the state government carries out various support programs including skill training and subsidies. The state is known for production of carpets, embroidery products, jewelry, marble and woodwork products. In particular, handicraft products account for around 60% of the state's exports on a value basis.

Noida, located in the east side of and adjacent to Delhi, is a major industrial area, where foreign electronics and automotive industries are vigorously investing and IT software and BPO businesses are fast growing.

At the same time, the state of UP attracts the large number of tourists in the country because of ample resources. For instance, Kushinagar and Samath are known as a holy place for Buddhism, and together with Lumbini in Nepal, it forms a Buddhist pilgrimage area. On the other hand, Noida has come on the world map becoming a F1 site since 2011.

(2) Current state of economic and social infrastructure

While the state government has been rapidly building infrastructure for industrial development, it is limited to the Noida industrial district and the rest of the state still has a serious power shortage problem.

1) Electricity: The total installed capacity is 13,054MW (as of 2011/12), 15% short of demand (exceeding the national average of 8.5%). Electricity shortage is also evidenced by personal power consumption of 348Kwh, which is less than one half the national average of 779KWh. Power loss in transmission and distribution reaches 31%, far exceeding the national average of 25%[2]. To deal with power shortage, the state government has approved three thermal power plant projects in the form of PPP.
2) Transportation: The state's total road length is 351,160km, of which national highways cover 6,681km. The most important highways are Nos.2, 25, and 28, which cross the state east and west and connects Delhi and Kolkata. There are several roads that reach

[2] Nepal Electricity Authority, "Annual Load Generation Report 2011"

the border with Nepal are in good conditions. The state budget in FY2011 allocates IRs.67.7 billion to road construction and maintenance, a 17% increase over the previous year. The state has six airports, of which two (Agra and Varanasi) handle international flights.

3) Industrial area: The state has around 150 industrial areas. 12 industrial parks and 21 special economic zones, specialized in specific industries and functions as shown below, have been approved and some of them are under construction (mainly in and around Noida).
   - Special economic zones for the handicraft industry (one located 160km from Moradabad/Delhi, and another in Baranashi under construction)
   - Agro Parks (one in Lucknow under operation and another in Baranashi under construction)
   - Leather Parks (one in Lucknow under operation and another in Baranashi under construction)
   - Apparel Parks (one in Lucknow and another in suburbs of Ghaziabad/Delhi)
   - Complex special export zone (Ghaziabad)
   - Plastics Park (under construction, 150km from Kanpur)
4) Education: The adult literacy rate in the state is 67%, below the national average, but it has improved significantly from 12% in FY2001, up 56 percentage points over the decade, evidencing considerable efforts and their results. The state's educational budget in FY2011 increased by around 20% over the previous year, totaling IRs.234.7 billion, and reflects various goals which include establishing 5,000 primary schools. In fact, the state serves as a center of high education, having prestigious universities including the country's oldest university, Indian Institute of Technology, and Indian Institute of Management.
5) Public health: The infant mortality rate and other health indicators in the state are below the national average. There are around 300 hospitals (plus more than 1,700 traditional medical facilities) and 5,000 local health centers. However, the number of beds of government medical facilities per 100,000 population are 18[3], suggesting relatively poor medical access.

(3) State industrial policies and tax incentives

The state government is implementing a wide range of policies for industrial development focusing on cottage industries, IT, food processing, biotechnology, and tourism and using PPP schemes actively. Major policies and tax incentives are outlined as follows.

- Manufacturing/service sector investment policy (2004): This sets forth a variety of support policies and programs, including establishment of the Infrastructure Initiative Fund to promote construction of major infrastructure facilities under PPP; incentives for power

[3] Statistical report by the Ministry of Public Health and Family Welfare (2011)

source development; commitment to 24-hour power supply within industrial estates; installation of dedicated power distribution lines to investment projects of IRs.500 million or more (IRs.100 million or more in the case of food processing companies); exemption or reduction of stamp tax, registration fee and land rent for designated industries.

- IT policy (2012 – draft under preparation): It consists of subsidy programs targeting the IT industry, including development of infrastructure such as IT research and development centers and IT parks; enhancement of IT education; priority lot allotment in the Noida industrial district to IT-related companies, and exemption of stamp tax and VAT
- Food processing policy (2004): it includes tax exemption on processed products for export markets, five-year exemption of electricity charge, provision of preferential rate loans for investment of IRs.50 million or more, and provision of IT equipment for research purposes.
- SEZ policy (2007): It sets forth tax exemption within the SEZs, favorable electricity rates, and one stop service for procedures relating to construction and operation of independent power plants

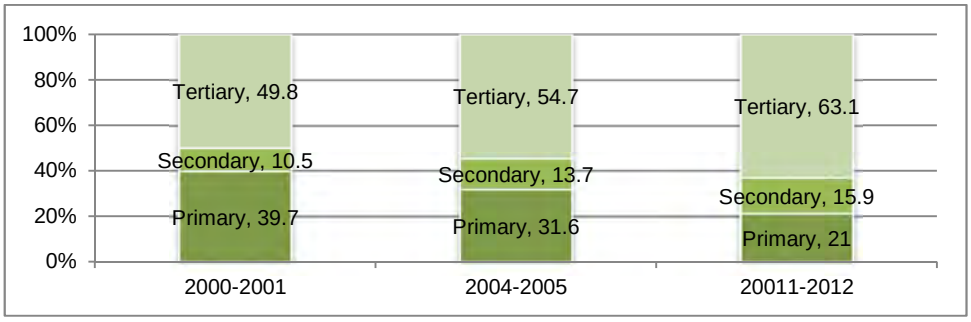
6.1.3 State of Bihar

The state has the third largest population in India, and similar to UP, it is one of the poorest states. According to 61th National Sample Survey (NSS) conducted in 2004/2005, about 40% of the state's population lives below the poverty line, way above the national average of 27.4%.

In 2005, the National Democratic Alliance led by Mr. Nitish Kumar as Chief Minister came to power by setting industrial development as the primary goal and started to implement vigorous industrialization policy. As a result, the state achieved the highest growth in the country with an annual average rate of over 18% in recent years. The remarkable success appears to come from an accelerated rate of infrastructure development including roads, enactment of related laws, improvement of public safety, and enhancement of education and medical service through increased disbursement of subsidies. Furthermore, the state economy is driven by unprecedented increase in purchase of consumer durables such as motorcycles and a significant rise in productivity in the agricultural sector.

(1) Major industries

According to the results of the 2011 national census, approximately 90% of the state's population lives in rural areas and most of them are engaged in farming activity. However, the primary industry's GDP share is relatively low at 23.48%, while the secondary sector accounts for 14.46% and the tertiary sector 62.05%. Major industries in the state are dominated by state enterprises such as Indian Oil Corporation and Hindustan Fertilizer Corporation.



Source: Dep of Planning and Development, State Government of Bihar

Figure 6.1-3 Percentage Distribution of GSDP

Agricultural output in Bihar represents around 10% of the Indian total, but processed food production holds a meager 1% share, which indicates a large room for growth of the food processing industry. As the state's climate is generally suitable for sugarcane production, sugar boasts the largest production among agricultural products. There are around 30 sugar mills in the state. As many as 500,000 farms grow sugarcanes, and 50,000 workers are engaged in work relating to sugar production. The state ranks 8th in crop production (including rice, sugarcane, wheat and maize), 3rd in vegetable production (including tomatoes, onions, and eggplants), and 6th in fruit production (mangos, lychees, and bananas). The food processing industry is designated as a priority area by the state government, which provides subsidies for startup of processing facilities to cover 40% of the total project cost.

As for the manufacturing sector, textile and leather industries are traditionally thriving in the state. Over 10,000 handloom weavers are concentrated in Patna, Gaya, and Biharshariff. Bihar is also renown for production of silk goods. The leather industry takes advantage of abundant livestock and over 50,000 shoemakers are said to work in the state.

Bihar is endowed with a variety of tourist resources, which are still undeveloped. The state government is currently emphasizing development of tourism. The state is dotted with historic spots with high cultural value and holy places. There are pilgrim tour routes for various religious belief systems that can attract a large number of pilgrims and tourists from inside and outside the country, namely the Buddhism Circuit including Gaya, Rajgir, and Nalanda, the Sufi Circuit including Mizoram, and Manander hill, and Chapanagar for Sufism, and the Ramayan (Hindu's goddess) Circuit including Rajgir,Vaishali. Recently, the number of tourists visiting Bihar is on the steady rise thanks to the improvement of public security and infrastructure. According to Bihar Tourism Development Corporation, approximately 20% of foreign tourists coming to India visit the state. The state government is currently formulating a 20-year Tourism Promotion Master Plan and is implementing various development projects including construction of tourist facilities.

Table 6.1-3 Tourists to Bihar

	Domestic Tourists	Foreign Tourists
2007	10,400,000	1,770,000
2008	11,900,000	3,4600,00
2009	15,700,000	4,230,000
2010	18,500,000	6,350,000

Source Bihar Tourism Development Corporation

(2) Current state of economic and social infrastructure

1) Electricity: The present installed capacity totals 1,833MW, most of which are produced at coal-fired thermal power plants. Electricity is supplied to around 3,940,000 customers, while 60% of rural villages are not electrified. Overall, only 15% of households benefit from electricity and there is a serious supply shortage. Efforts are being made to introduce biomass power generation systems to take advantage of abundant rice husk.
2) Transportation: In the state, there are national and state highways, total length of which is 8,500km. In particular, four-lane highways connecting Delhi and Kolkata run through the state in east-west direction. There are also north-south highways, which are connected to the Nepal border at two points. At present, a 50km-long section up to the border is in poor condition but repair work is underway. National highways are constructed according to the National Highway Development Plan (NHDP) by partially using private funds. At present, eight construction projects are carried out in the BOT system and under participation of the private sector. Railways also have two connecting points to the Nepal border. There are one airport in Patna for domestic flights and one international airport in Buddha Gaya.
3) Industrial areas: The state has four major industrial estates, which are managed by Bihar Industrial Area Development Authority (BIADA). The following industrial clusters are formed in each estates although sector classifications are rough.
   - Patna: Processing of agricultural products
   - Bhagalpur: Silk, textile, sugar refining, and rice cleaning
   - Darbhanga: Tobacco, beverage, cotton, jute, and paper making
   - Mazafpur: Chemical products, leather, dairy products, and processing of fruits
4) Education: Literacy rate of Bihar is 63.8%, which is well below the national average of 74%. The state government is making effort to improve education status and the budget allocation for education sector in FY2012 increases by 10% from the previous year. There are 15 universities and more than 1,000 specialized colleges. The India Institution of Technology (IIT) was established in the state in 2008 to promote IT sector.
5) Public Health：While there are around 150 hospitals and 10,000 local health centers in the entire state, access to medical treatment is very low as their service ratio is one health center per 10,000 population and one doctor per 25,000 population.

(3) Industrial policies and tax incentives

The state government implements a variety of policies and programs for industrial development and investment promotion. Major policies are outlined as follows.

- Industrial Incentive Policy (2011): To spur industrial development, a variety of incentives are offered, including exemption and reduction of stamp tax, cross-border tax and VAT, subsidies for skill learning and land investment in industrial estates, subsidies for capital formation of small- and medium-sized startup companies, and assistance for acquisition of ISO certification and other international standards. The state government has designated priority areas, including food processing, agriculture, tourism, special medical facilities, higher education and technical training, IT, electrical equipment, textile and energy.
- Alternative energy source promotion policy (2011): To promote developing alternative energy sources, incentives are provided for development projects relating to biomass, small-scale hydropower generation, solar energy, and waste, including exemption of cross-border tax on goods.
- Information and communication technology policy (2011): Incentives for development of IT infrastructure and investment relating to IT hardware production, including tax exemption and financial assistance, are provided
- Sugar incentive package: Incentives for construction of new sugar mills and ethanol refineries, including exemption of excise tax, purchase tax on sugarcanes, stamp tax and registration fee relating to land acquisition, and a subsidy for 10% of capital cost, are provided.
- Tourism policy: The policy sets forth development of infrastructure to make tourism a major industry in the state, formulation of a 20-year tourism development master plan, and development of handcraft products

6.2 Current State of the North India Market

The size of retail market in India is currently estimated to be around $350 billion and is expected to reach around $415 billion in 2015.[4] While the country's population is projected to become the world largest in 2025, strong domestic demand, resulting mainly from the increase of the middle-income class, is expected to drive market expansion further. It should be noted, however, that India is a country consisting of 28 states and 7 union territories where people of diverse races, languages, religions, and cultures live together. As a result, consumer behavior varies greatly between geographical areas and socioeconomic classes, so it is very difficult to generalize the country's market characteristics as a single, unified one. In analyzing the Indian market, a primary distinction should be made between rural and urban areas. North India, covered by the Study, shows a clear distinction between urban and rural states. As shown in the table below, two states, UP and Bihar, are characterized by high percentage of rural population, 78% and 89% respectively, whose consumption is centered on food and other consumer goods for daily use. On the other hand, the Delhi Capital Region and urban areas in Noida and Lucknow (state capital of UP) as well as Patna (state capital of Bihar) have population with much higher household income, which is reflected in a very different consumer pattern in comparison to rural areas. Thus, the current market conditions in north India are analyzed mainly by separating urban and rural areas[5].

Table 6.2-1 Percentage population in north India (%)

	Rural	Urban
Delhi	3	97
UP	78	22
Bihar	89	11
India Total	69	31

Source: India National Census 2011

6.2.1 Income Classes and Consumption Pattern

While India is achieving spectacular economic development, the low-income class with annual household income of less than IRs.200,000[6] still accounts for a predominant share of 85%. On the other hand, the middle-income class increased from 16 million households in 2005 to 28

[4] PWC "Winning in India's retail sector" (2011), Deloitte "Indian Retail Market"(2011)

[5] The Census of India 2011 defines the urban area as all places that meet legal requirements including autonomous functions and all other places with a minimum population of 5,000, a density of population of at least 400 persons per square km, and at least 75% of the male main working population engaged in non-agricultural pursuits, while other places that do not conform to the above definition are rural areas.

[6] Latest available household income data can be obtained from the household consumption survey conducted by the National Center for Applied Economic Research (NCAER) in 2005, which defines the low-income class as people with annual household income of IRs.200,000 or less.

million in 2009. According to a McKinsey Global Institute's report[7], the middle-income class is projected to increase tenfold between 2005 and 2025.

Table 6.2-2 Household income distribution of India

Income class	Annual household income (IRs)	2001		2005		2009 (estimates)			
		# of household (10 thousand)	%	# of household (10 thousand)	%	# of household (10 thousand)	%		%
Rich	More than 1 mil	81	0.4	173	0.8	381	1.7	Rural	0.3
								Urban	1.4
Middle	200,000～1mil	1,075	5.7	1,640	8.1	2,844	12.8	Rural	4.2
								Urban	8.6
Higher poor	90,000~200,000	4,126	21.9	5,328	26.2	7,530	33.9	Rural	20.7
								Urban	13.2
Lower poor	Less than 90,000	13,538	71.9	13,225	64.9	11,439	51.5	Rural	43.4
								Urban	8.1

Source: NCAER "Market Information Survey of Households" (2005)

As shown in Table 6.2-2, the low-income class is largely found in rural areas. As a consequence, consumer spending in rural areas is much smaller than that in urban areas. The average monthly spending per person in the former is less than one half that in the latter. There is also a large difference among states. The monthly consumer spending in UP is IRs.899 in rural areas and IRs.1,574 in urban areas, and that in Bihar IRs.780 and IRs.1,238, respectively. The figures in urban areas of the two states, however, are smaller than the average monthly spending in rural areas of higher incomes states of Kerala and Punjab. On the basis of the average number of persons in an Indian household of 5.3, the monthly average household spending in rural areas of UP and Bihar is equivalent to 6,000 Japanese yen.

As shown in Table 6.2-3, the breakdown of monthly spending indicates that food and utility costs in rural areas account for 68% of the total, leaving not much money for other consumption items. On the other hand, a spending pattern of people in urban areas is more diverse, including expenditures for education, communication, and purchase of consumer durables. In fact, urban areas are seeing an increasing number of entertainment complexes that house movie theatres, restaurants and shopping malls which give a wider range of shopping choices. People in urban areas more frequently eat out, which evidences the changes in ways to spend time and money for pastime.

The total consumer expenditure trend in the past two decades (Table 6.2-4) shows a significant increase in all items. In particular, spending on health and communication grew by over 1,000 times in the past 15 years. Other fast-growing items are transportation and education.

[7] McKinsey Global Institute "The 'Bird of Gold': The Rise of India's Consumer Market" (2007)

Table 6.2-3 Monthly expenditure per person

	Rural		Urban		Total	
	Amount (IRs)	%	Amount (IRs)	%	Amount (IRs)	%
Food and Beverage	631	60	912	46	771	52.9
Utility	85	8	138	6.9	111	7.5
Clothing and Footware	66	6.2	96	5.9	90	6
Consumer durables	37	3.5	81	4.1	59	3.8
Transportation	36	3.5	112	5.6	74	4.5
Housing	5	0.5	115	5.8	60	3.1
Health and Medical	57	5.5	99	5	78	4.8
Daily consumer good	45	4.3	81	4	63	4.1
Education	38	3.6	161	8.1	99	5.8
Communication and service	44	4.2	124	6.3	84	5.2
Leisure and Recreation	8	0.8	32	1.6	20	1.2
Tax	2	0.2	16	0.8	9	0.5
Total	1,054	100	1,985	100	1,519	100

Source: Ministry of Statistics and Programme Implementation "National Sample Survey"（2009/10）

Table 6.2-4 Sectorwise expenditure

(Unit：100IRs、Current price)

	1990	1995	2003	2007	2010	% Growth (1995~2010)
Food	1,993	3,681	6,615	9,086	12,058	227
Beverage	137	256	462	841	1,398	447
Clothing and Footware	282	516	864	2,028	2,779	438
Housing	549	893	2,135	3,562	6,294	604
Household goods and service	161	274	574	1,115	1,693	518
Health and Medical	55	153	860	1,276	2,068	1,249
Transport	366	836	2,482	4,649	7,702	821
Communication	36	83	269	569	945	1,032
Leisure and Recreation	64	128	275	337	554	333
Education	64	116	383	491	1,061	818

Source: Euromonitor "World Consumer Income and Expenditure Pattern 2012"

As for ownership of consumer durables, 54% of urban households possess color TV sets and 44% refrigerators, both of which are owned particularly among higher income earners. On the other hand, consumer goods widely owned by rural people are radio (57%) and bicycles (69%), which therefore seem to be necessities in rural life. In addition, Nielsen, the world leading research firm, predicts that sales of fast moving consumer goods (FMCG) will grow rapidly in rural areas and the current market size of around $9 billion will expand more than tenfold to a $1,000 level in 2025. In particular, consumption of edible oil, shampoo and washing powder has been growing at a remarkable pace (Fig.6.2-2).

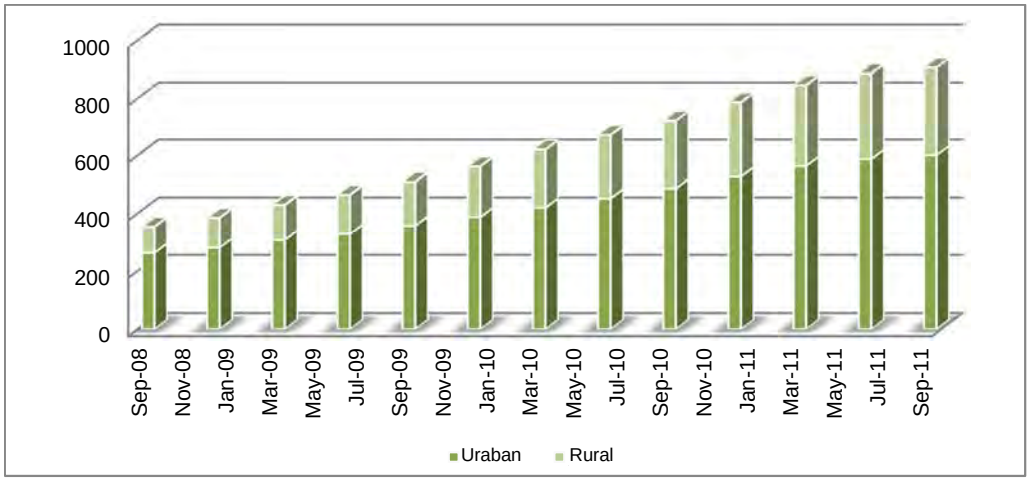
Most recently, cellular phone ownership is growing at an explosive rate. As of the end of 2011, the number of telephone service users reached approximately 917,330,000, of which cellular phone users represent 96.4%. As shown in Fig.6.2-1, the number of cell phone subscribers increased by 50% in the past three years. Among high income earners in urban areas, smartphones are quickly gaining popularity with increased use of social media service. Although

cell phone ownership is expanding in rural areas, the ownership rate is still low, 45.2% in Bihar and 56.4% in UP in comparison to the national average of 72.7% per 100 persons.

Table 6.2-5 Ownership of consumer durables (2004/05)

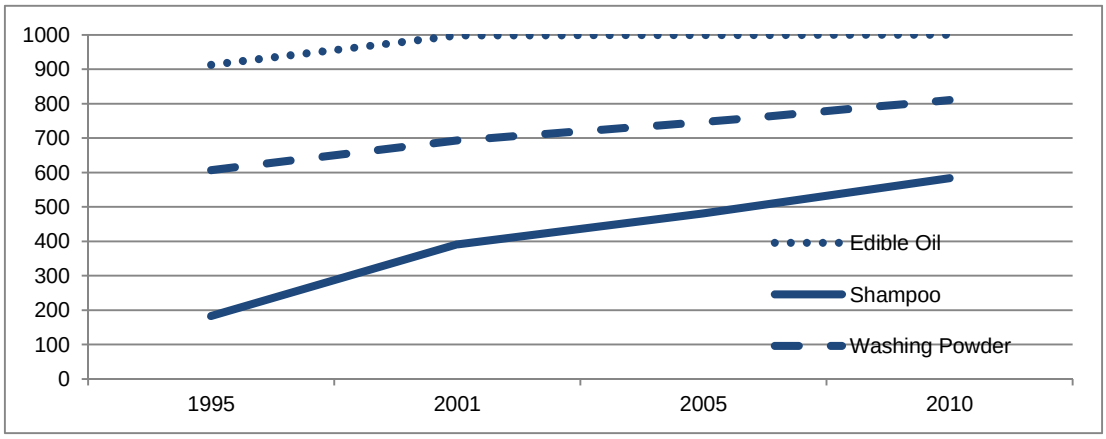
	Rural %	Urban %	Low Income %	Rich %
Car	3	12	4	83
Motorbike	19	34	47	71
Refrigerator	8	44	34	74
Color TV	17	54	40	99
Radio	52	43	44	49
Bicycle	69	53	NA	NA
PC	1	5	NA	NA

Source: NCAER "National Expenditure Survey" (2004/05), "The Great Indian Middle Class" (2005)



Source: TRAI "The Indian Telecom Services Performance Indicators" (unit : 1million)

Figure 6.2-1 Subscription of telecom service



Source: NCAER "Great Indian Market"

Figure 6.2-2 Commodity consumption per 1,000 households in rural area

Finally, it is important to mention the National Rural Employment Guarantee Scheme (NREGAS) and its effect on income and consumption patterns in India's rural areas. This is a flagship program of the Manmohan Singh administration which was started in 2006. It provides the low-income class in rural areas with warranted employment opportunity relating to public works projects up to 100 days per household and year to secure a stable source of income for them. While it's true effectiveness is a subject of debate, the scheme is accepted as an effective policy to stimulate consumption in rural areas.

6.2.2 Distribution System in India

The retail market in India is dominated by family-operated small shops and stores, which amount to around 12 million throughout the country with annual sales of IRs.16 trillion[8]. The distribution system that supplies products to a numerous number of retailers involves a large number of intermediaries that connect manufacturers and consumers. In the complex system, distributors called C&FA (carry and forwarding agent) play a major role in handling and warehousing of goods. They are often used to avoid the CST (cross-state tax) that is imposed on goods transported from one state to another[9]. While some C&FAs are subsidiaries of large enterprises, most of them are small- to medium-sized and locally based. They supply goods to agents, wholesalers and then retailers. Almost all products are sold through this marketing channel, and partnering with a competitive C&FA and other intermediaries seems to be the key to successful marketing.

A wholesale market in Delhi (different markets are set up for different product categories)

A wholesaler carrying electrical products

Many are copycat products made in China

In rural areas, most consumer goods are sold at traditional shops called "kirana." These shops carry a variety of goods for daily use, ranging from bread to confectionaries, instant noodles, soap, shampoo and batteries, which are sold in a small pack to make the price affordable to low-income customers. As pointed out earlier, each state in India imposes the CST to control movement of goods between states. As there is a limited number of large distributors that have

[8] See Price Waterhouse Coopers "Winning in India's retail sector"(2011), IBEF "Retail Report2011"

[9] Based on information obtained from JETRO India office.

nationwide networks, products are largely sold inside the state of their origin and thus the market is divided geographically. For this reason, if Nepalese products made by SMEs are to be marketed in India's rural markets, their markets would inevitably be limited to the neighboring states of UP and Bihar.


A typical retail shop in India's rural village. Most products are sold in small packs

IRs.13 worth of shampoo and tooth paste.

In addition, unique marketing channels are emerging to serve rural villages that are not easily accessible. For instance, ITC, the largest tobacco company in India, offers IT-based service enabling order receiving and information gathering. Also, Unilever works together with women's self-support groups to carry out the "Shakti Programme" to visit rural villages for door-to-door sales.

In urban areas, large retailers operated by local large enterprises or joint ventures with foreign corporations are on the rapid rise in recent years. Their share increased from a mere 3% in 2004 to 13% in 2010. Bihar and UP are no exception to this. In large cities such as Patna and Lucknow, there are many supermarkets and shopping malls that carry a wide variety of goods similar to those sold at supermarkets in industrialized countries. At present, general retailing is not made open to foreign investment, which is limited to retailing business selling a single brand. In December 2011, however, the law to ease restriction on foreign investment in the retail industry was passed by the parliament, which is thus expected to open the doors to foreign retailers such as Wal-Mart of the U.S. and help accelerate growth of retail chains.

Modern shopping malls in UP and Bihar

There are also many convenience shops in city areas

6.3 Prospective Areas and Major Challenges for Nepal's Industry as viewed from India

In this survey, interview with the concerned government officials, business associations, industrial area development authorities etc. was conducted in order to identify Nepal's prospective areas for trade with and investment from north India (the Delhi Capital Region, Uttar Pradesh, and Bihar States). As mentioned above, this area is in the midst of tremendous growth and concentrating on their own market, overall level of reaction and interest to business with Nepal was relatively low. It was not able to find any enterprise which is importing materials or products from Nepal at least among member companies of the business associations or resident companies in the industrials areas the study team visited, while it was found that many see Nepal as an attractive market to sell their products. Some people suggested that there might be some trade including informal one going on in Kolkata in West Bengal, Gorakhpur in UP, Purnea in Bihar, but it could not be confirmed by this Study. By and large, as the volume of trade with Nepal is comparatively insignificant for India, it turned out to be very difficult to capture the exact trade situation from Indian side. As a result of the interviews, it can be concluded that trade with India by Nepal local SMEs is conducted rather small scale only, as transactions between Nepal and India is limited to informal trade conducted by unofficial or small sized agents around the border, investment by some MNCs based in Delhi, Kolkata or Mumbai, and trade conducted by a certain group of Nepalese conglomerates who has their own network in India.

Currently, the products distributed in the Nepal market are mostly imported and there are very few Nepalese products with competitiveness when compared with Indian made products. Therefore, Nepal should concentrate on the domestic market, develop products for import substitution, and gain competitiveness progressively. Having said that, it is inevitable that India has been and will be the most important trading partner for Nepal. As a result of this survey, Agro products, Tourism, Construction materials and so on are identified as the prospective areas for Nepal to promote for the north Indian market. In this chapter, the details and challenges of these areas are analyzed based on the findings of the interviews, market survey and collected data.

6.3.1 Prospective Areas and Challenges for Export

(1) Agro products

India has achieved self-sufficiency of rice in the 1970s and became a rice exporting country in the 1990s as food grain production had grown drastically as a result of "Green Revolution" started in the 1960s. The state government of Bihar has developed a plan for "Rainbow Revolution" to cover agriculture driven growth including promotion of fisheries and poultry. As can be seen, it was named after the successful previous efforts.

Regarding the future food demand-supply situation, the Indian government has an optimistic view and predicts in their mid-term development plan called "India Vision 2020" that India will be

one of the major food exporting countries by 2020. However, the current Indian average per capita consumption of food grain is only about 180 kg which is significantly low comparing to that of other countries (Japan 326 kg, China 306 kg, France 472 kg, USA 889 kg). To complement the shortage of food grain intake, they eat a lot of vegetables and drink much milk. This typical food consumption pattern is predicted to change in the near future to push consumption of food grain as new food culture such as eating pizza, pasta or meat is prevalent. Meat consumption will make a great impact on agro products production and animal feed production as well.

The result of the survey conducted by the Ministry of Agriculture, Forestry and Fisheries of Japan is shown as the table 6.3-1. According to this survey, while rice and wheat can continue to self-supply, cereal as a whole will face a shortage in India. This is because the productions of maize which accounts for 18% of total food grain production cannot suffice to meet the increasing demand of animal feed. It also foresees that India will face serious shortage of pulse, edible oil and sugar and that the dependency level on import food will increase. Nepal should prepare for such a situation in the future by developing long term strategies which enable increased food supply to the great Indian market.

Table 6.3-1 Demand-Supply prediction for major food crops and food products in India

(Unit：1 million tons)

	Scenario I			Scenario II		
	2011	2021	2026	2011	2021	2026
Cereal	21.9	-0.6	-13.3	21.2	-2.9	-17.0
Rice	1.2	8.9	9.0	1.3	9.0	9.1
Wheat	20.1	24.8	28.8	21.2	27.3	32.0
Pulses	-6.9	-21.1	-32.6	-8.0	-24.9	-39.3
Edible oil	-5.6	-14.2	-21.4	-6.7	-17.7	-27.0
Sugar	-1.7	-29.0	-54.5	-4.3	-39.7	-74.1

Source: “Overseas Agriculture Information Survey and Analysis Report (2010）”

Nepal has potential to export agro products which have comparative advantages taking advantage of difference of seasonality or high altitude (apple, strawberry, citrus, or high value added vegetables) to the Indian market. At present, such products distributed in the north Indian market are mainly from the hill areas such as Himachal Pradesh and Uttarkand, or overseas. As Nepal is located more close to the north Indian states of UP and Bihar and thus advantageous than those areas, it should have possibility to supply them if they produce competitive products.

There are many challenges for Nepal to export such products to India though. It does not have good transportation infrastructure, and cannot collect a volume of products large enough to export. Besides, many kinds of subsidies are granted to agriculture sector in Indian farmers, which makes Indian products much more competitive than Nepalese products in terms of quality and price.

A large volume of ginger and cardamom are exported from Nepal to India, but they are exported unprocessed, and even simple processing such as cleaning or peeling is done in Indian side, which makes Nepal side’s profits low. Recently Nepal government decided to provide funds for setting up a process factory in Jhapa district. As the factories in the industrial areas in UP and Bihar the study team visited were not very modern or sophisticated, Nepal should be able to copy

them. More aggressive efforts to establish process facilities for those products in the Nepal territory is required.



Simple garlic powdering factory in Industrial Area in UP


20ton garlic/day is procured by farmers in the area

There are 150 industrial areas and many food processing factories in UP. Agro parks are being constructed in Lucknow and Baranashi. Raw materials for processing in the areas are basically procured domestically. A juice factory in Lucknow industrial area the study team visited procures semi-processed raw materials (pulp) from Maharashtra (mangos, grapes) and Himachal Pradesh (apples) to mix it to make final products which are sold in local and national markets. The factory manager mentioned that they were willing to procure raw materials from Nepal if prices were cheaper, but he also told that they had not heard that kind of information thus far. He also said that the local market demand for fruit juice is increasing and that it was hard to fill the demand.

Herbs and medical plants are the products which Nepal has comparative advantage thanks to its geographical characteristics, and the current major export destination is India. It is considered to be one of potential products for export, but the current share of export of herb and medical plants (including processed essential oil) in total export amount remains less than 2%. According to the custom office and herbal goods traders in Nepalganj which is the hub of herb trade, wild raw herbs are collected by Nepalese traders from local famers and handed to Indian traders who deal with processing companies in big cities in India. Herb cultivation conducted under controlled environment is very limited in Nepal, and thus selling prices are determined by Indian traders according to market conditions in India. Since Nepal traders do not have a direct market access, they are put in a disadvantageous position with no bargaining power. There are approximately 35 traders handling herbs in Nepal, but they lack market access, often decrease profits by harvesting too much, and lack technical skills for processing.

(2) Tourism

The number of Indian tourists is increasing drastically these days as income level is upgraded and choice of leisure is expanded. As mentioned in Chapter 3, the largest number of tourists in Nepal comes from India and it accounts for 20% of total foreign tourists. The actual number should be even greater since it does not count people who cross border without immigration check, as passport is not required for travel between the two countries.

As Table 6.3-2 indicates, the number of Indian tourists became about five holds in this 14

years. The popular states for travel destination are in mid-northern regions such as UP and Andhra Pradesh.

Table 6.3-2 Number of Tourists in India

(Unit：1 million)

	1997	2000	2004	2007	2011	% change 2010-11
Foreign Tourist Arrival	2.37	2.65	3.46	5.08	6.29	8.9
Indian departure to overseas	3.73	4.42	6.21	9.78	14.21	9.4
Indian domestic tourist visit	159.9	220.1	366.3	526.6	850.9	13.8

Table 6.3-3 Top 10 States of India in Number of Domestic Tourists Visits (2011)

State	Number (Million)	Percentage Share (%)
Uttar Pradesh	155.4	18.3
Andhra Pradesh	153.1	18.0
Tamil Nadu	137.8	16.2
Karnataka	84.1	9.9
Maharashtra	55.3	6.5
Madhya Pradesh	44.1	5.2
Rajastan	27.1	3.2
Uttarakhand	25.9	3.0
West Bengal	22.3	2.6
Gujarat	21.0	2.5

Source：Ministry of Tourism “India Tourism Statistics at a Glance”

As mentioned in 6.1, UP and Bihar is aggressively promoting tourism industry. This area has lots of important religious sites which is attracting both international and domestic tourists and pilgrims. There is a plan to develop areas which connects many Buddhism heritage sites (Varanasi, Sarnath, Kushnagar in UP, Bodh Gaya, Vaishari in Bihar) with Lumbini in Nepal, a birth place of the lord Buddha as “Buddhism Circuit”. Nepal side is required efforts to take advantage of these trends in India and increase unit spending per visitor and average length of stay in Lumbini and the surrounded areas. Indian Visa rules which does not permit re-entry for 2 months from last visit was removed November 2012, excluding a few countries, and this will facilitate movement of international tourists coming to the area.

According to travel agencies and tourism boards in north India, they do not have enough information of Nepal tourism and thus the interest level is low as there are not so much promotional activities from Nepal side. Indian tourists prefer luxurious resort or casino kind of entertainment to Himalaya mountain trekking and this form of tourism has been in existence over the last few decades though for few select upper class. Nepal should develop strategies for marketing and promotion to attract increasing Indian middle income class.

(3) Construction Materials

India is experiencing a boom of construction sector. Among total construction expenditure of 175 billion US dollars in 2007, 140 billion are spent for non-housing and rest is for housing and the

total amount is expected to reach 370 billion US dollars by 2013. Demand for housing is hiking and the Planning Commission estimates the shortage of housing will be 26.53 million during 2007~2012 (period of the 11th 5-year plan).

According to the National Sample Survey 2008/09, the number of the newly built house is 2.7 million. As Table 6.3-4 shows that the structure of common housing in India is changing. Katcha, the house built with bamboo, mud, straw kind of materials is still common in rural area, but in urban area, Pacca, the house built with concrete, bricks or stone materials is more prevent accounting for 92%. The business association such as PHD Chamber of Commerce and Industry mentioned that due to this kind of change of the trend, demand for construction materials such as cement and bricks is increasing rapidly. Nepal might have possibility to fill this demand-supply gap in Indian construction market, but production should be done near border as transportation cost is high for heavy materials. Also it was mentioned that Nepali construction materials do not have competitiveness in terms of quality and price comparing to Indian at this moment.

Table 6.3-4 Housing structure in India

(Unit：%)

		1987	1993	2007	2009
Rural Area	Katcha	48.6	31.7	18.8	NA
	Semi-Pacca	31.9	36.0	31.4	NA
	Pacca	19.5	32.3	49.8	55.0
Urban Area	Katcha	17.8	8.3	2.9	NA
	Semi-Pacca	24.3	17.9	9.1	NA
	Pacca	57.9	73.8	88.0	92.0

Source：National Sample Survey

(4) Others

Automobile manufacturing is one of the most rapidly growing industries in India. The size of motorbike market is 2nd, commercial vehicle is 4th, and bus and truck is 5th largest in the world. It is also estimated that the market of passenger car will be 6th largest in the world by 2014. In the north India region, Japanese automakers like Muruti Suzuki and Honda have established factories in Gurgaon and Noida near Delhi, and industrial accumulation is proceeding. Society of Indian Automobile Manufacturers (SIAM) estimates the car production in India will be double from 2004/05and profit of whole industry will reach 145 billion US dollars by 2016.

Table 6.3-5 Automobile Production in India

(Unit：10thousand)

	2005	2007	2009	2011
Car	121.0	154.5	183.6	298.7
Commercial Car	35.4	52.0	41.7	75.3
Tricycle car	37.4	55.6	49.7	80.0
Motorbike	653.0	846.7	842.0	1337.6
Total	846.8	1108.8	1117.2	1791.6

Source：SIAM

According to the Automotive Component Manufacturers Association of India (ACMA), among about 1,200 car parts manufactures in India, the majority is Indian local SMEs and they are already equipped with necessary technical skills and capacity. It is difficult for Nepal to provide mechanical parts to Indian market under the current situation of lack of technical skills and few investment. However as the afterparts market is much larger than new automobile market in India and the market will grow further in the future, Nepal has possibility if it will develop certain area such as repairing parts with long term vision.

As mentioned above, the number of Japanese companies is increasing these days, and about 40% of those are automobile related industries. Major destinations are the major cities such as Delhi, Mumbai, Kolkata, Bangalore and Chennai, and they target the state of Rajastan and Gujarat as the next destinations. Very few Japanese companies seek business in Nepal through the local subsidiaries in India, as currently they are struggling with the large market and harsh competition in India[10]. However, if the business environment will be matured in long run, Nepal has pontial to be considered as the next destination. There is indeed an example[11] that an Indian subsidiary of a Japanese company invested in a painting company in Nepal. The possibility to attract Japanese companies in India should be examined in a mid-long run.

6.3.2 Prospective Areas and Challenges for Investment

Many areas in India are still suffering from shortage of electric power to respond increasing demand, even though the production capacity is growing 6% every year. It is especially serious in the study area of UP and Bihar that are wanting industrial growth. Industrial areas are prioritized for power supply, but regular power cut is quite common in residential areas. While rural electrification rate in UP is 88%, in Bihar is only 53%, which means that a half of total villages still remains without grid supplied power. With this background, at the interview of this study, many had great interests in investment for Nepal's huge potential for hydropower generation. They also have expectation in tourism sector and industrial area development near border area. However they pointed out the instability of security and political environment, lack of political will, lack of infrastructure (especially power shortage), high labor cost, low level of technical skill, shortage of raw materials etc. hinder investment in Nepal from India. Many answered that they are not in position to consider investment in Nepal positively under the current situation.

IT software development is also a fast growing industry in India. As the cost of IT human resource is surging, many companies started to look at outsourcing to overseas with lower labor cost. According to National Association of Software and Services Companies (NASSCOM), recently some companies started pilot outsourcing projects in Bhutan. There are still small interests to Nepal in Indian software industry since the IT infrastructure and the labor market of mid level

[10] Based on the information obtained at JETRO India office.

[11] In 2012, Kansai Nerolac Paints, the Indian subsidiary of Kansai Paint, announced investment for a painting company in Nepal.

human resource in Nepal is not yet favorable. But they also said that they are keen to seek opportunity for invest in Nepal to outsource simple IT works such as call center or data input, if the condition is set ready as there are no cultural and language barriers between two countries.

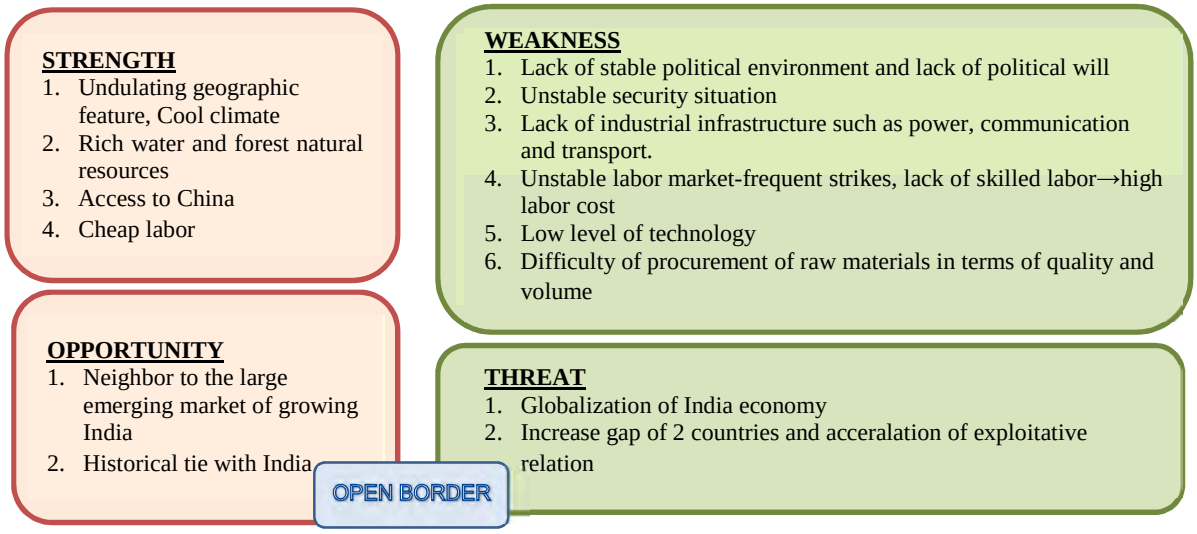
6.4 Challenges for Trade Promotion with India

6.4.1 Analysis of Challenges and Recommendations

The study team's extensive interview with government officials, business organizations and private enterprises in North India have revealed that, as discussed earlier, they are mostly indifferent to trade with Nepal. This reflects the fact that Nepal's local industries and SMEs, trade with India on only a very small scale. While the majority of Indian people tend to view Nepal as a marginal part of North India, Indian companies consider Nepal as a sizable market (population of 26.5 million). As a result, many of them view Nepal as an export market, rather than resource country of import goods.

Based on the results of field survey conducted in North India, perceptions of Indian companies on trade with Nepal have been summarized by means of SWOT analysis as follows.

Table 6.4-1 SWOT of Nepali Trade with India



First of all, many Indian companies pointed out six areas of weakness about Nepal. In particular, the continued unstable political environment was perceived by most respondents as the major obstacle for investment in Nepal. It is a common opinion of India's industry that, so long as the current political unrest persists, it is very difficult to view Nepal as a reliable trade partner or a place for investment. While many feel that public security in the country has generally improved after the peacemaking with the Maoist party, there are deep-rooted concerns about the resumed disturbance of public order caused by Nepalese Maoists and India's Naxalites[12]. Furthermore, the lack of basic social and economic infrastructure, unstable labor market, and low

[12] Naxalites are varioour militant Communist groups operating in different part of India and they are commonly called as Indian Maoists

level of industrial technology are perceived as additional factors to bring about negative cost impacts. Also, Indian companies recognize that many companies in Nepal import raw materials and industrial parts from India and other countries, so that they do not feel much incentive to build factories in Nepal where local procurement of materials is not feasible in terms of both quality and quantity.

A major threat to Nepal is acceleration of exploitative relationship due to a further decline in importance of Nepal for India. With strong economic growth in recent years, India's economy is increasingly globalizing and diversifies its trade partners, especially industrialized countries, while its trade with Nepal is on the decline in relative terms; 0.7% of India's total exports and less than 0.1% of imports. If the above weaknesses continue for the time being, Nepal's weight in India's international trade will decrease further. At the same time, the current trade pattern will increase dependency of the Nepalese economy on India due to persistent trade deficits, further deteriorating the country's bargaining power against India.

The open border between the two countries serves as a threat as well as an opportunity for Nepal. The lack of control on informal trade results in lost tariff revenues (accounting for 20% of the country's tax revenues), a further increase in trade deficit, and growth of crimes.

According a survey conducted by the South Asia Network of Economic Research Institutes (SANEI) of informal traders[13], around one half of informal exports made from Nepal to India are the third country's products. In particular, products that are subject to import restriction in India for the interest of protecting local industries, and those subject to high tariff rates are brought to the Indian market via the informal trade channel passing Nepal. The situation creates a risk of creating negative impacts on trade relationship between Nepal and third countries. In fact, India has once blockaded the border to prevent informal exports from Nepal. While both governments realize the need for control of informal trade between them, informal trade includes free trade of daily goods by residents living in the border area and revitalize, to some degree, the local economy. In addition to these reasons, a high cost required for long border control discourages both governments to crack down on informal trade, and the condition is expected to continue.

Table 6.4-2 Reason for Informal Trade (% of response、multiple answer)

	Nepal to India	India to Nepal
Low transportation cost	43	55
Lower time to reach destination	20	28
Imported from third country	70	0
No paperwork	62	78
No procedural delay	42	66
Lower bribes	60	48
Quick realization of payments	44	70
Ethnic ties across the border	15	31
Presence of high duty in official channel	34	27

[13] South Asia Network of Economic Research Institutes, "India's Informal Trade with Nepal" (2001)

Then, is there any way to expand trade with India by overcoming the above challenges? Nepal's strengths as perceived by many Indian companies are summarized in Table 6.4-1. The Indian government and companies are interested in agricultural products grown by taking advantage of cool climate or seasonality as well as rich natural resources. However, as pointed out earlier, Nepal fails to utilize the strengths to their advantage. Finally, strong development of the Indian economy results in a significant increase in the middle-income class even in urban areas of backward states and some parts of rural areas, which provide good opportunity for the Nepalese economy. All in all, desirable directions for development of trade with India are summarized as follows.

(1) Building of strategy for improving competitiveness

As seen in 6.3, it is generally recognized as to which Nepalese products have competitiveness in the Indian market; higher value added agricultural products grown in cool climate or having seasonality, processed foodstuffs, non-tree forestry products (NTFPs), and MAPs seem to have increasing potential demand in the fast growing market in India. Furthermore, there are a number of villages located along the India-Nepal border, where many products are moved over the border by informal trade. As discussed in 6.2.1, there is increasing demand for daily products, such as shampoos and instant noodles, which can be supplied by Nepalese companies if they can offer competitive price. Finally, there are new market opportunities in India, such as Buddhist tourism, IT business using cell phones and so on.

Despite these opportunities, it is also true that there are few Nepalese products that can compete with Indian products in terms of quality and quantity. To improve the situation, step-by-step strategic moves are essential; to select products that have potential to obtain competitiveness against Indian products, to conduct market analysis and to develop marketing strategy. It is recommended to take the first step in development of products that can substitute imports in the domestic market.

(2) Strengthening of promotional efforts

According to many respondents to the study team's interview, Indian companies do not have much information on investment opportunity or prospective products available in Nepal. For instance, the exchange between the chambers of commerce and industry in the two countries does not go far beyond general communication, rather than discussion on specific business matters or follow-up activity. The lack of promotion is found also in the tourism sector, as Indian travel agents do not have sufficient information on tourism in Nepal, thus losing opportunity created by an increase in the number of Indian tourists to reflect income growth. Thus, there is a large room for market development for Nepalese industries by increasing interactions with Indian counterparts and conducting promotional activities. In this connection, government support will also play an important role.

Chapter 7 Infrastructure Development and Industrial Concentration

Chapter 7 Infrastructure Development and Other Industrial Location Factors

7.1 Current State of Infrastructure Development

The Global Competitiveness Index published by the World Economic Forum positions overall infrastructure quality as a basic determinant factor for a country's competitiveness, as important as government systems and institutions, macroeconomic stability, and health and primary education. Table 7.1-1 shows scores and rankings of Nepal and other South Asian countries in infrastructure quality according to the Global Competitiveness Index 2011-12. Nepal ranks the lowest among 142 countries in the area of power supply and 132nd in terms of overall infrastructure quality, slightly below Bangladesh and the lowest among the South Asian countries.

Table 7.1-1 Global Competitiveness Index: South Asian Countries (Electricity, Roads and Telecommunications)

	Overall score	Basic requirement	Infrastructure (overall)	Road	Electricity	Land-line phone	Mobile phone
Nepal	3.47	3.67	2.7	2.5	1.3	2.8	30.7
	125	**121**	**132**	**128**	**142**	**115**	**138**
Bangladesh	3.73	3.81	2.8	2.9	1.6	0.6	46.2
	108	**112**	**129**	**111**	**135**	**135**	**127**
India	4.30	4.25	3.8	3.4	3.1	2.9	61.4
	56	**91**	**86**	**85**	**112**	**113**	**117**
Pakistan	3.58	3.53	3.5	3.7	2.2	2.0	59.2
	118	**130**	**109**	**79**	**126**	**120**	**119**
Sri Lanka	4.33	4.61	4.7	4.5	5.0	17.2	83.2
	52	**65**	**48**	**49**	**62**	**73**	**95**

Note: Ranking of 142 countries Upper line (score), lower line (rank)
World Economic Forum. The Global Competitiveness Report 2011–2012.2011

In the following sections, the current state of electricity supply, roads, and telecommunications in Nepal are summarized.

7.1.1 Electricity Supply

In Nepal, there are approximately 6,000 rivers, 33 of which have a drainage area over 1,000 km^2. Their total drainage area in Nepal reaches 140,000km^2, which are translated to economically viable potential hydro-energy of 42,000MW, the fourth largest in the world (Table 7.1-2). The potential hydro-energy can be used to generate 176,000GWh annually (Table 7.1-3). In reality, however, actual electricity generation was only 652MW as of 2010/11. The present electrification rate is around 42%, which is estimated from the number of customers of Nepal Electricity Authority (NEA), namely 5.44 persons per household, and the current state of off-grid rural electrification. This is among the lowest in the world.

Table 7.1-2 Theoretical and Economically Viable Potential Hydro-Energy in Nepal

	Theoretical potential hydro-energy			Economically viable potential hydro-energy
	Major rivers 1,000km^2 and over	Small and medium-sized rivers 300－1,000km^2	Total	
Sapta Koshi	18,750	3,600	22,350	10,860
Sapta Gandaki	17,950	2,700	20,650	5,270
Kamali & Mahakali	32,680	3,500	36,180	25,100
Southern Rivers	3,070	1,040	4,110	880
Total	72,450	10,840	83,290	42,110

Source: WECS. National Water Plan, Hydropower Sub-sector (Draft Report). 2003

Table 7.1-3 Potential Hydro-Electric Energy in Nepal

	Number of project	Total generating power (MW)	Total electric energy (GWh/year)
10-100MW	157	6,200	38,000
100-300MW	47	7,815	42,056
300-1,000MW	20	9,437	45,723
1,000MW≦	5	19,463	50,985
Total	229	42,915	176,764

Source: WECS. National Water Plan, Hydropower Sub-sector (Draft Report). 2003

Table 7.1-4 summarizes Nepal energy consumption by energy source. In 2011/12, the country consumed electricity energy equivalent to 182 TOE (petroleum basis). Although it represents a 65% increase over the 2001/02 figure (119 TOE), electricity holds only 2% of total energy consumption, while traditional energy sources (such as fuel wood and agricultural waste) hold a dominant share of over 80%.

Table 7.1-4 Composition of Energy Consumption in Nepal

(Unit: Ton of Oil Equivalent [TOE])

Energy Sources	2001/02	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12*
Traditional (A)	**7,066**	**7,854**	**8,015**	**8,185**	**8,342**	**8,500**	**7,093**
Fuel wood	6,315	6,999	7,149	7,301	7,467	7,606	6,337
Agri. Waste	305	337	337	344	324	331	289
Animal Dung	446	518	529	540	551	563	467
Commercial	**1,029**	**1,031**	**1,038**	**1,139**	**1,464**	**1,580**	**1,049**
Coal	152	144	193	182	286	293	195
Petroleum	758	709	655	775	965	1,058	672
Electricity (B)	**119**	**178**	**190**	**182**	**213**	**229**	**182**
Others	33	59	59	64	70	75	61
Total (C)	**8,128**	**8,944**	**9,112**	**9,388**	**9,876**	**10,155**	**8,203**
(A)/(C)	86.93%	87.81%	87.96%	87.19%	84.47%	83.70%	86.47%
(B)/(C)	1.46%	1.99%	2.09%	1.94%	2.16%	2.26%	2.22%

* Estimate of first eight months.

Source; Ministry of Finance. Economic Survey Fiscal Year 2011/12. 2012.

In Nepal, a state enterprise – Nepal Electricity Authority (NEA) – is responsible for planning and designing, construction, operation and management of all facilities and equipment required for

electricity supply in the entire country, including power plants, transmission lines, and distribution lines. Table 7.1-5 lists power plants and their generation capacities owned and operated by NEA. At present, NEA owns 27 hydropower stations, 23 off-grid hydropower stations, two thermal power plants, and two solar power generation plants, which installed capacity totals 531.04MW. NEA also owns power transmission lines with total length of around 2,000km (132KV and 66KV) and around 50 substations.

Table 7.1-5 NEA Power Plants and Power Generation Capacity (2010/11)

(kW)

Major Hydropower Stations		
1	Middle Marsyangdi	70,000
2	KaliGandaki "A"	144,000
3	Marsyangdi	69,000
4	Kulekhani No. 1	60,000
5	Kulekhani No. 2	32,000
6	Trisuli	24,000
7	Gandak	15,000
8	Modi Khola	14,800
9	Devighat	14,100
10	Sunkosi	10,050
11	Puwakhola	6,200
	Sub-total (A)	**459,150**
Small Hydropower Stations		
1	Chatara	3,200
2	Panauti	2,400
3	Tatopani/Myagdi(i) & (II)	2,000
4	Seti (Pokhara)	1,500
5	Phewa (Pokhara)	1,000
6	Tinau (Butwal)	1,024
7	Sundarijal	640
8	Pharping***	500
9	Jomsom**	240
10	Baglung	200
11	Khandbari**	250
12	Phidim**	240
13	Surnaiyagad (Baitadi)	200
14	Doti	200
15	Ramechhap	150
16	Terhathum**	100
	Sub-total (B)	**13,844**

Small Hydropower Stations (isolated)		
1	Dhankuta***	240
2	Jhupra (Surkhet)***	345
3	Gorkhe (Ilam)***	64
4	Jumla **	200
5	Dhading***	32
6	Syangja***	80
7	Helambu	50
8	Darchula (I) & (II)**	300
9	Chame**	45
10	TapleJung**	125
11	Manang**	80
12	Chaurjhari (Rukum)**	150
13	Syarpudaha (Rukum)**	200
14	Bhojpur**	250
15	Bajura	200
16	Bajhang**	200
17	Arughat Gorkha	150
18	Okhaldhunga**	125
19	Rupalgad (Dadeldhura)	100
20	Achham	400
21	Dolpa	200
22	Kalikot	500
23	Heldung (Humla)	500
	Sub-total (C)	**4,536**
Diesel Power Stations		
1	Duhabi Multi fuel	39,000
2	Hetauda	14,410
	Sub-total (D)	**53,410**
Solar Power Stations		
1	Simikot	50
2	Gamgadhi	50
	Sub-total (E)	**100**

Total Hydro - Grid Connected (A)+(B)	**472,994**
Total Hydro (A)+(B)+(C)	**477,530**
Total-Grid Connected (A)+(B)+(D)+(E)	**526,504**
Total (A)+(B)+(C)+(D)+(E)	**531,040**

** Leased to Private Sector *** Not in Normal Operation

Source: Nepal Electricity Authority. A Year in Review, Fiscal Year 2010/11. 2011.

Table 7.1-6 lists power plants operated by Independent Power Producers (IPPs) and their installed capacities. After liberalization of the electricity generation business in 1992 according to the Electricity Act 2049, a total of 23 power plants are operated by IPPs as of 2010/11, whose total installed capacity reaches 174.526MW. Of the country's total installed capacity of 705.566MW[1] (together with NEA's installed capacity of 531.04MW), IPPs account for around one fourth (Table 7.1-7). In addition, for the purpose of supplying electricity to rural villages that are not connected to power grids, small-scale hydropower and solar power stations have been constructed and operated under the assistance of various donor organizations. While they contribute greatly to improvement of electricity supply in local communities, they do not have significant impacts on the country's electricity supply capacity. Figure 7.1-1 shows geographical distribution of power plants, transmission lines and substations in the country. As seen from the map, NEA's power grids primarily serve the Terai region, the Central hilly region in and around Kathmandu, and the Western hilly region (Pokhara and Lekhnath in Kaski, Damauli in Tanahu, and etc.) with some exceptions.

Table 7.1-6 Power Plants of Independent Owner Producers and Power Generation Capacity

(kW)

1	Khimti	60,000	13	Baramchi Khola	4,200
2	Bhotekoshi	36,000	14	Thoopal Khola	1,650
3	Chilime	22,000	15	Sisne Khola	750
4	Indrawati -III	7,500	16	Sali Nadi	232
5	Jhimruk	12,000	17	Pheme khola	995
6	Andhi Khola	5,100	18	Pati Khola	996
7	Syange Khola	183	19	Seti -II	979
8	Piluwa Khola	3,000	20	Ridi Khola	2,400
9	Rairang Lhola	500	21	Upper Hadi Khola	991
10	Sunkoshi Khola	2,500	22	Mardi Khola	3,100
11	Chaku Khola	1,500	23	Mai Khola	4,500
12	Khudi Khola	3,450	**Total**		**174,526**

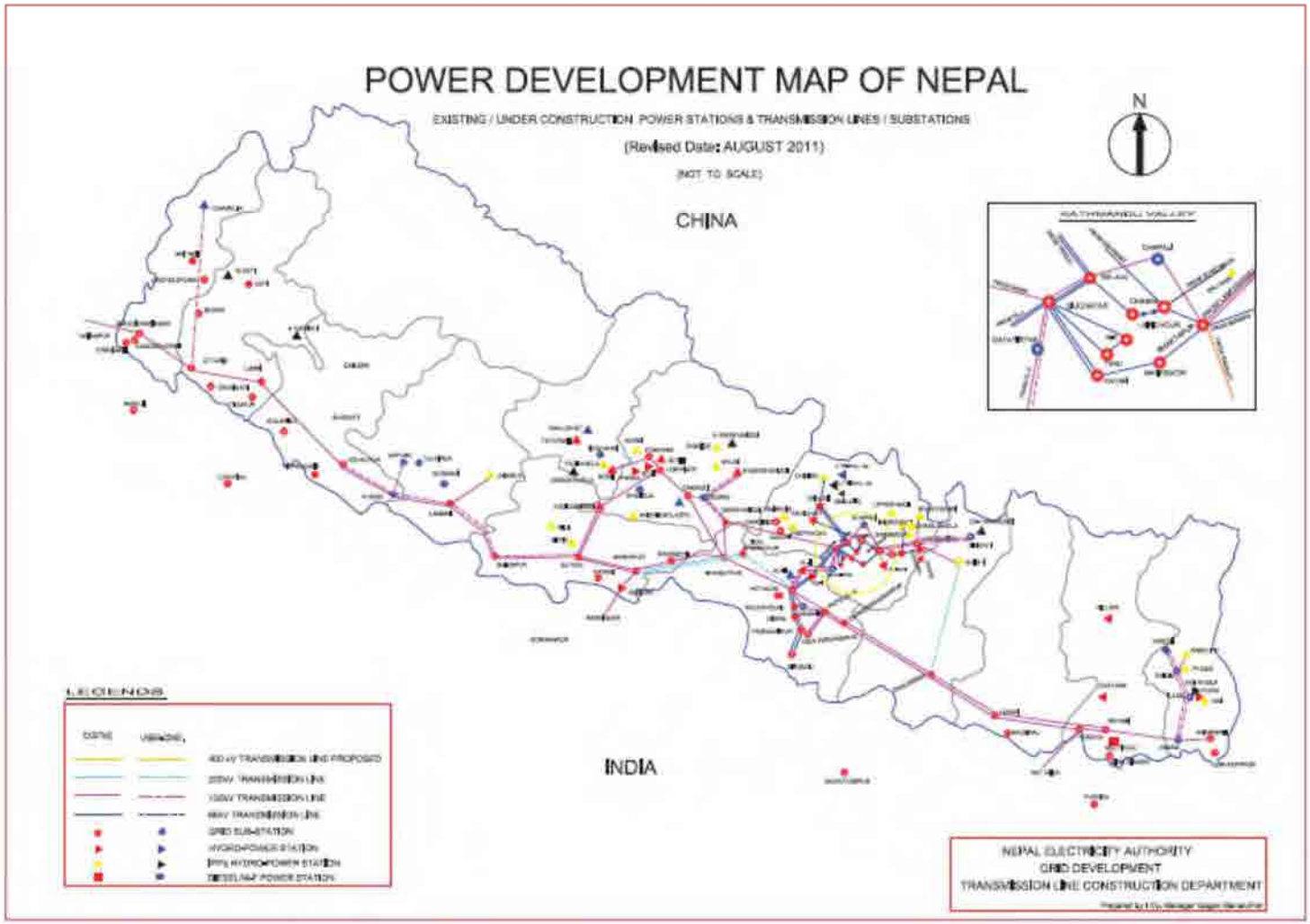
Source: Nepal Electricity Authority. A Year in Review, Fiscal Year 2010/11. 2011.

Table 7.1-7 Summary of the Installed Power Generation Capacity

	Number	Generating Power
Total Major Hydro (NEA) - Grid Connected	27	472.994
Total Small Hydro (NEA)- Isolated	16	4.536
Total Hydro (NEA)	27	477.53
Total Hydro (IPP)	23	174.526
Total Hydro (Nepal)	50	652.056
Total Thermal (NEA)	2	53.41
Total Solar (NEA)	2	0.1
Total Installed Capacity	**54**	**705.566**

Source: Nepal Electricity Authority. A Year in Review, Fiscal Year 2010/11. 2011.

[1] As of 2009, power generation capacity in neighboring countries is as follows: 156,784MW in India; 1,497MW in Bhutan; 5,493MW in Bangladesh; and 2,684MW in Sri Lanka.



Source: Nepal Electricity Authority. A Year in Review, Fiscal Year 2010/11. 2011.

Figure 7.1-1 Power Plants, Transmission Lines and Substations in Nepal

While the country has the total installed capacity of 705.566MW, most of hydropower stations are of run-off-river type equipped with a small regulating reservoir that has a daily adjustment capacity, so that actual electricity supply drops to around one half of installed capacity during the dry season (November – May) when river flow decreases to as low as less than one tenth that in the rainy season (July – October), and the dry season includes a peak period for electricity consumption (Table 7.1-8). As a result, scheduled outage is necessitated to stop electricity supply for over ten hours per day (as long as 13 hours per day in 2012). Recently, scheduled outage occurs in the rainy season as electricity supply fails to meet demand.

Table 7.1-8 Power Supply in the Dry Season

	Installed capacity (A)	Power supply in dry season (B)	(B)/(A)
2003	606	411	0.68
2004	609	464	0.76
2005	614	492	0.80
2006	612	447	0.73
2007	616	495	0.80
2008	617	456	0.74
2009	689	394	0.57
2010	698	396	0.57
2011	706	396	0.56

Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.

To reduce power outage, Nepal imported electricity (totaling 120MW) from India during the 2011 dry season. In November 2011, the country requested the Indian government to supply additional 100MW, which required the repairing of existing power lines, which was agreed. Furthermore, to ensure smooth electricity supply from India, NEA established an affiliated company - Power Transmission Nepal Limited - under the PPP arrangement, to construct 400KV transmission lines in three sections: between Dhalkebar and Muzaffapur; between Kuhabi and Purnia; and between Butwal and Gorkhapur. Then, the Dhalkebar – Muzaffarpur section was selected as the first project and is slated for completion in 2014 under financial assistance of the World Bank. Although the completion of the transmission line will boost import capacity, a significant increase in electricity supply cannot be expected, amounting to around 150MW at the most, because Bihar, from which electricity is transmitted, faces chronic power shortages too. Table 7.1-9 summarizes electricity import record and forecast from India.

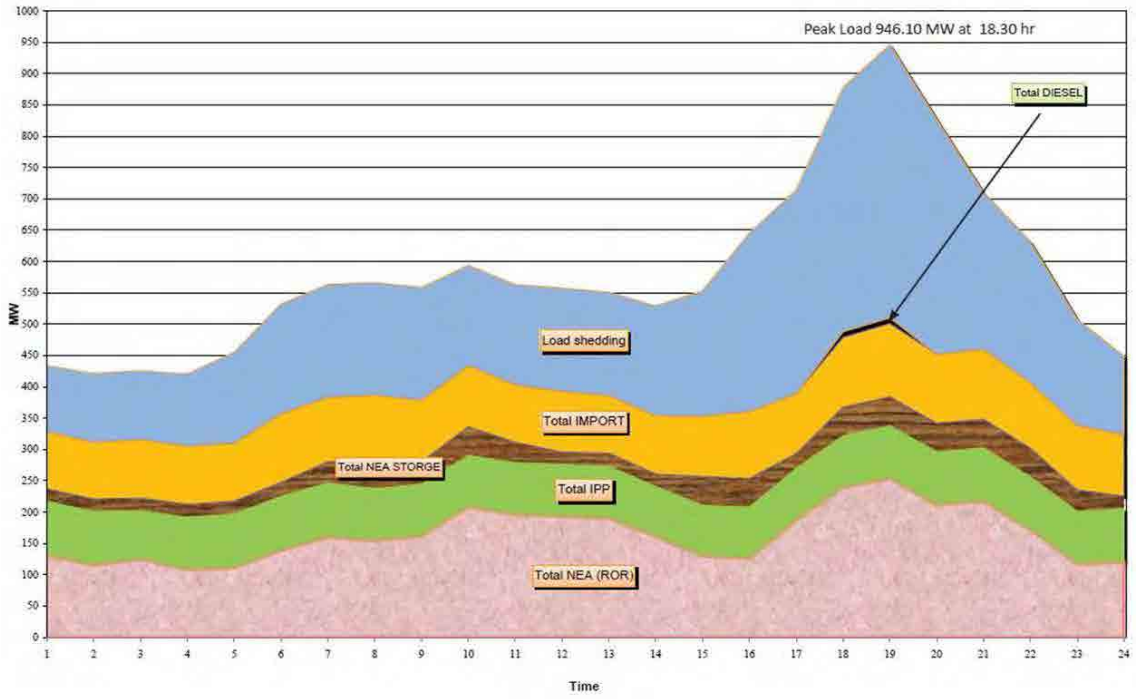
Table 7.1-9 Electricity Import from India

	Electricity import in the dry season（MW）	Note
2011	117	Actual Import volume
2012	120	
2013	220	Additional purchase of 100MW
2014	220	
2015	370	Additional purchase of 150 with a new transmission line
2016	370	

	Electricity import in the dry season（MW）	Note
2017	370	
2018	370	
2019	370	

Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.

Figure 7.1-2 shows the load curve on the peak demand day in 2010/11. In 2011, peak demand occurred at around 7 p.m. on January 28 and NEA was unable to meet it by taking all possible measures (imports from India and use of diesel generators), resulting in a scheduled outage for long hours.



Source: Nepal Electricity Authority. A Year in Review, Fiscal Year 2010/11. 2011.

Figure 7.1-2 Load Curve on the Peak Demand Day in 2010/11

Table 7.1-10 summarizes recent trends in the country's electricity production and import, actual sales, power loss, and peak loads. Notably, most of electricity supply depends on hydro-energy. Also, IPPs accounted for one fourth of total electricity production in 2009/10 and 2010/11 (27% for 2010/11) and imports from India nearly 20% (18% in 2010/11), whereas NEA generated slightly larger than 50%. As for sales, 41.4% of electricity was supplied to households in 2011/12, 37.7% to industrial customers, and 7.2% to commercial customers.

Table 7.1-10 Power Generation, Sales and Peak Loads

		2001/02	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Production & Import (GWh)	1. NEA Hydro	1,113	1,747	1,793	1,840	2,109	2,122*	**n.a.**
	2. NEA Thermal	17	13	9	9	13	3*	n.a.
	3.Purchase (Total)	936	1,291	1,384	1,282	1,590	1,733*	n.a.
	Nepal (IPP)	698	962	958	926	951	1,039*	n.a.
	India	238	329	425	356	639	694*	n.a.
	Total	**2,066**	**3,052**	**3,186**	**3,131**	**3,689**	**3,758**	**4,119***
Sales (GWh)	Household	558	893	931	909	1,109	1,143	1,311*
	Industrial	597	849	901	846	1,008	1,013	1,192*
	Commercial	90	142	154	146	193	205	227*
	Export	134	77	60	46	75	31	50*
	Other	161	292	263	258	293	295	385*
	Total	**1,540**	**2,253**	**2,310**	**2,205**	**2,678**	**2,687**	**3,165***
Power Loss		526	799	876	926	1,011	1,071	954*
Peak Load MW		**426**	**648**	**722**	**813**	**885**	**946**	**947***

*provisional figure
Note: Peak demand is for all areas covered by integrated system including supply to India
Source: Nepal Electricity Authority. A Year in Review, Fiscal Year 2010/11. 2011. Ministry of Finance. Economic Survey Fiscal Year 2011/12. 2012.

As seen from Table 7.1-10, electricity consumption has been increasing faster than production by NEA and IPPs. It is forecasted that peak demand will grow at an annual 8-12%. In terms of output, electricity production needs to increase at an annual rate of 100-200MW in order to meet demand growth (Table 7.1-11).

Table 7.1-11 Peak Loads Forecast

Fiscal Year	Energy (GWh)	System Peak Load(MW)	Change from the previous year	Change from the previous year (%)
2010-11	4,430.7	946.1		-
2011-12	4,851.3	1,056.9	110.8	11.7%
2012-13	5,349.6	1,163.2	106.3	10.1%
2013-14	5,859.9	1,271.7	108.5	9.3%
2014-15	6,403.8	1,387.2	115.5	9.1%
2015-16	6,984.1	1,510.0	122.8	8.9%
2016-17	7,603.7	1,640.8	130.8	8.7%
2017-18	8,218.8	1,770.2	129.4	7.9%
2018-19	8,870.2	1,906.9	136.7	7.7%
2019-20	9,562.9	2,052.0	145.1	7.6%
2020-21	10,300.1	2,206.0	154.0	7.5%
2021-22	11,053.6	2,363.0	157.0	7.1%
2022-23	11,929.1	2,545.4	182.4	7.7%
2023-24	12,870.2	2,741.1	195.7	7.7%
2024-25	13,882.4	2,951.1	210.0	7.7%
2025-26	14,971.2	3,176.7	225.6	7.6%
2026-27	16,142.7	3,418.9	242.2	7.6%
2027-28	17,403.6	3,679.1	260.2	7.6%

Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.

To reduce the severe electricity supply conditions, a large number of power plant construction projects are planned or implemented. Tables 7.1-12 and 13 list power generation projects implemented by NPA and IPPs, their installed capacity and the expected year of startup.[2]

Table 7.1-12 Power Plants Projects by NEA (including PPP)

Project	Installed Capacity (MW)	Expected year of the startup	
Kulekhani III	14	2013	under construction (2008-)
Chamelya	30	2013	under construction (2006-)
Upper Trisuli 3A	60	2015	under construction (2011-)
Rahughat	32	2015	under construction (2011-)
Sanjen+Upper Sanjen	58	2015	
Upper Modi A	42	2017	
Upper Tamakoshi	456	2017	under construction (2011-)
Tamakoshi V	87	2018	
Upper Trisuli 3B	37	2018	
Middle Bhotekoshi	102	2018	
Rasuwagadhi	111	2018	
Upper Seti (Storage)	140	2018	
Upper Arun	335	2021	
Budhigandaki (Storage)	600	2021	
Dudhkoshi (Storage)	510	2022	
Tamor (Storage)	530	2023	
Nalsyaugad (Storage)	400	2023	
West Seti (Storage)	750	2024	
Andhi Khola (Storage)	180	2024	
Uttarganga (Storage)	300	2024	
Naumurte (Storage)	245	2024	

Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.

Table 7.1-13 Power Plants Projects by IPPs

Project	Installed Capacity (MW)	Expected year of startup
Small IPPs	10	2012
Small IPPs	10	2013
Small IPPs	10	2014
Small IPPs	10	2015
Small IPPs	10	2016
Lower Modi Khola	20	2017
Small IPPs	10	2017
Mai Khola	16	2018
Kirne	67	2018
Small IPPs	10	2018
Likhu 4	120	2019
Upper Karnali	108 (900)	2019

[2] While there is a plan to construct a power plant under investment by India, it does not make progress partly due to the opposition (claiming that the project will lead to electricity export to India and will not contribute to the improvement of Nepal electricity supply situation.

Project	Installed Capacity（MW)	Expected year of startup
Arun III	88 (402)	2019
Small IPPs	10	2019
Tamakoshi 3	880	2020
Lower Arun	80 (400)	2020
Kikhutar	120	2020
Small IPPs	10	2020
Small IPPs	10	2021
Phulkot Karnali	110	2022
Small IPPs	10	2022
Small IPPs	10	2023
Upper Marshangdi	70 (600)	2024
Upper Trisuli (1+2)	216	2024
Small IPPs	10	2024

Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.

Meanwhile, there are around 30 areas where multipurpose dams (including water supply, irrigation, and flood control) can be built with a total effective capacity of 77 billion cubic meters, which are equivalent to 40% of the total flow during the rainy season (Table 7.1-14). If these dams (reservoirs) are constructed, the total river flow during the dry season will increase by an estimated 4,200 cubic meters per second.

Table 7.1-14 Number of Developable Reservoirs and Effective Capacity

（1million m^3）

River basin	Number of reservoirs	Reservoir capacity	Effective capacity
Sapta Kosi	5	22,390	13,760
Sapta Gandaki	9	26,901	17,830
Karnali	6	72,160	34,250
Mahakali	2	10,200	6,040
Southern Rivers	8	8,070	5,420
Total	30	14,630	77,300

Source: NEFAS. Energy Policy: National and Regional Implications.

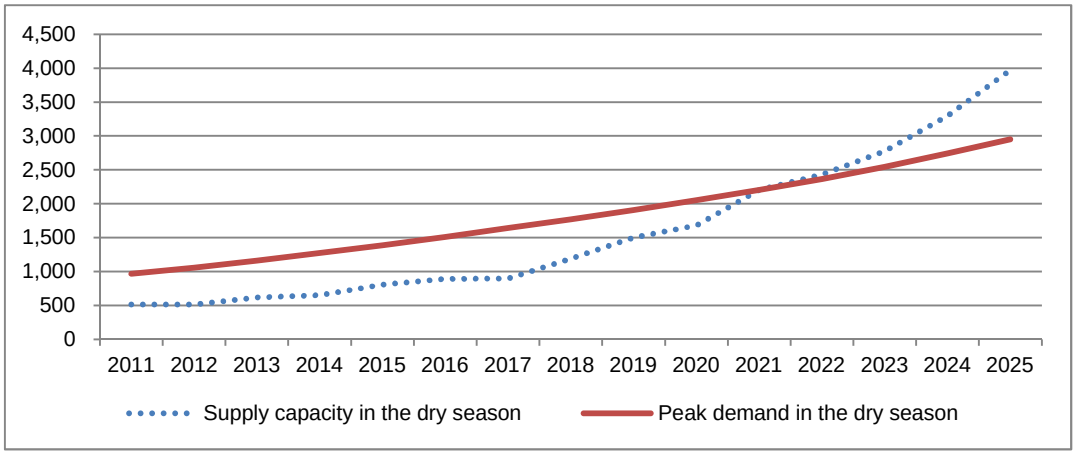
Based on the planned power generation projects listed in Tables 7.1-12 and 13, future peak supply capacities, together with peak demand, are estimated as shown in Table 7.1-15 and Figure 7.1-3. (Note that the estimate is based on the power supply at 55% of the total installed capacity in the dry season according to the actual production trend shown in Table 7.1-8 and does not take into account the increase in the total installed capacity during the dry season, which is attributable to construction of the planned dams.

Table 7.1-15 Peak Loads Forecast

	Installed capacity	Power Supply in the dry season (A)	Import from India (B)	(A)+(B)	Peak demand in the dry season
2003	606	411	59	470	
2004	609	464	51	515	
2005	614	492	64	556	
2006	612	447	87	534	

	Installed capacity	Power Supply in the dry season (A)	Import from India (B)	(A)+(B)	Peak demand in the dry season
2007	616	495	90	585	
2008	617	456	104	560	
2009	689	394	35	429	
2010	698	366	114	480	
2011	706	396	117	513	967
2012	716	394	120	514	1,057
2013	726	399	220	619	1,163
2014	780	429	220	649	1,272
2015	790	435	370	805	1,387
2016	950	523	370	893	1,510
2017	960	528	370	898	1,641
2018	1,488	818	370	1,188	1,770
2019	2,058	1,132	370	1,502	1,907
2020	2,384	1,311	370	1,681	2,052
2021	3,474	1,911	295	2,206	2,206
2022	4,419	2,430		2,430	2,363
2023	5,049	2,777		2,777	2,545
2024	5,989	3,294		3,294	2,741
2025	7,215	3,968		3,968	2,951

Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.



Source: Yukiyoshi Ozaki. Electricity Development in Nepal and Assistance by Japan (revised). 2012.

Figure 7.1-3 Forecasted Demand and Supply Capacity in the Dry Season

From the above estimates, the following electricity supply conditions are expected to occur: (1) the scheduled outage won't be reduced in the next few years even if the planned projects are completed according to the schedule and electricity imports from India increases; (2) the scheduled outage will continue at least until 2020; and (3) the situation will get worse if the construction projects are delayed and/or imports from India fall below the expected levels. Most companies operating in Nepal cite electricity shortage as one of the most serious restricting factors, but the problem cannot be solved in the short- or medium-term in light of the fact that it takes considerable time to build a power plant.

7.1.2 Road Conditions

As there are not many navigable rivers in the country of the landlocked geography, road transport serves as a primary means of moving people and goods. For the country having steep mountainous areas and many rivers, however, it is difficult to build road networks quickly throughout the country, not to mention high costs. Generally, road conditions are not very good due to a slow rate of construction, with a significant variation between regions. According to Priority Investment Plan II (PIP II) 2007 – 2016, 39% of people residing in hilly or mountainous areas need to walk for more than 4 hours to get to the nearest all-weather road. Even in the Terai region, only 10% of population can reach the nearest paved road within 2 hours. In an extreme case, people have to walk for 13 days to get to a road. As roads are essential in delivering medical and other social services, in addition to goods, poor road conditions in hilly and mountainous areas are considered as a major obstacle to local economic development.

In Nepal, roads are classified into four categories: national highways, feeder roads, district roads, and city roads/streets. National highways, feeder roads and other roads considered to serve the national interest constitute the Strategic Road Network (SRN), and Department of Roads is responsible for their development and repair. The remaining roads, which are further classified as Class A (district roads) and Class B (city, village, and farm roads), are owned and maintained by District Development Committees (DDCs) under the supervision of Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR).

Table 7.1-16 summarizes the recent status of construction of SRN by type of surface. The total length of strategic roads increased by 2.5 times from 4,740km in 1998 to 11,635.58km in 2011/12. On the other hand, percentage shares of paved, graveled and earthen roads changed from 61.3%, 34.9% and 3.8%, respectively, in 1998, to 47.9%, 16.2% and 35.9% in 2011/12. The decrease in share of paved roads seems to reflect the fact that the government has given priority to the increase in the total length, rather than road surface quality.

Table 7.1-16 Length of the Strategic Road Network by Type of Surface

(Unit; km)

Year	Black topped	Graveled	Earthen	Total	Density km/100km^2	Influenced Population (per km)
1998	2,905.00	1,656.00	179.00	4,740.00	3.22	3901.08*
2000	2,974.00	1,649.00	171.00	4,794.00	3.26	3857.13*
2002	3,028.74	1,663.84	168.38	4,860.96	3.30	4762.73**
2004	3,494.73	883.51	614.49	4,992.73	3.39	4636.23**
2006/07	4,258.20	2,061.70	3,079.48	9,399.38	6.39	2463.08**
2009/10	4,952.11	2,065.15	3,817.76	10,835.02	7.36	2136.72**
2011/12	5,573.55	1,888.49	4,173.55	11,635.58	7.91	2287.88***

Source: Department of Road. Statistics of Strategic Road Network 2011-12. 2012.

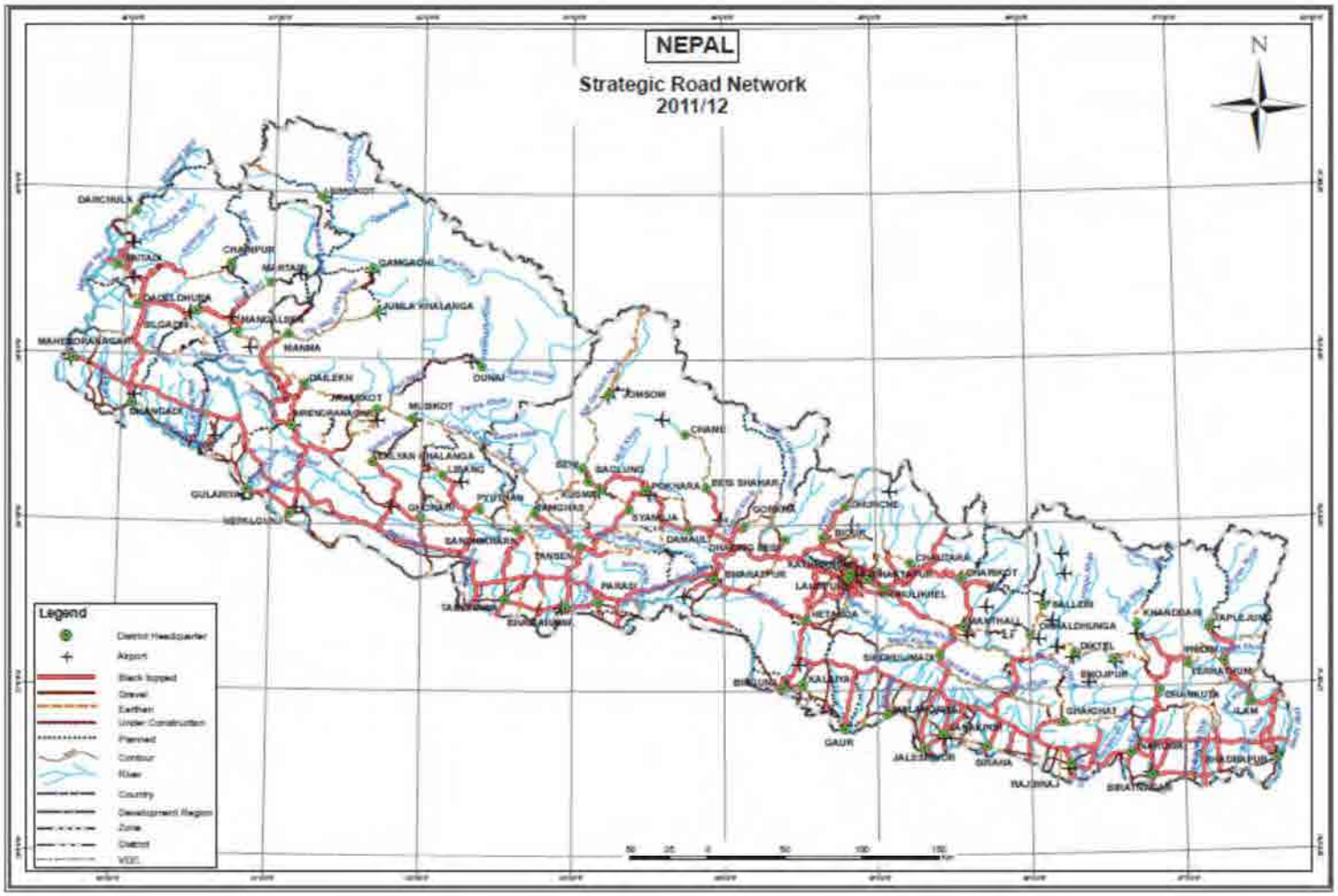
Table 7.1-17 shows breakdown of SRN by region and type of surface, together with that under construction and planned. At present, 413.82km of strategic roads are under construction and 2,757.7km are under planning. Figure 7.1-4 shows the SRN including roads under construction and planning. As seen from the map, the East-West Highway that crosses the Terai region and highways that branch out from the East-West Highway extending northward serve as arterial roads for movement of people and goods in the country. Many vehicles that come and go between the Terai region and Kathmandu use the Tribhuvan Highway from Birgunj to Hetauda, the road that goes westerward to Hetauda and Narayanghat, and to Hugling on the north, and then the Prithvi Highway (PRM) between Mugling and Naubise, or the Tribhuvan Highway's Naubise – Kathmandu section. It takes 5 – 8 hours between Kathmanud and Pathlaiya. The JICA Study Team passed the Biratnagar – Birgunji section, where many trucks that seemed to carry imports from India were seen near Birratnagar and Birganji (which serve as gateways for trade with India) and road conditions were fairly good.

Table 7.1-17 Length of the Strategic Road Network by Region and by Type of Surface (including Roads under Construction and Planning)

(Unit: km)

	Region	BT	GR	ER	**Total**	UC	PL
National Highway	Eastern	630.05	48.68	118	**796.73**	20	102
	Central	833.54	19	23.5	**876.04**	0	142.8
	Western	478.3	0	0	**478.3**	0	0
	Mid-Western	524.88	95.26	114.96	**735.1**	0	0
	Far-Western	456.61	50	18.42	**525.03**	8	88.3
	Sub-Total	**2923.38**	**212.94**	**274.88**	**3411.2**	**28**	**333.1**
Feeder Road (Major)	Eastern	471.77	212.1	496.16	**1180.03**	9	245.9
	Central	892.8	449.47	545.55	**1887.82**	20.42	547.3
	Western	505.64	73.54	806.25	**1385.43**	16	457.6
	Mid-Western	320.63	320.19	307.4	**948.22**	205.4	406
	Far-Western	190.54	102.35	334.56	**627.45**	10	559
	Sub-Total	**2381.38**	**1157.65**	**2489.92**	**6028.95**	**260.82**	**2215.8**
Feeder Road (Minor)	Eastern	0	0	28	**28**	0	0
	Central	61.43	25.9	49.35	**136.68**	0	24.8
	Western	48.15	56.5	89.6	**194.25**	8	78
	Mid-Western	25	27	164	**216**	9	29
	Far-Western	0	0	0	**0**	0	0
	Sub-Total	**134.58**	**109.4**	**330.95**	**574.93**	**17**	**131.8**
Mid-Hill Road	Eastern	31.5	30	367.8	**429.3**	0	0
	Central	0	0	61	**61**	0	0
	Western	0	0	142	**142**	7	0
	Mid-Western	0	0	309	**309**	25	0
	Far-Western	35	0	52	**87**	0	0
	Sub-Total	**66.5**	**30**	**931.8**	**1028.3**	**32**	**0**
Postal Road	Eastern	23	63	50	**136**	16	9
	Central	39	138	34.5	**211.5**	21.5	45
	Western	0	38.5	12	**50.5**	10	8
	Mid-Western	0	71	29	**100**	3	8
	Far-Western	5.7	68	20.5	**94.2**	25.5	7
	Sub-Total	**67.7**	**378.5**	**146**	**592.2**	**76**	**77**
	Grand Total	**5573.55**	**1888.49**	**4173.55**	**11635.6**	**413.82**	**2757.7**

Source: Department of Road. Statistics of Strategic Road Network 2011-12. 2012.



Source: Department of Road. Statistics of Strategic Road Network 2011-12. 2012.

Figure 7.1-4 Strategic Road Network

Table 7.1-18 shows breakdown of SRN by district and by road category. Note that SRN is not connected to Dolpa and Mugu in the Mid-Western region. Also, Humla that has 40km of feeder roads is not connected to the district capital, Simikot, which cannot be seen from the table.

Table 7.1-18 Length of the Strategic Road Network by District and by Road Category

(Unit: km)

District/Zone/Region	National Highway	Major Feeder Road	Minor Feeder Road	Mid-Hill Road	Postal Road	**Total SRN**
1 Taplejung	46.5	0.0	0.0	0.0	0.0	**46.5**
2 Panchthar	91.9	58.0	0.0	66.4	0.0	**216.3**
3 Ilam	94.7	153.3	0.0	0.0	0.0	**248.0**
4 Jhapa	110.8	53.9	0.0	0.0	32.0	**196.6**
5 Morang	54.3	137.9	0.0	0.0	24.0	**216.2**
6 Sunsari	89.0	80.0	0.0	0.0	22.0	**191.0**
7 Dhankuta	48.3	53.4	7.0	26.0	0.0	**134.7**
8 Terhathum	0.0	33.1	0.0	94.6	0.0	**127.7**
9 Sankhuwasabha	0.0	113.7	21.0	0.0	0.0	**134.7**
10 Bhojpur	0.0	0.0	0.0	116.0	0.0	**116.0**
11 Solukhumbu	0.0	37.2	0.0	0.0	0.0	**37.2**
12 Okhaldhunga	0.0	56.7	0.0	15.0	0.0	**71.7**
13 Khotang	77.0	10.5	0.0	109.3	0.0	**196.8**
14 Udayapur	69.9	173.5	0.0	2.0	0.0	**245.4**
15 Saptari	71.2	150.4	0.0	0.0	25.0	**246.5**
16 Siraha	43.3	68.7	0.0	0.0	33.0	**144.9**
Total in Eastern Region	**796.7**	**1,180.0**	**28.0**	**429.3**	**136.0**	**2,570.1**
17 Dhanusa	63.1	107.0	0.0	0.0	25.0	**195.1**
18 Mahottari	47.8	110.0	0.0	0.0	27.5	**185.3**
19 Sarlahi	30.2	115.2	0.0	0.0	36.0	**181.4**
20 Sindhuli	97.0	164.8	0.0	61.0	0.0	**322.8**
21 Ramechhap	0.0	77.0	0.0	0.0	0.0	**77.0**
22 Dolakha	0.0	136.7	0.0	0.0	0.0	**136.7**
23 Sindhupalchok	55.9	140.3	0.0	0.0	0.0	**196.3**
24 Kavrepalanchok	85.4	58.9	4.8	0.0	0.0	**149.1**
25 Lalitpur	18.0	113.4	0.0	0.0	0.0	**131.4**
26 Bhaktapur	14.1	70.5	27.0	0.0	0.0	**111.6**
27 Kathmandu	39.9	143.5	46.7	0.0	0.0	**230.0**
28 Nuwakot	0.0	106.5	34.2	0.0	0.0	**140.7**
29 Rasuwa	0.0	66.2	0.0	0.0	0.0	**66.2**
30 Dhading	94.4	78.7	0.0	0.0	0.0	**173.1**
31 Makwanpur	140.0	171.2	24.0	0.0	0.0	**335.1**
32 Rautahat	26.4	45.4	0.0	0.0	16.0	**87.8**
33 Bara	66.5	78.9	0.0	0.0	22.0	**167.3**
34 Parsa	8.6	20.2	0.0	0.0	24.0	**52.8**
35 Chitwan	88.8	83.5	0.0	0.0	61.0	**233.3**
Total in Central Region	**876.0**	**1,887.8**	**136.7**	**61.0**	**211.5**	**3,173.0**
36 Gorkha	0.0	128.6	48.6	0.0	0.0	**177.2**
37 Lamjung	0.0	70.0	2.0	0.0	0.0	**72.0**
38 Tanahu	71.3	90.2	0.0	0.0	0.0	**161.5**
39 Syangja	78.9	78.0	0.0	0.0	0.0	**156.9**
40 Kaski	35.4	54.1	23.5	0.0	0.0	**113.0**
41 Manang	0.0	30.0	0.0	0.0	0.0	**30.0**
42 Mustang	0.0	181.0	0.0	0.0	0.0	**181.0**
43 Myagdi	0.0	31.0	0.0	0.0	0.0	**31.0**
44 Parbat	0.0	72.6	13.0	0.0	0.0	**85.6**
45 Baglung	0.0	12.1	0.0	142.0	0.0	**154.1**
46 Gulmi	0.0	118.0	9.0	0.0	0.0	**127.0**
47 Palpa	58.9	140.7	0.0	0.0	0.0	**199.6**
48 Nawalparasi	98.5	80.4	11.0	0.0	14.0	**203.9**

District/Zone/Region	National Highway	Major Feeder Road	Minor Feeder Road	Mid-Hill Road	Postal Road	**Total SRN**
49 Rupandehi	70.4	67.0	26.3	0.0	0.0	**163.7**
50 Kapilbastu	60.8	106.8	18.8	0.0	36.5	**223.0**
51 Arghakhanchi	4.1	124.8	42.0	0.0	0.0	**170.9**
Total in Western Region	**478.3**	**1,385.4**	**194.3**	**142.0**	**50.5**	**2,250.5**
52 Pyuthan	0.0	60.4	100.0	0.0	0.0	**160.4**
53 Rolpa	0.0	134.4	22.0	0.0	0.0	**156.4**
54 Rukum	31.4	2.0	2.0	150.0	0.0	**185.4**
55 Salyan	91.7	44.0	40.0	0.0	0.0	**175.7**
56 Dang	118.6	156.6	36.0	0.0	55.0	**366.2**
57 Banke	128.4	65.0	0.0	0.0	33.0	**226.4**
58 Bardiya	87.9	111.5	0.0	0.0	12.0	**211.4**
59 Surkhet	90.1	129.0	16.0	0.0	0.0	**235.1**
60 Dailekh	86.0	71.2	0.0	114.0	0.0	**271.2**
61 Jajarkot	0.0	73.0	0.0	45.0	0.0	**118.0**
62 Dolpa	0.0	0.0	0.0	0.0	0.0	**0.0**
63 Jumla	31.0	54.0	0.0	0.0	0.0	**85.0**
64 Kalikot	70.0	7.0	0.0	0.0	0.0	**77.0**
65 Mugu	0.0	0.0	0.0	0.0	0.0	**0.0**
66 Humla	0.0	40.0	0.0	0.0	0.0	**40.0**
Total in Mid-Western	**735.1**	**948.2**	**216.0**	**309.0**	**100.0**	**2,308.3**
67 Bajura	0.0	43.0	0.0	0.0	0.0	**43.0**
68 Bajhang	0.0	79.1	0.0	0.0	0.0	**79.1**
69 Achham	0.0	55.0	0.0	87.0	0.0	**142.0**
70 Doti	74.5	107.0	0.0	0.0	0.0	**181.5**
71 Kailali	150.8	123.1	0.0	0.0	35.7	**309.6**
72 Kanchanpur	44.3	52.6	0.0	0.0	58.5	**155.4**
73 Dadeldhura	77.1	64.0	0.0	0.0	0.0	**141.1**
74 Baitadi	100.0	103.7	0.0	0.0	0.0	**203.6**
75 Darchula	78.4	0.0	0.0	0.0	0.0	**78.4**
Total in Far-Western	**525.0**	**627.5**	**0.0**	**87.0**	**94.2**	**1,333.7**
Total of Nepal	**3,411.2**	**6,029.0**	**574.9**	**1,028.3**	**592.2**	**11,635.6**

Source: Department of Road. Statistics of Strategic Road Network 2011-12. 2012.

Table 7.1-19 shows breakdown of the SRN in each district by type of surface, together with road density. While road density is relatively high in Kathmandu (58.2km/km^2) and its surrounding districts (Bhaktapur – 93.8km/km^2; and Lalitpur – 34.1km/km^2), road length is longer in districts whose areas are longer in east-west direction, e.g., Dang (366km), Makwanpur (335.14km), and Sindhuli (322.8km). On the other hand, mountainous districts − including Dolpa, Mugu, Humla, Manang, Myagdi, and Solukhumbu - show road length of 40km or less, which confirm the information that road construction in mountainous areas is substantially lagged behind.

Table 7.1-19 Length of the Strategic Road Network by Type of Surface and Road Density

(Unit: km)

District/Zone/Region	Black topped	GR	ER	Total	Road Density(Km/100Km^2)
1 Taplejung	29.5	0.0	17.0	46.5	1.3
2 Panchthar	91.9	0.0	124.4	216.3	17.4
3 Ilam	108.8	12.1	127.1	248.0	14.6
4 Jhapa	139.9	39.7	17.0	196.6	12.2
5 Morang	150.5	25.5	40.2	216.2	11.7
6 Sunsari	115.0	66.0	10.0	191.0	15.2
7 Dhankuta	80.2	45.5	9.0	134.7	15.1

District/Zone/Region	Black topped	GR	ER	Total	Road Density(Km/100Km^2)
8 Terhathum	33.1	0.0	94.6	127.7	18.8
9 Sankhuwasabha	47.7	25.0	62.0	134.7	3.9
10 Bhojpur	0.0	7.5	108.5	116.0	7.7
11 Solukhumbu	0.0	0.0	37.2	37.2	1.1
12 Okhaldhunga	9.0	6.0	56.7	71.7	6.7
13 Khotang	13.0	0.0	183.8	196.8	12.4
14 Udayapur	90.9	42.0	112.5	245.4	11.9
15 Saptari	135.0	65.5	46.0	246.5	18.1
16 Siraha	111.9	19.0	14.0	144.9	12.2
Total in Eastern Region	**1,156.3**	**353.8**	**1,060.0**	**2,570.1**	**9**
17 Dhanusa	104.1	47.5	43.5	195.1	16.5
18 Mahottari	99.8	59.0	26.5	185.3	18.5
19 Sarlahi	58.2	85.2	38.0	181.4	14.4
20 Sindhuli	67.5	33.8	221.5	322.8	13
21 Ramechhap	44.0	0.0	33.0	77.0	5
22 Dolakha	106.7	10.0	20.0	136.7	6.2
23 Sindhupalchok	119.2	8.0	69.1	196.3	7.7
24 Kavrepalanchok	128.8	16.1	4.3	149.1	10.7
25 Lalitpur	62.2	36.0	33.2	131.4	34.1
26 Bhaktapur	81.5	23.1	7.0	111.6	93.8
27 Kathmandu	168.4	25.4	36.2	230.0	58.2
28 Nuwakot	104.7	11.0	25.0	140.7	12.6
29 Rasuwa	40.5	10.0	15.7	66.2	4.3
30 Dhading	114.9	20.0	38.2	173.1	9
31 Makwanpur	193.7	100.8	40.7	335.1	13.8
32 Rautahat	71.8	9.0	7.0	87.8	7.8
33 Bara	83.3	68.0	16.0	167.3	14.1
34 Parsa	37.8	13.0	2.0	52.8	3.9
35 Chitwan	139.8	56.5	37.0	233.3	10.5
Total in Central Region	**1,826.8**	**632.4**	**713.9**	**3,173.0**	**11.6**
36 Gorkha	26.8	40.5	109.9	177.2	4.9
37 Lamjung	19.2	1.0	51.9	72.0	4.3
38 Tanahu	118.1	9.3	34.1	161.5	10.4
39 Syangja	97.9	2.0	57.0	156.9	13.5
40 Kaski	87.5	5.0	20.5	113.0	5.6
41 Manang	0.0	0.0	30.0	30.0	1.3
42 Mustang	0.0	0.0	181.0	181.0	5.1
43 Myagdi	0.0	10.0	21.0	31.0	1.3
44 Parbat	37.1	0.0	48.5	85.6	17.3
45 Baglung	9.7	2.4	142.0	154.1	8.6
46 Gulmi	44.5	0.0	82.5	127.0	11.1
47 Palpa	108.6	0.0	91.0	199.6	14.5
48 Nawalparasi	151.1	23.8	29.0	203.9	9.4
49 Rupandehi	132.7	17.5	13.5	163.7	12
50 Kapilbastu	140.0	54.0	29.0	223.0	12.8
51 Arghakhanchi	58.9	3.0	109.0	170.9	14.3
Total in Western Region	**1,032.1**	**168.5**	**1,049.9**	**2,250.5**	**7.7**
52 Pyuthan	85.4	0.0	75.0	160.4	12.3
53 Rolpa	38.4	84.0	34.0	156.4	8.3
54 Rukum	0.0	20.0	165.4	185.4	6.4
55 Salyan	46.2	68.5	61.0	175.7	12
56 Dang	174.2	148.0	44.0	366.2	12.4
57 Banke	149.8	42.5	34.1	226.4	9.7
58 Bardiya	121.4	61.0	29.0	211.4	10.4
59 Surkhet	138.1	53.7	43.3	235.1	9.6
60 Dailekh	116.9	35.8	118.6	271.2	18.1
61 Jajarkot	0.0	0.0	118.0	118.0	5.3
62 Dolpa	0.0	0.0	0.0	0.0	0
63 Jumla	0.0	0.0	85.0	85.0	3.4
64 Kalikot	0.0	0.0	77.0	77.0	4.4
65 Mugu	0.0	0.0	0.0	0.0	0

District/Zone/Region	Black topped	GR	ER	Total	Road Density(Km/100Km^2)
66 Humla	0.0	0.0	40.0	40.0	0.7
Total in Mid-Western	**870.5**	**513.5**	**924.4**	**2,308.3**	**5.4**
67 Bajura	13.0	0.0	30.0	43.0	2
68 Bajhang	30.4	0.3	48.4	79.1	2.3
69 Achham	75.0	0.0	67.0	142.0	8.5
70 Doti	115.5	6.0	60.0	181.5	9
71 Kailali	171.4	74.3	64.0	309.6	9.6
72 Kanchanpur	44.3	89.0	22.1	155.4	9.7
73 Dadeldhura	77.1	0.0	64.0	141.1	9.2
74 Baitadi	151.2	0.8	51.6	203.6	13.4
75 Darchula	10.0	50.0	18.4	78.4	3.4
Total in Far-Western	**687.9**	**220.4**	**425.5**	**1,333.7**	**6.8**
Total of Nepal	**5,573.6**	**1,888.5**	**4,173.6**	**11,635.6**	**7.9**

Source: Department of Road. Statistics of Strategic Road Network 2011-12. 2012.

Table 7.1-20 shows breakdown of local road length by district and type of surface. The total length of local roads is 50,944km, of which paved roads account for a merely 3.09% of total. There is no paved road in 42 districts, of which 25 districts have only earthen roads. Also, as shown in Fig.7.1-5, construction of local roads in the Mid-Western and Far-Western regions is lagged behind other regions to a much larger degree than that of the SRN. For instance, 11.5% of strategic roads exist in the Far-Western region in comparison to 5.7% of local roads. While the differences in geographical features, population and other factors should also be taken into account, all the regions have hilly and mountainous areas and it is reasonable to conclude that road construction in these regions is delayed in comparison to other regions.

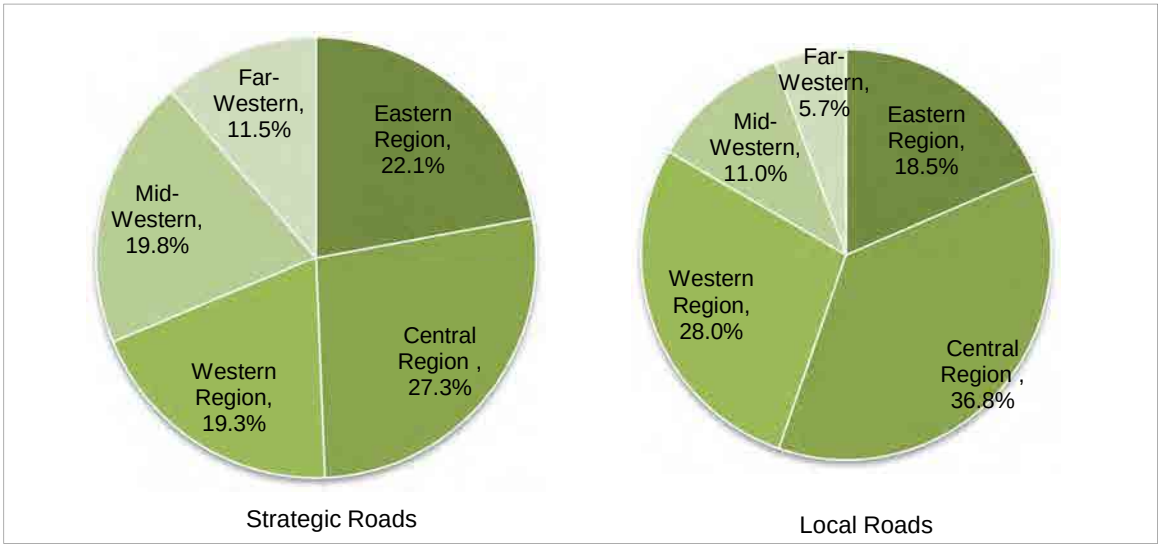
Table 7.1-20 Length of Local Roads by District

(Unit: km)

No	District	No of roads	Length of roads (km)	BT	Gr	Earthen	Density of road km/100km^2
1	Taplejung	27	157.86	0.000	0.000	157.860	4.33
2	Panchthar	136	1,084.64	0.000	0.000	1,084.640	87.40
3	Ilam	68	783.40	0.000	0.000	783.400	46.00
4	Jhapa	215	1,134.53	92.100	833.550	208.880	70.64
5	Morang	102	1,233.88	22.707	953.655	257.513	66.52
6	Sunsari	61	500.50	19.500	366.000	115.000	39.82
7	Dhankuta	45	650.90	8.500	84.200	558.200	73.05
8	Terhathum	26	241.60	0.000	11.270	230.325	35.58
9	Sankhuwasabha	32	418.39	0.000	6.090	412.300	12.02
10	Bhojpur	24	346.69	0.000	54.000	292.687	23.01
11	Solukhumbu	16	223.00	0.000	9.500	213.500	6.73
12	Okhaldhunga	26	278.80	0.000	0.000	278.800	25.96
13	Khotang	17	247.70	0.000	0.000	247.700	15.57
14	Udayapur	45	579.80	22.000	126.000	431.800	28.10
15	Saptari	86	629.31	7.200	217.420	404.690	46.17
16	Siraha	83	924.75	0.500	353.500	570.750	77.84
Total in Eastern Region		**1009**	**9,435.74**	**172.507**	**3,015.185**	**6,248.045**	**33.16**
17	Dhanusa	265	1,161.10	24.900	180.900	955.300	98.40
18	Mahottari	171	1,006.10	5.100	859.390	141.610	100.41
19	Sarlahi	135	713.00	0.000	247.500	465.500	56.63
20	Sindhuli	30	714.00	0.000	102.000	612.000	28.66
21	Ramechhap	90	1,002.81	0.400	31.500	970.910	64.86
22	Dolakha	81	711.00	0.500	108.300	602.200	32.45
23	Sindhupalchok	224	1,778.44	0.000	15.000	1,763.440	69.96
24	Kavrepalanchok	165	1,614.50	11.000	117.000	1,486.500	115.65

No	District	No of roads	Length of roads (km)	BT	Gr	Earthen	Density of road km/100km^2
25	Lalitpur	121	569.36	104.380	233.400	231.580	147.89
26	Bhaktapur	92	348.23	93.103	150.430	104.697	292.63
27	Kathmandu	276	828.30	88.500	627.800	112.000	209.70
28	Nuwakot	76	977.50	28.000	56.500	893.000	87.20
29	Rasuwa	28	117.27	0.000	18.410	98.860	7.60
30	Dhading	195	1,524.80	36.000	35.000	1,453.800	79.17
31	Makwanpur	95	747.85	62.710	112.560	572.580	30.83
32	Rautahat	196	912.10	22.100	551.650	338.350	81.00
33	Bara	116	803.81	0.000	106.500	697.310	67.55
34	Parsa	121	966.95	22.120	398.900	545.930	71.47
35	Chitwan	595	2,254.15	180.650	1,024.000	1,049.500	101.63
Total in Central Region		**3072**	**18,751.27**	**679.463**	**4,976.740**	**13,095.067**	**68.41**
36	Gorkha	89	921.20	0.000	5.000	916.200	25.52
37	Lamjung	78	767.39	3.140	92.150	672.100	45.35
38	Tanahu	261	1,952.50	41.000	20.000	1,891.500	126.29
39	Syangja	63	1,025.50	40.300	63.700	921.500	88.10
40	Kaski	43	576.53	57.180	76.110	443.240	28.58
41	Manang	14	54.70	0.000	0.000	54.700	2.44
42	Mustang	15	246.30	0.000	0.000	246.300	6.89
43	Myagdi	18	247.50	0.000	0.000	247.500	10.77
44	Parbat	39	555.15	0.430	11.750	542.970	112.38
45	Baglung	106	817.10	0.000	4.000	813.100	45.80
46	Gulmi	82	1,343.28	0.000	0.000	1,343.284	116.91
47	Palpa	140	1,278.50	39.500	55.000	1,184.000	93.12
48	Nawalparasi	306	1,477.27	35.500	374.450	1,067.320	68.33
49	Rupandehi	322	1,552.19	404.644	993.716	153.831	114.13
50	Kapilbastu	107	1,023.95	23.500	679.550	320.901	58.92
51	Arghakhanchi	22	443.00	1.200	2.000	439.800	37.13
Total in Western Region		**1705**	**14,282.07**	**646.394**	**2,377.426**	**11,258.246**	**48.58**
52	Pyuthan	11	100.00	0.000	0.000	100.000	7.64
53	Rolpa	23	357.00	0.000	0.000	357.000	19.00
54	Rukum	31	363.50	0.000	33.000	330.500	12.63
55	Salyan	6	129.50	0.000	0.000	129.500	8.86
56	Dang	149	1,413.03	29.430	621.700	761.900	47.82
57	Banke	101	497.40	47.640	313.330	136.430	21.28
58	Bardiya	198	1,400.00	0.000	1,400.000	0.000	69.14
59	Surkhet	53	526.00	0.000	10.000	516.000	21.46
60	Dailekh	28	387.15	0.000	0.000	387.150	25.78
61	Jajarkot	6	72.50	0.000	0.000	72.500	3.25
62	Dolpa	3	26.00	0.000	0.000	26.000	0.33
63	Jumla	24	142.50	0.000	0.000	142.500	5.63
64	Kalikot	5	44.20	0.000	0.000	44.200	2.54
65	Mugu	2	33.00	0.000	0.000	33.000	0.93
66	Humla	3	102.00	0.000	0.000	102.000	1.80
Total in Mid-Western		**643**	**5,593.78**	**77.070**	**2,378.030**	**3,138.680**	**13.20**
67	Bajura	8	45.30	0.000	0.000	45.300	2.07
68	Bajhang	6	97.42	0.000	0.000	97.420	2.85
69	Achham	20	355.50	0.000	10.000	345.500	21.16
70	Doti	8	150.00	0.000	0.000	150.000	7.41
71	Kailali	87	1,168.50	0.000	1,168.500	0.000	36.12
72	Kanchanpur	68	689.04	0.000	676.040	13.000	42.80
73	Dadeldhura	20	218.38	0.000	0.000	218.380	14.20
74	Baitadi	21	89.80	0.000	0.000	89.804	5.91
75	Darchula	16	66.85	0.000	0.000	66.850	2.88
Total in Far-Western		**254**	**2,880.79**	**0.000**	**1,854.540**	**1,026.254**	**14.74**
Total of Nepal		**6683**	**50,943.65**	**1,575.434**	**14,601.921**	**34,766.292**	**34.61**

Source: Department of Local Infrastructure Development and Agriculture Roads. Rural Road Summary 2069.



Source: Department of Local Infrastructure Development and Agriculture Roads. Rural Road Summary 2069.

Figure 7.1-5 Composition of Road Networks

7.1.3 Current State of the Telecommunications Industry

(1) Telecommunication services

As of October 2012, there were five companies in Nepal to provide fixed line telephone service, namely NDCL (Nepal Doorsanchar Company), UTL (United Telecom Limited), STM Telecom Sanchar (STM), NSTPL (Nepal Satellite Telecom), and STPL (Smart Telecom Pvt. Ltd.). The total number of subscribers is 834,352 as of November 2012 (Table 7.1-21) and the penetration rate was 3.14%. NDCL provide service by using two network systems, Public Switched Telephone Network (PSTN)[3] and Wireless Local Loop (WLL)[4], while STM and STPL provide the PSTN service and UTL and NSTPL the WLL service. International telephone service is provided mainly via the Intelsat satellite network. Finally, for the purpose of building the telecommunication infrastructure for rural areas, especially mountainous ones, Nepal Telecommunications Authority (NTA) licenses 16 companies to provide voice communication service using the VSAT (Very Small Aperture Terminal)[5] system (as of October 2012).

[3] Conventional subscriber telephone lines

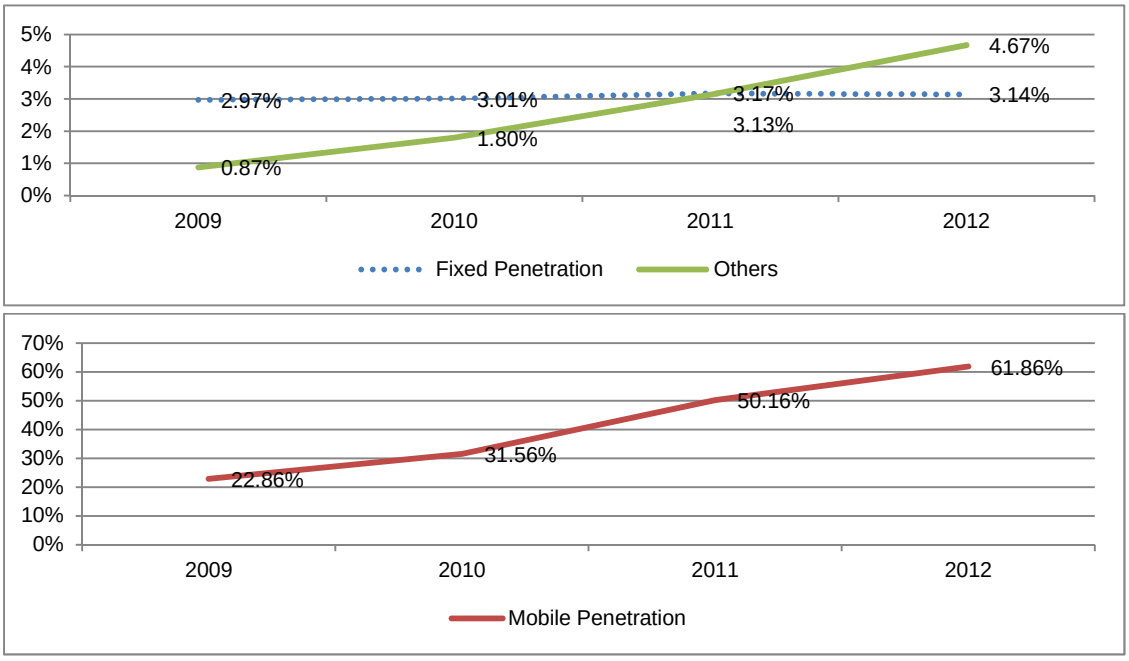
[4] The network system that directly and wirelessly connect a telecommunications service operator and a subscriber

[5] One of the two-way communication systems via telecommunication satellites, consisting of VSAT control terrestrial stations (HUB station) that control communication with satellites, local VSAT satellite earth stations (VSAT station), and the PSTN. The VSAT system features small satellite communication terminal equipment and is mainly used for telephone and data communication purposes.

Table 7.1-21 Voice Telephony Subscription (November, 2012)

	Fixed		Mobile		Others		Total
	PSTN	WLL	GSM	CDMA	LMS	GMPCS	
NDCL	632,772	121,335	6,642,455	823,958	-	-	8,220,520
UTL	-	71,496	-	-	596,098	-	667,594
NCELL	-	-	8,912,643	-	-	-	8,912,643
STM	5,201	-	-	-	155	-	5,356
NSTPL*	-	2,950	-	-	146,758	-	149,708
STPL	598	-	-	-	492,946	-	493,544
Others	-	-	-	-	-	1,742	1,742
Sub total	638,571	195,781	15,555,098	823,958	1,235,957	1,742	18,451,107
Total	834,352		16,379,056		1,237,699		
Penetration	3.14%		61.86%		4.67%		

Note: Penetration rate is calculated as the ratio of the number of subscriptions divided to the population.
Source: Nepal Telecommunications Authority. Management Information System vol. 96.



Note: Penetration rate is calculated as the ratio of the number of subscriptions divided to the population.
Source: Nepal Telecommunications Authority. Management Information System vol. 32,72, 85 & 96.

Figure 7.1-6 Penetration Rates of Fixed and Mobile Phones

While the fixed line service has been expanding at a very slow pace, cell phone subscribers have been growing rapidly, reaching 16,379,056 subscribers as of November 2012 with the penetration rate of 61.86% in comparison to 22.86% in 2009 (Figure 7.1-6). Mobile telecommunication service is provided by two companies, NDCL and Ncell Pvt. Ltd. (Ncell). NDCL started the GSM900/1800[6] mobile telephone service in 1999, followed by the CDM2000

[6] A communication standard for the second-generation (2G) cell phones implemented by the FDD-TDMA system; SSM stands for Global System for Mobile Communications.

1x service[7] in 2004, and the W-CDMA[8], 3G service in May 2007. As of October 2012, NDCL's subscriber population reached 7,466,413, which are divided into 6,640 thousand subscribers for the GSM service and 820 thousands for the CDMA service.

Ncell started GSM900/1800 commercial service in September 2005, under the original name Spice Nepal Private Ltd. (SNPL), and the number of subscribers reached around 8,910 thousand as of October 2012. SNPL changed its brand name to Ncell in March 2010. It launched the Blackberry service in August and announced the start of 3G service for the Mt. Everest and surrounding areas in October. At present, Ncell's communication network covers around 90% of the country's population. Mobile telephone service via satellite was launched in September 2002. As of October 2012, there were two GMPC[9] service operators with total subscriber population of approximately 1,742.

(2) Internet service

In Nepal, Internet connection service was first introduced in 1995. As of October 2012, 42 service operators provide service. Types of connection service include dial-up, ADSL, mobile Internet, and cable modem. The number of subscribers totaled 5,526,970, accounting for 20.86% of population (Table 7.1-22). Subscribers have increased rapidly after 2011 and are expected to catch up with cell phone subscribers (Figure 7.1-7). In terms of market share, Ncell (GRPS service) holds a 51.78% with 2.86 million customers, followed by NDCL 45.36%. NDCL announced plans to start Wi-Fi service in January 2012[10]. During the field survey, a large number of smartphone users were seen in Kathmandu, suggesting the increasing use of Internet service via a mobile terminal.

Table 7.1-22 Internet Subscriptions (November, 2012)

	NDCL	UTL	NCELL	ISPs	Total
Dialup (PSTN +ISDN)	4,445	-	-	10,547	14,992
Wireless Modem, Optical Fiber Ethernet	-	-	-	45,658	45,658
Cable Modem	-	-	-	18,097	18,097
ADSL	103,204	-	-	-	103,204
GPRS,EDGE,WCDMA	2,263,080	-	2,861,777	-	5,124,857
CDMA 1X, EVDO	136,573	83,589	-	-	220,162
Total	2,507,302	83,589	2,861,777	74,302	5,526,970
Internet Penetration Rate %					20.86%

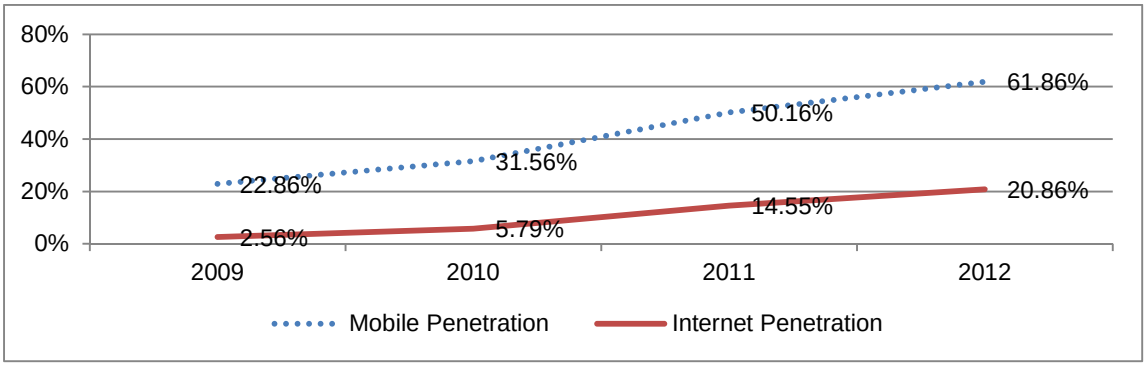
Source: Nepal Telecommunications Authority. Management Information System vol. 96

[7] A communication standard based on the CDMA 2000 system

[8] A communication system for the third-generation (3G) cell phones; W-CDMA stands for Wideband Code Division Multiple Access.

[9] Global Mobile Personal Communications by Satellite

[10] To launch the service within four months after the announcement, NDCL will install routers in around 150 locations in Kathmandu and other major cities, followed by further expansion in other areas to installation of more than 500 routers.



Note: Penetration rate is calculated as the ratio of the number of subscriptions divided to the population.
Source: Nepal Telecommunications Authority. Management Information System vol. 32, 72, 85 & 96.

Figure 7.1-7 Internet Penetration

7.2 Industrial Districts/Estates and Special Economic Zones

7.2.1 Current State of Industrial Districts/Estates and Major Issues

In Nepal, there are three types of industrial agglomerations: industrial districts/estates[11]; special economic zones (SEZs); and industrial corridors that emerge and develop spontaneously without government support. The current state of industrial districts/estates, special economic zones, and industrial corridors in the country is outlined as follows.

As shown in Table 7.2-1, there are 11 industrial districts/estates in the country, although one in Dhankuta is virtually inoperative at present. The oldest industrial district was established in 1960, and the most recent one in G.N. Singh was completed in 1986. Eight out of ten operative industrial estates have been constructed under foreign assistance. By country, India has been involved in the establishment of 4 industrial estates, followed by the United States (2), the Netherlands (1), and Germany (1).

All the industrial districts but Hetauda are small in terms of land area, and their utility service facilities and equipment are generally aged. Thus, they are not attractive enough for foreign companies to make new investment. As most of them were established under assistance of foreign governments, original tenant companies formed joint ventures with foreign partners. At present, however, joint venture partners are mainly local companies that serve the local market.

The industrial districts/estates are operated and managed by Industrial District Management Limited, which is a public enterprise jointly owned by the MoI, the MoF, and Nepal Industrial Development Corporation. It has the head office in the Balaju Industrial District in Kathmandu and maintains operation and management staff in each district. It has 35 staff members at the head office and 190 within the ten districts.

[11] According to Industrial District Management Limited that is responsible for operation and management of industrial districts/estates in the country, there is no effective difference between industrial districts and industrial estates.

Table 7.2-1 Current Status of Industrial Districts and Industrial Estates in Nepal

(Fiscal Year 2009/2010)

S.N.	Name of Industrial District (ID) or Industrial Estate (IE)	Date of Establishment	Assistance / Cooperation	Land Area (in Ropani)[1]					Investment (in Million Rs)		No. of Industries		
				Total Area	Developed	Leased	Leasable	Occupied by utility and services[2]	Industrial Districts	Industriast	In Operation	Under Construction	Closed
1	Balaju Industrial District	1960	USA	670	670	534	-	136	52.4	2120	88	22	11
2	Hetauda Industrial District	1963	USA	2829	2491	1793	54	601	49.7	4870	54	10	15
3	Patan Industrial Estate	1963	India	293	293	219	-	74	35.8	4250	95	6	5
4	Nepalgunj Industrial Estate	1973	India	233	233	189	-	44	16.7	1950	27	4	2
5	Dharan Industrial Estate	1973	India	202	202	134	6	62	11.2	250	21	7	2
6	Pokhara Industrial Estate	1974	Nepal	501	501	397	-	104	24.1	900	60	7	9
7	Butwal Industrial Estate	1976	Nepal	434	406	348	-	58	21	2700	62	3	5
8	Bhaktapur Industrial Estate	1979	Germany	71	71	58	-	13	19.4	550	33	1	0
9	Birendranagar Industrial Estate	1981	Netherlands	90	90	56	7	27	8.6	6.6	18	4	1
10*	Dhankuta Industrial District	1984	Nepal	63	-	-	-	-	5.6	-	-	-	-
11	G.N. Singh (Rajbiraj) Industrial Estate	1986	India	294	171	2.9	27	141	48.6	25	0	0	1
	Total			5680	5128	3731	94	1260	293.1	13796.6	458	64	51

[1] 1 ha=19.65 Ropani and 1 Ropani=5476 Square Feet,
[2] Utility service include road, power house, drainage, green belt, industrial and administrative building etc.

Source: Annual Report, FNCCI

According to a director of Industrial District Management Limited, the total number of tenant companies operating in the industrial districts/estates is around 650. According to publicly available data, the industrial districts/estates generated 12,582 jobs as of 2009.

Industrial District Management Limited has the following three revenue sources: 1) sales of electricity to tenant companies, which is purchased from Nepal Electricity Authority (NEA); 2) rental paid by tenant companies (facilities leased); and 3) rent from companies operating in the industrial district (only land leased). Originally, IDML received financial assistance from the government. Now it is financially independent. However, the above revenues alone can only pay for salaries and wages of employees, leaving little money for facility maintenance. IDML manages to report profits each year because it does not carry out any maintenance work. As facilities are very old (largely built in the 1960s) and deteriorated due to aging, the industrial districts are likely to become dysfunctional unless the rental is raised or a new revenue source is found.

Table 7.2-2 Status of the Industrial Districts and Industrial Estates 2

S.N.	Name of Industrial District (ID)	Employment	No. of Buildings and Shades			Capacity of Utility Provided		Road Construction within Estate (Km)
			Constructed by the Industriast	Constructed by ID	Rented to the Industriasts	Electricity (KVA)	Water Supplies (KL/day)	
1	Balaju Industrial District	3,500	87	46	46	4,000	470	5.2
2	Hetauda Industrial District	2,344	400	13	12	5,000	288	18.2
3	Patan Industrial Estate	1,247	161	61	61	1,500	21	5
4	Nepalgunj Industrial Estate	866	41	22	22	1,000	75	2.34
5	Dharan Industrial Estate	625	38	16	16	1,000	45	2.31
6	Pokhara Industrial Estate	1,650	153	14	14	1,500	744	2.54
7	Butwal Industrial Estate	1,465	86	8	8	1,350	104	2.14
8	Bhaktapur Industrial Estate	717	44	11	11	900	-	0.69
9	Birendranagar Industrial Estate	115	20	5	5	500	48	0.91
10	G.N.Singh (Rajbiraj) Industrial Estate	9	-	10	4	25	8	2
	Total	12,582	1,030	206	199	16,775	1,803	41.33

Source: Economic Survey and Industrial Districts Management Limited

The rental for the industrial districts is very low since their establishment. The average monthly rental is Rs.3 per square feet with variation according to location and other site conditions. In contrast to the typical rental of Rs.47 per square feet for industrial land leased by local government, it is incomprehensible that the rental has not been raised during the past five decades.

At present IDML is negotiating the increase in rent with the Federation of Industries in Nepal Industrial Estate, which represents tenant companies, but not much progress has been made because, at the time of the establishment of the industrial districts, the government promised to transfer land and buildings to tenant companies with free of charge. As pointed out earlier, most tenant companies supply products to the local market and there are few export companies. Export companies are mainly operating in industrial corridors in Birganj and Biratnagar, which have spontaneously emerged to take advantage of proximity to the Indian border.

As an example of how the industrial districts are operated, the current state of two industrial districts, Pokhara and Nepalganj, is described as follows.

(1) Pokhara Industrial District

According to the administration office, the Pokhara industrial district has 78 tenant companies, of which 50 are local companies. As shown in Table 7.2-1, 60 companies were operating in 2009 and 7 companies were constructing their facilities, totaling 67. Thus, 11 companies have been added since 2009.

In comparison to industrial corridors in Birganj and Biratnagar, where the study team conducted interview survey, more female workers were seen in the industrial district, partly because many tenant companies produce food and other lightweight items that can be easily handled by women. Also, some owners of tenant companies indicated that they had to rely on female workers because male workers were hard to find as many of them had gone overseas.

According to the chamber of commerce and industry in Pokhara, food companies create the largest number of jobs and grow rapidly among all companies operating in the industrial district. However, food companies in the industrial district supply their products to the local market, with exception of Gauri Shanker Foods that sells biscuits in Tibet via a wholesaler to take advantage of the industrial district's geographical location between India and Tibet.

(2) Nepalganj Industrial District

This industrial district is located a 15-minute drive from the Indian border. It was established 38 years ago and has 31 tenant companies. By type of industry, the largest number of companies – 5 to 6 – belong to the engineering industry, followed by four each in the metal and plastic industries, two each in the plywood and pipe industries, and one each in the stone, cable, electric engineering, and food industries. All of them are local companies. There is no foreign company including a joint venture. Most of products made in the industrial district are shipped to the local market, and few products are exported to India. Total employment in the industrial estate is 866, the smallest among the eleven districts[12], suggesting that, in addition to its small size, the Nepalganj industrial district mainly accommodates midsize and small industries.

(3) Proposals for future development of industrial districts

Originally, the industrial districts housed global corporations such as Kodak and Palmolive. However, they later moved to India under both pressure and incentive by the Indian government. It is understandable that there was not much thing to do for tenant companies and the Nepalese government in consideration of difference in economic and other powers between the two countries. As present, the ten industrial districts that remain operational are mostly occupied by joint ventures formed by local manufacturers that mainly serve the local market.

Many of them were constructed between the 1960s and the 1980s and their filicides and equipment are dilapidated due to aging because of lack of proper maintenance. Negotiation initiated by IDML to raise the rent is in stalemate as tenant companies firmly oppose to it on the pretext of the government's initial promise. Meanwhile, it is clear that most of the industrial districts will become inoperable in due course due to financial difficulty and physical deterioration, and urgent measures to restore their financial condition are needed.

The field survey results indicate that real estate prices are rising sharply in the Tarai region and the Kathmandu Valley region, which are positioned as the country's major industrial areas. On the other hand, industrial infrastructure is still underdeveloped, including electricity and water. Under these circumstances, the industrial district can be highly attractive for local

[12] As compared to eight other districts, excluding the one in Dhankuta that is inoperative and the one in Singh that is operated at a very low occupancy rate.

industries as a means to gain low-cost access to much-needed utility services and is still capable of serving as a stepping stone for industrial development, if managed properly.

7.2.2 Current State of Special Economic Zones and Major Issues

The idea of the Special Economic Zone (SEZ) arose in Nepal in the mid-90s from garment industry. They proposed to establish SEZ in Birgunj with the industrial accumulation of the garment sector. At that period, garment sector along with carpet industry consist 80 % of export and represented the structural industry of Nepal. Therefore, they tried to strengthen competitiveness and intensify the scattered related companies in the specific area as well as the administration services for trade promotion.

Successively, Nepali government proposed SEZ bill, but it requires some improvement. For instance, all goods and services except tourism and entertainment are forced to export more than 75% of value in the text. It has been reduced from the initial draft text, but it is still high. Even compared with India and Bangladesh, it remains high. Thus, Ministry of Commerce and Supplies intends to propose the abolition of the export requirement clause in NTIS 2010.

Additionally, conditionality to fire the workers are strict in Nepal. It does not allow the foreign companies to hire and fire local labor forces flexibly corresponding to the demand of the market. There was an idea not to apply labor act in SEZ, but it seems to be quite difficult from the perspective of relevant officers as of February 2013.

Ministry of Industry clarify that current idea of SEZ is prepared for FDI. Any of SEZ candidate location is not available yet. As of December 2012, SEZ bill[13] is not discussed in the congress due to the dysfunctional situation after May, 2012. For the reference, Banepa, Mahendranagar, and Panchkhal are supposed to be IT-specific SEZ[14].

Among the SEZ candidates, the most advanced ones are Bhairawa and Birgunj. They still remain in the unsatisfactory level, though. Condition of these two sites is narrated below.

(1) Bhairahawa Special Economic Zone

According to the MoI, several special economic zones are planned for foreign companies. However, no SEZ is operated at present. Because of the suspension of the national assembly, a bill relating to SEZ has still to be discussed as of December 2012. Note that three special economic zones, Banepa, Mahendranagar, and Panchkhal, are planned exclusively for IT companies[15].

[13] It was approved in January and signed in February, 2013 based on Cabinet Order.
[14] International Finance Corporation, 'Nepal Creating a Competitive SEZ Regime' 2008
[15] International Finance Corporation, 'Nepal Creating a Competitive SEZ Regime' 2008

Meanwhile, construction of several special economic zones is already underway. For instance, boundary fences for Bhairahawa Special Economic Zone were completed as of October 2007 (three years after the start of construction), where site roads were not paved and no preparation was made to lay sidewalks[16].

As of January, 2013, pavement of array, plotting, water tank and street lights are already set up. But it looks like a Safari Park with the unattended grasses. Water tank and street lights are not taken care of, either. It has been nine years to start the project, but even administration office and service offices are under the construction.

General outline of Bhairahawa Special Economic Zone

- Total land area: 30ha
- Net leasable area: 20ha
- Minimum lot size: 1,000㎡
- Maximum lot size: 2,000㎡ (two more lots can be combined)
- Boundary fence: Concrete (3m high, covering the outer boundary of the SEZ)
- Water supply: water pipes of 15cm diameter to be laid to each lot (installation work was underway in the southern part at the time of the study team's visit)
- Waste disposal: Waste discharge pipes of 40cm diameter to be laid to each lot (installation work was underway in the southern part at the time of the study team's visit)
- Waste treatment facility: Included in the plan but no tender for construction work has been made; storage capacity of 16,000m^2; the auxiliary fluid treatment system capable of treating general biological wastes but not effective for toxic chemical wastes
- Electricity supply: To be supplied by NEA; 11kv transformers and overhead transmission lines to be installed within the SEZ; tenant companies are expected to purchase power from the SEZ at a discount price (10-15% less the normal charge); tenant companies are required to comply with NEA's power equalized distribution (load restriction) rule[17].
- Communication: Telephone lines not connected to the SZE; line extension from the Siddharta highway to the SZE (1.2km) is needed.
- Planned facilities: Administration building, and nursing and medical facilities (construction has not started for none of them)
- Distance to Kathmadu: 300km
- Distance to the Indian border: 3km
- Distance to the Bhairahawa airport: 8km (connected to the SZE via a two-lane Lumbini-Bhairahawa highway and the Siddharta highway)
- Runway length: 1km (not suitable for large cargo aircraft)
- Population in surrounding areas: Approx.200,000

[16] When the study team visited the site in November 2012, no significant progress was seen in comparison to the state confirmed in October 2007.

[17] Under the rule, NEA can cut off electricity supply to specified sites or equipment on a temporary basis when electricity consumption increases at a rate to create a risk of exceeding supply capacity and resulting in total blackout due to overload. Generally, large plants and commercial facilities are subject to this rule, but individual homes may be included. At the time of the study team's visit, scheduled outage was effected for 2 hours in the evening.

(2) Advantages and disadvantages of the Bhairahawa SZE in terms of actual needs of potential users

The SZE's advantages and disadvantages as assessed from actual needs (including concerns) of companies that have expressed interest in the SZE are summarized as follows.

- Land area: The SZE is attractive for local medium and small enterprises that mainly need a land area of 1-2ha. On the other hand, as multinational corporations operating in the country use industrial sites ranging from 2.8ha to 28ha, the SZE does not meet their needs. Another SZE in Birganj, which is planned to develop a 500ha land area, is thus expected to meet the need for 3ha or larger land.
- Model factory and office: No model factory or office has been provided. This is a negative factor for companies that intend to start operation in the SZE quickly after the contract.
- Waste treatment and disposal: As in the case of the industrial districts, the SZE will be provided with a wastewater treatment plant. However, no tender was made for its design and construction as of July 2010. Note that tenant companies are expected to install a waste pretreatment facility at their own cost.
- Transportation: The SZE is close to the Indian border (3km) and has good access to major industrial areas in Nepal. This is an excellent location for companies that manufacture and deliver products to North India by purchasing raw materials and intermediate goods from North India, Bangladesh or Nepal.
- On the other hand, the SZE's location is disadvantageous for companies that use the Haldia Port of Kolkata, which is generally used by Nepalese companies for international trade. Also, the SZE does not have good access to the international airport and is thus not convenient for companies that export high value added products, such as electronic parts and pharmaceutical products.
- Companies that have shown interest in the Bhairahawa SZE: As of October 2007, 14 companies showed interest in the SZE, consisting of 11 Nepalese companies, one Indian company, and two Chinese companies (including a joint venture with a local company). By trade, five companies were manufacturers of textile products (two companies specialized in silk, and others in fabrics, polyester fibers and bags), followed by two motorcycles (both were Chinese companies including the joint venture), three plastics, others flowers, food (ghee), carpet/handicraft, and tea.

(3) Birganj SZE (proposed site)

In addition to the Bhairahawa SZE, another SZE in Birganj was under planning as of October 2007 (the conceptual plan was prepared). It was planned to develop a total land area

of 500ha, of which 100ha would be allocated as a garment processing zone[18] in order to meet request by Nepal Garment Association, which has long lobbied for SZE development. Also, FNCCI has proposed, jointly with the MoA, the establishment of a SZE in Palpa District as part of 22 OVOP programs on the ground that the district has many companies that trade with India[19].

While preliminary study was conducted for the development of the Birganj SZE, no deliverables, such as demand forecast, master plan or phased development plans, are available. On the other hand, it was confirmed that roads to the SZE site and boundary fences were under construction. The estimated development cost is Rs.6 billion (US$91,143,855). The government requested the Indian government for financial assistance relating to the development of the SZE, but the Indian government only recommended an Indian company (Infrastructure Leasing and Finance Services) as designer and developer.

A general outline of the SZE development plan as of November 2012 is as follows.

- Law to authorize the SZE development: Special Economic Bill and Private Investment in the Development and Operation of Public Infrastructure Act, 2063[20] (2006)
- Government agency supervising SZEs: Special Economic Zone Board (SEZB)[21]
- Role of SEZB: Construction of SEZs, monitoring and regulation of license holders, establishment of rents and service fees, issuance of export/import licenses, certificates of permits and approvals, certificate of origin, and work permit for foreign workers
- SEZB's board meeting: The SEZB board consists of 5 members, namely one representative of the MoI, one representative of the MoCS, the president of the Chamber of Commerce and Industry, and two persons appointed by the Nepalese government
- Validity of license: 30 years (extendable for additional 5 years[22])
- Incentives for tenant companies: exemption of VAT, excise tax, customs duties, and income tax
- Possible areas of improvement: The condition to require a tenant company to export at least 75% of goods or services in all areas excepting tourism and entertainment is very strict in comparison to neighboring countries including India and Bangladesh. IN fact, the MoCS proposed, in NTIS 2010m the elimination of the export requirement for SZM companies.

[18] IFC, `Creating a Competitive SEZ Regime`, pp.35-35`
[19] FNCCI, `Balanced Economic Growth; One District One Product`
[20] The year in the lunar calendar (the year 2006 is equivalent to 2063 in the lunar calendar)
[21] SEZB is headquartered in Kathmandu and is authorized to establish branch offices in other areas.
[22] It is not clear as to whether the extension is only once or more.

(4) Proposals relating to SEZ management policy

It is currently planned to use a company other than Industrial District Management Limited for operation and management of SEZs, because a different management method from that used for management of industrial districts will be required and a management cost will be much higher. Once related laws are approved by the national assembly, a new management organization needs to be developed. In this connection, technical support from outside will be useful.

The MoI's intention is to establish a successful case for a SEZ at first and expand the project to other areas, rather than starting multiple SEZs (as in the case of industrial districts). And the Bhairahawa SEZ is considered to be the most prospective site. If the MoI's strategy is to be pursued, lessons learned from the industrial districts, as pointed out earlier, can also be applied to the SEZ management; an unrealistic promise or commitment should not be made for the sake of attracting foreign investors; and proper advice and assistance regarding financial access needs to be provided for tenant companies that are often unable to obtain loans due to the lack of collateral as they lease land and buildings at the SEZ.

Current labor act excessively protects the labors and it causes the moral hazard and uncompetitive labor forces in Nepal. This should be addressed by both public and private sectors.

Industrial Policy which includes SEZ is compared with the benchmark of the other countries in their decision making process by the global investors. Thus, unfavorable and unreasonable policy from the market perspective will receive low evaluation and will not convince the investors to bet on Nepal. Actually, Nepal attracts the lowest level of FDI flow in South Asia. It is interpreted as the lowest evaluation on the industrial policy and business environment in Nepal from the investors.

7.2.3 Current State of Industrial Corridors and Major Issues

The study team visited industrial corridors in Birganj and Biratnagar in November 2012. As discussed earlier, industrial corridors have been spontaneously developed in the following five areas as manufacturers built factories along the arterial highways to leverage locational advantage of being close to the Indian border.

Morang District (Biratnagar)
Parsa District（Birgunj）
Banke District（Nepalgunj）
Khailali District（Dhangadi）
Rupandehi District（Bhairawa）

Figure 7.2-1 Major municipalities in Nepal

As for size of agglomeration, there are at least 110 companies in Biratnagar on the basis of the membership list obtained from Morang Merchants Association[23]. Of total, jute companies (8) and plastics manufacturers (14) show presence. The study team's interview survey revealed that exports were mainly made to India, with small portions going to Bangladesh. At present, these companies do not receive any tax or other incentive from the government. On the other hand, based on the membership list of the Birgunj Chamber of Commerce and Industry, 77 companies operating in Burgunj make exports to India and 21 to other countries[24] (15 companies are double counted).

The industrial corridors represent spontaneous agglomeration of companies that have chosen a specific location that is optimal for procurement, manufacturing and/or trade, as differed from industrial districts developed under the government's leadership. Companies operating in the industrial corridor are dominated by joint ventures with Indian companies and Nepal's major company groups such as Golchaha and Jyoti. A major issue facing these companies is the shortage of workers. Many companies point out that many workers are not satisfied with salary and other working conditions and leave the companies after a relatively short period to go overseas. There are also cases where Nepalese workers with professional skills are often hard to find and Indians are hired instead. The situation is the same at the top management level and Nepalese

[23] This is the oldest chamber of FNCCI

[24] 22 companies appeared in the membership list, less one company that is double counted.

employees are rarely promoted beyond the manager. This mismatch in labor supply and demand for local employees seems to continue for a while.

The high turnover seems to be aggravated by the management's policy to offer easily replaceable jobs for local workers, rather than making systematic efforts to teach higher skills and offer an attractive career path. It is important to realize that the labor shortage problem can only be resolved by developing an employment system to allow Nepalese people to develop their skills and enjoy a pay rise, together with promotion, within the same company, which then leads to good labor-management regions and the improvement of productivity.

Chapter 8 Issues relating to Development of the Private Sector and Strategic Direction

Chapter 8 Issues relating to Development of the Private Sector and Strategic Direction

8.1 Growth Opportunity for Nepal's Industry

In the previous chapters, the current state of the private sector in Nepal, the business environment facing it, relevant government policies and programs, and characteristics of the North Indian market have been analyzed. This chapter starts with identification and analysis of major issues and bottlenecks relating to development of the Nepal's private sector, followed by reassessment of prospective industries and products identified and promoted by various donor organizations in terms of comparative advantage and growth potential. Then, industries and products and services that can serve as major drivers for the private sector's development will be identified on the basis of the study team's own analysis and evaluation. Finally, in recognition of a key significance and objective of the private sector's development, proposals will be made for strategic and development patterns in the areas of trade and investment as well as strategic directions for vitalization of local economy.

8.1.1 Identification of Development Issues

Issues relating to development of the private sector and industrial development in general have been taken up and discussed by many organizations. As discussed in 2.1, the Nepalese government also realizes such issues in depth in previous national economic development plans and sectorial development policies formulated by ministries. Thus, many of the development issues listed below are already recognized but are reviewed here for the purpose of sharing our understanding of their accurate meanings in the context of the country's industrial development and using them as a guideline for actual development planning. As for issues relating to political instability and the absence of political leadership, they are considered to be out of the scope of the present study that exclusively deals with the country's economic development.

8.1.1.1 Issues relating to Macroeconomic Development

First of all, the following issues have already been raised by many organizations as the country's major development issues in macroeconomic aspects, including the Immediate Action Plan on Economic Development and Prosperity (IAPEDP) published in January 2012, which have been verified in the present study.

(1) Low economic growth rates in comparison to neighboring countries
(2) Negative impacts of a slow pace of infrastructure buildup on economic development
(3) Low productivity agriculture that still depends on traditional techniques
(4) A slow rate of industrialization and structural weakness of the industrial base
(5) Low level of investment from both internal and foreign sources

(6) Delay in development of new tourist resources and infrastructure
(7) Weakness of the fiscal base that depends on remittance by overseas workers and foreign aids
(8) Increase in unemployment, minority workers, and overseas workers
(9) Electricity and energy shortage

Overall, from the macroeconomic perspective, the secondary industry grows sluggishly and fails to provide good job opportunities, which leads to increasing number of migrant workers. Nepal's economy is still fairly small and is difficult to assert its position between major economic powers of China and India. As a result of the small economy, fluctuation in trade and remittance inflow directly impacts people's life and industries. The country has still to establish an attractive business environment and investment climate due to a number of factors such as political instability and lack of enough competition in the market.

8.1.1.2 Issues relating to Development of the Private Sector

Major issues and bottlenecks relating to development of the Nepal's private sector of today are summarized as follows. These are not only for particular industry but commonly pointed out over the Nepal's private sector.

(1) Small size of the industrial sector

In Nepal, there are around 1,500 medium and large-size enterprises in all the sectors except for commerce, and around 125,000 cottage and small-size enterprises including individual business operators[1]. Notably, large enterprises that have more than 1,000 employees are very few. A relatively small number of companies are reflected in the lack of industrial diversity (particularly, in the manufacturing sector). In addition to the small size, the private sector generally lacks a close linkage or network among companies (or industries).

(2) Insufficient industrial infrastructure and capital

The country's manufacturing factor generally lacks basic infrastructure to support their activities, such as industrial land developed for promotion of processing trade (excluding some parts of the Terai), human resources and skills, capital, industrial development policies, and technical support organizations. In particular, the shortage of industrial capital[2] is a major issue that is common among all sectors.

(3) Lack of strong entrepreneurship

Healthy growth of SMEs means job creation, income growth and creation of new values, ultimately leading to poverty reduction. The level of entrepreneurship in terms of population and intensity varies among countries. In Nepal, there seem to be a relatively small number of

[1] Around 4.3 million companies are in Japan and India in 2009.
[2] Industrial capital here refers to capital directly relating to physical production, i.e., investment in production equipment, raw materials, and labor force.

entrepreneurs who intend to start up from long-term perspectives, partly due to the issues relating to the business environment and partly due to the inclination to short-term profit making.

(4) Low labor productivity and obsoleteness of technology and production equipment

Low labor productivity is seen in all sectors, not only the manufacturing sector but the public sector as well. Furthermore, many factories use obsolete technology and equipment, which further deteriorates productivity. As a result, the manufacturing sector is unable to take advantage of low labor cost to achieve cost competitiveness.

(5) Lack of cooperation between the private and public sectors in relation to industrial development

The government generally fails to promote cooperation between ministries in relation to industrial development, with the low level of commitment to industrial promotion and the lack of abilities and resources required for implementation of specific support activities, not to mention a slow pace of budget execution. On the other hand, the private sector is said to lack firm commitment by business owners to industrial development as well as cooperation among companies toward the common goal. Finally, neither the public sector nor the private sector has a strong willingness to cooperate in promotion of industrial development.

(6) Shortage of local leaders for revitalizing of the remote villages

Analysis of geographical distribution of industries indicates low levels of industrial activity in rural areas (especially, far-western and Himalayan regions). Although the MoI implements a program to foster small industries and the MoAD (together with FNCCI) carries out the One Village One Product program as part of local industrial promotion, they try to prop up existing industries rather than to develop new industries through vitalization and mobilization of local resources, which require local leaders and a mechanism to foster them.

In addition, labor dispute and high transportation cost resulting from being landlocked bring headaches to the private sector.

8.1.2 Selection of Products having High Growth Potential

This section examines industries and products that are considered to have high growth potential, including exports. Under the present Study, “prospective” industries and products are expected to meet either of the following two requirements:

I. Industries and products that have high growth potential in the area of exports to India; or
II. Industries and products that are expected to grow strongly in the local market.

As for the first element, the market survey in North India conducted by the study team revealed that there was not very high demand for Nepalese products in the region, including a

future prospect. This is because "goods produced or available in Nepal are also made in India." As a result, the study team redefined the first requirement as "industries and products that have high export potential including the Indian market. In consideration of these requirements, prospective industries and products have been selected by taking into account the relevant factors, including the results of macroeconomic analysis (representing the overall economic trend), analysis of industries (including investment and trade), and market characteristics of North India, as discussed in the previous chapters. On the basis of the above analyses, comparative and absolute advantages of Nepalese industries and products, bottlenecks relating to government policy, program implementation, and actual production system have been analyzed. Note that these advantages and bottlenecks (which can be considered as disadvantages) were reclassified from perspectives of precondition, production factor, and supply and demand conditions.

The selection process started with 24 products and services listed in Nepal Trade Integration Strategy 2010 (see Table 8.1-1), with addition of other potential products as considered appropriate.

It should be noted that the study team was not able to obtain the same amount information for all of 24 products and services. Information used for analysis and evaluation was primarily obtained from trade associations under FNCCI and member companies and was supplemented by statistical data and relevant information available from government organizations. The selection process has resulted in addition of two products as those with high export potential, namely floricultural products and coffee.

Table 8.1-1 24 Products and Services in NTIS 2010

Agro-Food		Services	
1	Cardamom	13	Tourism
2	Ginger	14	Labour services
3	Honey	15	IT/BPO services
4	Lentils	16	Health services
5	Tea	17	Education
6	Noodles	18	Engineering
7	Medicinal herbs/essential oils	19	Hydro-electricity
Craft and Industrial Goods		Other Potential Exports Sectors	
8	Handmade paper	20	Transit trade services
9	Silver jewelry	21	Sugar
10	Iron and steel	22	Cement
11	Pashmina	23	Dairy products
12	Wool products	24	Transformers

Source: NTIS2010, MoCS

Preconditions relating to the development of the private sector are identified and analyzed as follows.

8.1.2.1 Preconditions relating to development of the private sector

(1) Diversity in terms of geography, races, and plants and natural resources

Nepal is a relatively small inland country (140,800km2; 36% of Japan's land area) that is endowed with diverse geographical features ranging from plains to the Himalayas, which foster and embrace a great variety of plants and mineral resources, and over 100 ethnic groups. This diversity provides advantages for industrial development and tourism promotion. At the same time, however, rough terrains and difference in custom and culture between ethnic groups can be disadvantages.

(2) High quality water resources and the natural environment that can foster a variety of agricultural products

Abundant and clean water resources originated in the Himalayas and availability of farmlands under diverse climate zones (from the temperate zone to the cold upland) are considered to be a clear advantage in terms of water supply to India and dominance of tropical and sub-tropical climates in South Asia.

(3) Poor accessibility to foreign markets and high transportation costs

At present, Nepal has to rely on Kolkata in India as the sole port for exports and imports. Then, high transportation costs and considerable time requirements work as a disadvantage for Nepalese companies.

(4) Respect to maintain free trade policy as WTO member

Nepal takes pride in having become the first WTO member nation among the LLDCs and intends to maintain free trade policy with the intention to serve as a model for other LDCs. This prevents the government from using tariff barriers to protect local industries.

8.1.2.2 Production Factors

(1) Low wages

Nepal's average wage ranks lowest among neighboring countries.

Table 8.1-2 Average Monthly Salary for Factory Workers in Asia

City (Country)	Av. Salary（US$）	City (Country)	Av. Salary（US$）
Kathmandu, Nepal	62	Yangon, Myanmar	68
Dacca, Bangladesh	78	Bangkok, Thailand	286
New Delhi, India	204	Mumbai, India	403

Source: BTM Asia Weekly Special edition、Jan. 2012, Mitsubishi-Tokyo UFJ Bank

(2) Low technological capability and productivity

Productivity is very low in all the sectors. Technological capability of private companies is also low, including resources and systems for technological development. This is clearly seen in the manufacturing sector.

(3) Zero tariff trade arrangement between India and Nepal

Nepalese companies can benefit from the drawback of import duties when they process imported materials and parts and export products. Also, products which are 30% or more valued added in Nepal are exempted from import duties in India. Thus, Nepalese companies can enjoy tax incentive for being engaged in processing trade targeting the Indian market.

(4) Electricity shortage and high energy costs

Electricity shortage in Nepal is well known. Even an optimistic forecast indicates that power supply in the country will not catch up with demand before 2020. The country is totally dependent on imported petroleum products, including diesel. Exploitation of forest resources as fuel is increasingly restricted for the interest of environmental preservation. Small-scale hydro and solar power generations hold the key to the improvement of the electricity shortage for the time being. Thus, electricity shortage and high energy costs are major bottlenecks for the country's industrial development.

(5) Relatively low import tariff rates and reduction of negative list items

At present, Nepal's import tariff rates are set in the range between 5% and 25%, except for motor vehicles and fire arms that are subject to very high tariffs. These tariff rates are relatively low among South Asian countries[3]. Also, zero-tariff items are gradually on the increase, albeit at a slow rate. Thus, the country's tariff barriers are being lowered to encourage imports. As a result, it is hoped that opportunity for processing trade will arise for products on which high import tariffs are imposed in India and other neighboring countries.

(6) Labor union issues

In Nepal, labor unions connected to political parties used to be active, which often imposed an enormous drain on employers. Three to four labor unions are formed in a typical large enterprise, and the management needs to cope with each of them. However, there are fewer cases now in which labor dispute escalate like before, for revision of the minimum wage in 2010 and economic slowdown in recent years make workers think that being employed is more important.

8.1.2.3 Common Supply and Demand Condition

As far as industrial goods are concerned, domestic supply of both capital and production goods is in short. An exception is limestone from which cement is made, but prices are same as imports. Sometimes imports account for 30 to 40 percent of limestone used for production. Every sector is dependent on imports for a large part of capital goods. Except cardamom and some others, supply of agricultural products for food processing is in short, too. Fruits and vegetables are often on the scrap due to the

[3] It should be noted, however, that Nepal imposes excise tax on most of industrial products, so that some items are subject to the total tax rate including VAT, which is more or less the same level as tariff rates in other South Asian countries.

inadequacy of distribution system. What it comes down to is that the volume of supply is not large enough and that the way supplied goods are handled is not appropriate.

8.1.2.4 Prospective Products

In this section, prospective products and services in terms of growth potential are analyzed with regard to availability of raw materials, supply and demand conditions in and outside the country, product characteristics, and export-related requirements for compliance with standards. As mentioned earlier, these products and services are listed in NTIS 2010, but service items relating to labor supply, health, education and transportation are not covered here. On the other hand, floricultural products and coffee are taken up as prospective items.

(1) Large cardamom

There are three major producing countries, Nepal, India, and Bhutan, and Nepal is the largest producer and exporter[4]. Cardamom is called the queen of spices and is high priced next to saffron and vanilla. Because it is non-perishable and can be reduced to lightweight products, it is optimum for the inland country's exports.


Brown Cardamom

Production of large cardamom in Nepal grew rapidly since the late 1990s, but its yield is declining recently as opposed to the increase in cultivation area (Table 8.1-3). This is attributable to a production practice to plant any sucker[5] for quick production, regardless of its condition, also causing propagation of crop damage due to virus or bacterial contamination. Recently, the outbreak of a disease that blocks growth of flow bunches is reported. Meanwhile, no progress has been made to the establishment of product standards.

Table 8.1-3 Production of Large Cardamom in Nepal

	Cultivation Area (ha)	Production (t)	Yield (t/ha)
1995-96	9,252	3,622	0.39
2000/01	10,668	6,080	0.57
2005/06	11,498	6,647	0.58
2010/11	14,787	5,517	0.37

Cardamom is dried after being harvested. However, a conventional dryer (bhatti) tends to cause cracks, scorching and sooting due to excess drying, which deteriorate product value[6]. Although a modified type of bhatti capable of reducing drying time and damage is introduced but many farms are still using the old type.

[4] According to statistics published by the Spices Board India, production in 2010/11 (estimated) totaled 3,918 tons.

[5] A new roots or branch that grow on a plant away from its root

[6] Quality of large cardamom is mainly determined by the grain size, color (preferably retaining pink color) and water content (should be thoroughly dried).

Local consumption is small and most of large cardamom is exported. In particular, 90% goes to India partly because the country is one of the largest consumers and partly because further treatment and processing after drying (e.g., tail cutting, selection by size and cleaning) is carried out in India (Siliguri, West Bengal). These processes are increasingly done in Nepal (Birtamod in Jhapa and Dharan in Sunsari), but most products are still exported after drying. Large cardamom after the final processing in India is also exported to other countries including Pakistan, Saudi Arabia, and the UAE. Undertaking the post-drying process in Nepal will therefore create opportunity for direct exporting to these countries.

(2) Ginger

Ginger is also Nepal's major agricultural product, which ranked third in production (2011) and in exports (2010). As ginger plants are exported without being washed, their export price is $205 per ton, much lower than that of other major exporting countries (Table 8.1-4)[7]. If washing and other treatment are carried out within the country, the export price can be raised and direct export to consuming countries become feasible. (It is planned to install a washing system in Jhapa under FAO's assistance, which will allow exports of cleaned ginger). Furthermore, ginger can be used as an ingredient for various food products such as powder, candy, spice, oil, and oleoresin, while such commercial exploitation is not made within the country. Although the Department of Food Technology and Quality Control has developed ginger-based products, there are few investors showing interest in their commercialization.

Table 8.1-4 Major Export Countries of Ginger in 2010

Rank	Area	Quantity (tons)	Value (1000 $)	Unit value ($/ton)
1	China	303,525	439,832	1,449
2	Thailand	31,383	28,616	912
3	Nepal	30,416	6,234	205
4	Netherlands	20,621	37,756	1,831
5	India	20,384	23,870	1,171
6	Ethiopia	10,268	19,883	1,936
7	Myanmar	8,064	4,410	547
8	Brazil	6,212	8,392	1,351
9	Nigeria	5,602	11,275	2,013
10	Indonesia	4,212	3467	823

Source: FOA STAT

Production has been growing steadily with the increase in the cultivation area, with the yield reaching 11-12 tons per hectare in recent years. It is said that the yield can be further increased by improvement of cultivation techniques and introduction of superior species,

[7] Ginger trade with India is an import surplus for Nepal due to low export unit price at US$205 as compared with average import price of India at US$ 645

although the present yield far exceeds that in India (3.3 tons) and is compared favorably with China (11.8 tons in 2011)[8].

Table 8.1-5 Ginger Production and Export

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011
Area (Ha)	3,200	5,800	8,314	12,000	12,994	13,025	14,007	15,838	18,041	19,081
Yield (tons per Ha)	9.38	9.48	9.02	12.85	11.87	12.20	11.51	11.30	11.68	11.34
Production (tons)	30,000	55,000	74,994	154,200	154,197	158,905	161,171	178,987	210,790	216,289
Export (tons)	1,421	7,800	8,215	18,567	29,800	41,731	35,941	26,724	30,416	N/A

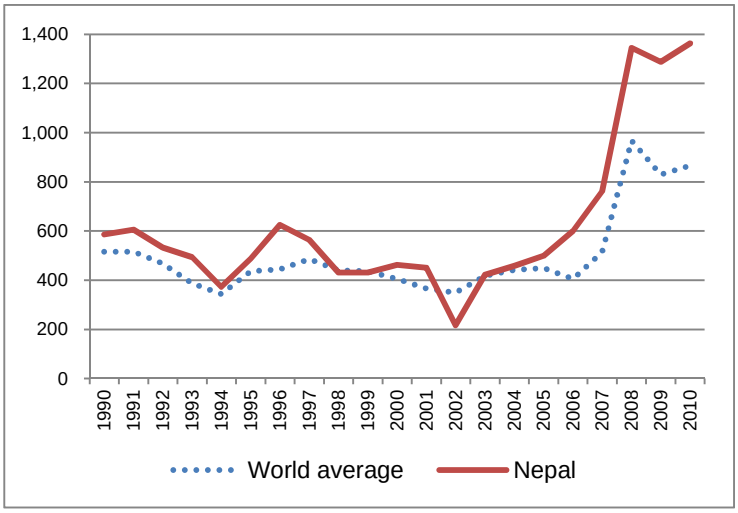
Source: FAO STAT.

According to FAO's statistics, around 15% of production is exported. However, some sources say that sizable exports are made through informal routes, resulting in the export ratio of over 60%. Most of formal route exports are destined to India, consisting of raw ginger that accounts for three fourths of the total and dried ginger (Suntho) the remaining one fourth. Nepal mainly produces fibrous species, which are said to be less suitable for consumption in the raw state. According to Nepal Ginger Producers & Traders Association, however, Nepalese ginger receives good reputation in India and is priced higher than the competing product from China.

(3) Lentil

Lentil is also one of Nepal's major agricultural products, ranked sixth in production (2011) and seventh in export volume (2010). The average export price in the world grew steadily from around $300 per ton at the beginning of the 21st century in response to growing demand worldwide. Then it shot up to as high as $968 in 2008 when production in Australia and Turkey plummeted due to a draught. It then declined relatively slowly by around $100 in 2010, as bolstered by continued demand growth (Fig.8.1-1). Notably, Nepal's lentil is highly valued for its size (smallness), color (pink) and taste, and its export price remains around 50% higher than the world average price in recent years. If the market condition is maintained, lentil will become the country's major source of income in foreign currency.

[8] Source: FAO STAT: the yield falls behind Thailand (15.6 tons) that ranked fifth in the world.



Source: FAO STAT

Figure 8.1-1 Export Price of Lentils

In recent years, production of lentil in Nepal ranged between 140,000 and 160,000 tons, and it recorded the highest level of 200,000 tons in 2010/11. While lentil is grown throughout the country, major production areas are found in the Terai region, which serves as a major source of supply to the local and export markets. In the region, as many as 700,000 farms grow lentil on a small lot of 0.2-0.3 hectares on average. The average yield per hectare is 866Kg for the five year period between 2007 and 2011, which fall below Canada, Turkey, Australia, and the United States (ranging between 1,100 and 1,500 Kg) but surpass India (644 Kg)[9].

Table 8.1-6 Production of Lentils

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011
Area Harvested (Ha)	121,970	147,579	180,750	188,895	183,170	189,181	189,497	183,798	187,437	207,591
Yield (Hg/Ha)	6,252	6,761	7,599	8,508	8,624	8,706	8,504	8,037	8,096	9,965
Production (tons)	76,250	99,776	137,343	160,716	157,963	164,694	161,147	147,725	151,757	206,869

Source: FAO STAT

Lentil is cultivated after the harvesting of rice and is one of the various crops that can be grown during the season, including wheat and vegetables. For Nepalese farmers, lentil is considered not as important as rice, which is the staple food, and they generally pay less attention to cultivation of lentil. Also, lentil has the same problems as other crops, including the shortages of superior seeds and fertilizers, and damage caused by plant disease.

The export volume varied greatly in recent years, ranging between 4,109 tons in 2007 (2% of total production) and 56,768 tons in 2009 (38%). Lentil is mainly exported to Bangladesh,

[9] Source: FAO STAT; The average for the five year period is used because the yield in Turkey and Australia decreased sharply in 2008 due to the draught. Note that Canada and the U.S. mainly produce green lentil and other countries red lentil.

which accounts for around 70% of total exports in 2009, followed by further growth to around 98% in 2010 and 2011. Bangladesh was the second largest importer of lentil next to Turkey as of 2010 and lentil made in Nepal accounted for around 20% of the country's total exports in terms volume in the same year.

Table 8.1-7 Import of lentils in Bangladesh, 2010

Exporters	Imported value 2010 (USD1,000)	Share (%)	Unit value (USD/MT)	Imported volume 2010 (MT)*	Share (%)*
Total	141,501	100%	930	152,152	100%
Canada	51,450	36.4%	764	67,343	44.3%
Nepal	42,558	30.1%	1,390	30,617	20.1%
Australia	25,699	18.2%	796	32,285	21.2%
Turkey	20,837	14.7%	1,000	20,837	13.7%
Ethiopia	748	0.5%	941	795	0.5%
USA	186	0.1%	608	306	0.2%
Sri Lanka	23	0.0%	958	24	0.0%

Remark：Imported volume is calculated back to the imported value and unit price.
Source: USAID. Value Chain/ Market Analysis of the Lentil Sub-Sector in Nepal. 2011.

To increase exports under the better terms of trade, Nepal needs to explore markets that import lentil at relatively high prices, including Egypt, Sudan, and Iraq. Also, India and Sri Lanka, which ranked third and fourth, respectively, in import volume in 2010, are mainly importing lentil from Australia, Canada and the U.S., which have price competitiveness on account of large scale production. For Nepal to compete with these countries, the country needs to supply high value added products that make up for the price differential. Finally, SAFT and BIMSTEC member countries are expected to enforce strict quarantine requirements (currently less strict than industrialized countries) and efforts should be made to meet them by improving hygienic standards in the supply chain.

(4) Orthodox tea

Tea production in Nepal does not show as a strong presence in the world market as lentil, ginger and cardamom, ranked 20th in production (2011) and out of the top 20 ranking in export (2010), although it is positioned as an important export item that rivals the three major agricultural products. However, most of CTC tea is consumed locally and a small percentage is exported to India, and it is therefore not widely recognized outside the country. On the other hand, orthodox tea has some export potential, which can be improved by introducing marketing techniques to establish its brand, including packaging and sales method, together with further improvement of quality.

Table 8.1-8 Tea Production in Nepal, 2010/11

(Unit :ha, ton)

	Orthodox		CTC		Total	
	Area	Production	Area	Production	Area	Production
Garden	3,133	745.8	6,198	10,003.6	9,331	**10,749.4**
Small farmers	5,139	1,496.9	2,981	5,191.6	8,120	**6,688.5**
Total	8,272	2,242.7	9,179	15,195.2	17,451	**17,437.9**

Source: National Tea and Coffee Development Board. 2012. Tea-Coffee.

Tea is mainly produced in the eastern region. In the Terai region, assamica featuring large tea leaves is grown as a species suitable for the local climate, while the sinensis species with small leaves is grown in the mountain region. CTI is produced from the former and orthodox tea from the latter. The total cultivation area expanded from 3,502 hectares in 1996/97 to 17,451 tons in 2010/11, accompanied by a six fold increase in production from 2,906 tons to 17,438 tons during the same period. As a result, export surplus is generated since 2003. Orthodox tea accounted for slightly larger than 10% of the 2010/11 production, while its cultivation area represented 53%. CTC tea leaves are mainly grown in plantations, whereas many small farms grow orthodox tea leaves. The yield, while being improvement, is relatively low (271kg/ha) in comparison to India (365kg/ha) and Sri Lanka (390kg/ha)[10]. Conventional cultivation techniques using chemical fertilizers and insecticides are still widely used and many farmers do not have adequate knowledge on cultivation techniques, causing concerns about overuse of insecticides that lead to residual chemicals, deterioration of soil fertility, and variation of product quality.

Some farms have introduced organic cultivation techniques in response to increasing demand for organic tea, but the practice spread slowly for various reasons; it takes around three year to establish an organic farm on a commercial basis, during which production declines; it requires a significant cost to obtain certification; and it is difficult to operate the organic farm after certification. As for collection and processing of tea leaves, farms sell tea leaves to nearby tea factories or contracted ones. However, tea factories are not located according to geographical distribution of tea farms, and there is an imbalance of supply and demand; some factories receive tea in large quantities that exceed their processing capacity, while others are operated far below capacity. Tea must be quickly transported after harvesting to a tea factory[11], but poor road conditions prevent some farms from doing so.

While CTC tea is mainly consumed within the country[12], most of orthodox tea is exported. Export destinations include Germany, but 90%[13] are said to be exported to India (especially

[10] The yields in India and Sri Land are obtained from NTIS.

[11] Tea can only be kept in good condition for 10-12 hours at maximum, even if it is stored in a well-ventilated place.

[12] According to MoAC, "Product Chain Study Orthodox Tea 2008," an estimated 13% of CTC tea produced in the country was exported in 2006/07.

Kolkata and Siliguri). Prices are determined by Indian importers according to quality and grade, who generally purchase all types of tea regardless of quality. The high dependency on Indian imports seems to prevent the Nepalese tea industry from gaining bargaining power. In fact, while quality of the Nepalese tea is viewed as well as Darjeeling tea, its purchase price is lower than the latter. Furthermore, the Nepalese tea exported to India is sometimes re-exported after being blended with an Indian tea, and it is no longer denoted as the Nepalese tea. To increase exports under the national brand, it is imperative to promote exports to countries other than India. In doing so, efforts should be made to meet market demand in relation to residual agricultural chemical, labeling, and packaging, while obtaining HACCP, ISO and Fair Trade certifications, in addition to the further improvement of product quality and expansion of product lines.

(5) Coffee

According to Nepal Coffee Producers' Association (NCPA), approximately 27,000 farms grow coffee on a total land area of 1,752 hectares. Last year, 418 tons of export quality green coffee beans (500 tons if beans not meeting export quality requirements are included) were produced. On the other hand, Nepal receives inquiries from foreign buyers that total 6,500 tons, so that supply capacity is dwarfed by demand[14]. In light of the fact that the coffee export from Nepal fluctuates in both volume and value of shipments, the above inquiries are not entirely translated into actual demand. Nevertheless, the sizable gap between demand and production suggests that increased production can be directly linked to export growth, making coffee a prospective product with high export growth potential. While the coffee cultivation area has been growing yearly, the production volume of green beans is recently stagnated, with the yield falling far below that in major coffee producing countries (Tables 8.1-9 and 8.1-10). In the future, therefore, it is important to improve the yield, while expanding the cultivation area. Also, efforts should be made to propagate knowledge on cultivation techniques and disease and insect control to individual farms. NCPA registered a trademark for Nepalese coffee to establish it as a national brand.

Table 8.1-9 Production of Green Beans

	1995	2000	2005	2006	2007	2008	2009	2010	2011
Area Harvested (Ha)	200	314	1,078	1,285	1,395	1,495	1,531	1,650	1,752
Production (tons)	25	72	250	300	460	500	268	307	402

Source: FAO STAT

[13] According to the above source, the export ratio including informal exports reaches 99%

[14] According to NCPA, 215 tons were exported last year, while 203 tons were consumed in the country.

Table 8.1-10 Yield of Green Beans（kg/ha）

	2006	2007	2008	2009	2010	2011
Nepal	233.5	329.7	334.4	175	186.1	229.5
Viet Nam (ref.)	2,039.1	2,558.8	2,110.8	2,085.1	2,160.0	2,187.9
World + (Total)	757.9	775.7	795.4	782.9	811.0	790.7

Source: FAO STAT

NCAP has confidence in quality of Nepalese coffee. As for variation of quality of beans as pointed out earlier, it expects that large pulping centers[15] recently completed in Palpa and Syangia will help improve the quality variation issue relating to the post-harvest processing. However, further efforts are required to reduce quality variation during cultivation and harvesting at individual farms.

(6) Medicinal and aromatic plants (MAPs)

In Nepal, a wide variety of MAPs grow naturally to take advantage of diverse terrains and various weather conditions, allowing an estimated 50,000 tons of annual production. At present, most of MAPs are exported as collected to India, without local processing. Clearly, the huge stock makes the manufacturing of MAP-originated products as a prospective industry. Local processing not only enables value addition in the country[16] but also reduces the product's volume, which is beneficial for the inland country by saving transportation costs. If 50,000 tons of MAPs produced annually could be used to extract an essential oil, they would be reduced to 250-300 tons of refined oil. Also, MAPs can be used to make products that do not require high levels of technology and do not need to comply with high export standards, thereby to expand opportunity for commercial use of MAPs, although care should be taken to maintain quality that is internationally competitive.

Commercial exploitation efforts should start with collection of MAPs growing in natural forests at a sustainable rate. At present, around 90% of MAPs traded in the country reportedly come from natural forests. As large-scale local processing should be taken into consideration, it is desirable to cultivate species on a farm, wherever commercially viable, so as to increase supply capacity. As for nonnative MAPs, care should be taken to provide farmers with technical advice on cultivation techniques, including selection of proper seeds. Finally, it should be pointed out that testing equipment used to analyze ingredients of MAPs, available in the country, is said to be old and unreliable in terms of accuracy, while taking considerable time for analysis.

[15] Pulping is the first step of the water refining process to remove the pulp that forms the outer layer of a coffee bean.

[16] According to UNCOMTRADE, the export price of Nepalese herbs (HS code 121190) was $1.18/kg in 2011, while that of the essential oil (HS code 330129) was $27.9/kg.

(7) Floricultural products

Commercial cultivation of floricultural products is growing in response to increasing demand in the country, especially in the Kathmandu metropolitan area. Around 650 farms located mainly in Kathumandu and Chitwan grow flowers, potted plants, and bulbs on farmland totaling 120 hectares. Annual sales reached Rs.230 million in 2006. Most of them are shipped to the local market, and only 5% are exported. If they are exported by air, the country can overcome the inland country's geographical disadvantage. At present, bulbs, cuttings, grafts, and roses are mainly exported to the Netherlands, Qatar, Germany and the U.S., although their composition varying from year to year.

Table 8.1-11 Export Value of Nepalese Floriculture

	Export Value (Rp)		Export Value (Rp)
1998/99	730,560	2005/06	32,634,275
1999/00	547,200	2006/07	20,844,930
2000/01	4,007,569	2007/08	24,216,171
2001/02	1,328,162	2008/09	29,205,311
2002/03	18,259,383	2009/10	20,874,606
2003/04	11,204,703	2010/11*	191,453,039
2004/05	16,228,315		

Remark: Export in 2010/11 has increased due to much order from China,
Source: Floriculture Association Nepal

India is not an attractive market for Nepalese floricultural products. Demand in India is limited to Deli and other urban areas, while competitive products are grown under government subsidy and are sold at low prices. Also, there is no large difference in the air transportation cost between India and other destinations.

To promote exports of floricultural products, it is imperative to improve quality by upgrading cultivation techniques, not to mention the efforts to achieve uniform quality. It should be pointed out that fertilization techniques, including selection of proper fertilizers, are to be established on a commercial basis. Also, cultivation techniques required in the winter are in the process of development. As for a marketing channel, a formal network with foreign buyers has still to be built up. At present, exporters have no means to find buyers and have to wait for inquiries from foreign counterparts. While floricultural products have high growth potential by taking advantage of the country's natural conditions, there is a large room for improvement if they are to be developed to a major export item.

(8) Instant noodles

It is often pointed out that the manufacturing sector in Nepal is unable to have international competitiveness because of its inability to achieve the economies of scale. Instant

noodles are one major exception; the industry has successfully gained price competitiveness by launching large-scale production under technical assistance of foreign companies. In Nepal, annual demand for instant noodles is estimated at around 30,000 tons and increases yearly. In response, local manufacturers have been expanding production capacity and are capable of competing in the North India market. In India, various companies including Maggie Noodle supply instant noodles but they are served as a soup, whereas Nepalese instant noodles are also consumed as snack to cover a wider market. Also, they are seasoned with Nepalese spices (powder soup), which gain popularity in South Asia.

In Nepal, more than 20 companies make instant noodles, but a large manufacturer dominate the market with a nearly 80% share. The company has production plans to exceed the present local demand in anticipation of further growth, which is shared by other companies that are also expanding production capacity steadily. Use of locally produced wheat helps offer competitive prices, although cooking oil, soy sauce, additives, monosodium glutamate, and packaging materials are all imported. There seems to be a room for further improvement of cost competitiveness by reducing the cost for packaging materials.

(9) Pashmina products

Pashmina is a type of cashmere wool taken from chayangra, a special breed of goat that live at high altitudes (3,000m or higher) of the Himalayas. It features fine and smooth fibers, which are soft, warm and very light in weight. Other than the Himalayas, pashmina is available only in Kashmir, India, and Pakistan, which have security problems that prevent stable supply. As a result, it can establish a position of a high-grade product in the wool product market. While standardized products are made in large quantities in China, Nepal's pashmina industry is capable of making products in response to the customer's order, which serves as a differentiating factor for exports to Europe. Also, Nepalese pashmina stoles use silk for warp to provide better usability and fashionability than Indian products using pashmina wools only. A major issue is found in the industry's inability to produce yarns locally; pashmina wools collected in the country have to be exported to China for the making of yarns due to the absence of spinning mills in Nepal, which are then imported at high prices.

Major types of pashmina products are shawls, stoles and sweaters[17], and 70-80% is exported. Most of products sold in the local market are purchased by foreign tourists. There are around 20 pashmina textile manufacturers that employ 100-200 workers each, which make most of exports. In the mid-1990s, popularity of pashmina products heightened to increase exports from Nepal considerably. However, the boom enticed the marketing of imitation products, i.e., wool or synthetic fiber shawls and stoles were sold as pashmina products, which ruined a high-grade image of pashmina products. With the end of the boom, exports from

[17] The industry is capable of making 15,000 sweaters or 10,000 pashmina shawls monthly from 10 tons of cashmere fibers.

Nepal declined rapidly. To restore a harmed image of pashmina products and to ensure their high quality, the National Pashmina Industries Association (NPIA) registered "Chyangra Pashmina" as a collective trademark for Nepalese pashmina products, currently in 41 countries. Further industrial efforts to raise the brand value of pashmina will be the key to further expansion of export markets.

(10) Cement

In Nepal, huge limestone reserves, totaling 12.5 billion tons, have been confirmed, and cement companies are already operating in areas where high grade limestone suitable for cement production is available. At present, domestic demand for cement is estimated at 3 million tons annually, of which local sources supply slightly less than 35%. If limestone deposits are developed and cement production capacity increases, demand can be fully satisfied by local supply. Cement production in Nepal requires relatively high costs due to insufficient infrastructure, electricity shortage, and high limestone prices reflecting additional development costs due to environmental consideration. Still, the cement industry has high growth potential derived from growing needs for infrastructure development (including power plants) and construction of modern buildings. Also, there is a future prospect for exports to neighboring countries including North India and Bangladesh.

(11) Iron and steel and metalworking products

At present, the iron and steel industry does not have a comparative advantage in Nepal because it consumes a huge amount of energy, whose cost (including electricity) is high in the country. The country does not have a steel mill and has to import steel materials from India for manufacturing of all processed steel products, working as another disadvantage. Still, production of steel frames and metalworking products in the country is on the rise, largely because of growth of demand from the government and household sectors. Also, a significant amount of steel materials is re-exported to India, mainly galvanized iron sheets and reinforcing rods, by taking advantage of tariff differentials between the two countries. The Indian construction market is far larger than that in Nepal and demands a large amount as construction materials, which are often in short supply. In particular, the building boom in the states of UP and Bihar has still to emerge and will provide opportunity for Nepal's steel exporters in order to anticipate future demand growth. At the same time, local demand is expected to grow as infrastructure development projects, including hydropower, are expected to increase steadily in the country. Thus, high demand is expected to support a good growth prospect for iron and steel products as well as metalworking products.

In addition to demand and cost perspectives, the fostering of metalworking industries that have traditional technologies is considered to be important for the balanced development of the country's manufacturing sector, including the building of the industrial bas A variety of hardware goods used at home (chests, tables, cooking stove tables, beds, and exterior

decorations) can be made by Nepal's skilled workers who possess traditional production techniques. Also there is high demand for guard rails and curved mirrors, which are essential in ensuring traffic safety on meandering roads that are omnipresent in the country. Their production requires various machinery and equipment, but the Nepalese industry is technologically capable of manufacturing them only if proper capital investment is made. All in all, the industry's major challenge is to increase productivity under the electricity and energy supply restraints.

(12) Engineering

In Nepal, industries that require large production facilities, like processing plants, are fairly limited, including tire, glass, cement, and sugar, and are run by state enterprises. A relatively large private enterprise engaged in the field of engineering is a joint venture with a Thai company that manufactures transformers. In addition, an electric tricycle manufacturing project, which was started in Kathmandu in 1999, is carried out under participation of four local companies, although only one company continues to operate in repair and maintenance service. On the other hand, there is a manufacturer of jeep-based multipurpose vehicles, which assemble 15-20 vehicles monthly by using imported truck engines and transmissions. There are companies that assemble simple machinery and equipment such as block making machines. Generally speaking, as local production of iron and steel products and shaped materials does progress much in the country, engineering business is still in the infant stage, although there seems to be substantial demand. For instance, multipurpose vehicles – the vehicle type solely produced locally – are manufactured in the country at the rate of 100 units per year, while 600 vehicles were imported in 2012. Although import substitution takes some time because the foundation of the engineer industry is undeveloped, the industry plays an indispensable role in driving the country's industrial development by raising the standard of the industry's technological capability.

At present, a future prospect for the industry is not very bright despite increasing demand within the country, but the fostering of the engineering industry can serve as a small, but good starting point for industrial development. For instance, automobile production made by Hulas Motor can become a springboard for the fostering efforts. Its chance of success will be augmented if the government provides full-fledged support for the private initiative.

As already listed, as far as small machines production is concerned, block making machines are produced not only in the Terai but other parts of the country. 10 to 15 domestic machine companies started producing them in response to large domestic demand for construction materials. Demand of metal processing products such as furniture, washstands, beds, exterior equipment is likely to boost from now on. Currently, small companies employing 5 or less are major producers. Promoting these areas can contribute to converting sole proprietors to enterprises.

(13) IT/BPO (Business Process Outsourcing)

The IT and BPO sector has high potential to promote the country's service export. The immediate opportunity is arising in India, where companies are increasingly looking for outsourcing service outside the country because of a rapid rise in labor cost. Nepal is in a favorable position on account of the absence of cultural or language barriers. Furthermore, the Nepalese IT industry is capable of providing the same level of service (in terms of the business environment) for foreign companies that outsource IT-related jobs to India, while having a comparative advantage over India and Bangladesh in terms of communication skills (e.g., friendliness).

As for IT professionals, while mid-level engineers are in short supply, the country's higher educational institutions offer ICT-related courses, including Computer Science Department of University of Kathmandu, from which around 2,000 persons graduate each year. Also, the IT park in Banepa – which is currently underutilized – can be used as a nucleus of IT agglomeration by offering attractive terms of use to IT companies. As for communication infrastructure, optic fiber lines are installed along the east-west highway in Terai and data centers are operated in Biratnagar and Hetauda. Broadband service is steadily propagated. All in all, development of IT resources in the country is showing good progress.

In Nepal, around 150 companies are registered in the ICT category, and if informal entities are included, as many as 300 companies are operating. Many of those who have launched IT business venture in Nepal seem to be young people who have received education in India. Excluding hardware sales, IT service companies are engaged in call center service, creation of animation products for Hollywood and development of Geographic Information System (GIS) (subcontracting), and Web site designing, and development of applications for cell phones. The percentage share of overseas sales has already reached an estimated 25-27% level. The industry can attract foreign direct investment by enhancing recognition in foreign countries and using the IT Park in Banepa as a core of industrial cluster.

(14) Buddhist site tourism

Lumbini, Kaplivastu, and nearby areas bordering India can be developed for Buddhist tours to attract not only pilgrims but foreign tourists as well. Major Buddhist sites on the Indian side are visited by around one million Buddhists annual for pilgrimage. On the other hand, Lumbini, which is one of the four Holy Buddhist sites (birthplace of Buddha), receives a far smaller number of pilgrims, less than one tenth. This is largely because Nepal has failed to develop the areas for Buddhist tourism. For instance, Kaplivastu, 20km from Lumbini, has the remains of the royal residence of Prince Siddhartha (Buddha) that is under excavation. However, the site has not been developed for tourism and is only visited by a small number of pilgrims. Development of the Buddhist sites in and around Lumbini, including hotel

accommodations, creates synergetic effect with the sites in India to attract more pilgrims and tourists.

Development of the Buddhist sites should include offering new attractions, such as light up night shows, construction or upgrading of museums, and adding elements of agro-tourism, in addition to the development of the Buddhist sites and their access routes. In particular, development of the Kaplivastu site should be planned and implemented from the standpoint of regional development in Nepal and India. Although there is a dispute between the countries as to an exact location of the site, the two countries need to cooperate for developing tourist routes covering both countries so that both can benefit.

(15) New Types of Tourism

Agro tourism and adventure tourism have high potential as new types of tourism. Lamjung district, a gateway of Manaslu and Annapurna is a success case of agro tourism. The district famous for trekking is trying to entertain tourists by letting them experience local lifestyle such as farming (mushroom production) and cattle-breeding, and more and more farmers are getting involved in the agro tourism activities. In Kaski where people enjoy rafting which is a traditional adventure activity, new attractions such as paragliding, crossing of a bridge built in high ground, crossing of a valley by tram way, and bungee jumping, all of which make use of being in a valley area, are proposed as new adventure tourism activities which offer good scenic view. Some other areas have already commercialized this kind of adventure tourism. Mixing it with trekking makes it possible to offer new types of adventure tourism.

8.1.2.5 Prospective Industries and Products

On the basis of analysis and assessment of the above preconditions, production factors, and supply and demand conditions, together with growth opportunity, the study has selected the following 6 products and 4 service fields as prospective industries and products. Note that they have not been selected by weighing relevant factors on equal footing. For instance, some industries and products whose production or market is currently small have been selected in consideration of competitiveness or growth potential to become a major export item or an economic base for the country. The final selection criteria are whether industries and products "have competitiveness" and/or "contribute to the building of the country's industrial structure (foundation)."

Table 8.1-12 Prospective Products and Services Selected by the Study Team

Role in Private Sector Development	Selected Products and Services
I. Industries and products that have competitiveness	
• Exportable products which are using an advantage of difference of the tariff rate between India and Nepal	(1) Galvanized steel plates, (2) Instant Noodle
• Having an advantage in Nepal such as plenty of resources high quality materials, traditional high skill etc.	(3) Agro and Agro-processing products, (4) Herbal products, (5) Cement, (6) Hydro and Solar energy
II. Contribute to the building of the country's industrial structure	
• Products and service area to be developed for the future of Nepal's industry	(7) IT/BPO services, (8) Light industry products
• Products and service area to be contributed to local economic development	(9) Tourism services, (10) OVOP products

Source: JICA Study Team

Note that some products are identified as product groups consisting of a variety of individual products, namely agricultural/processed products, herb products, and OVOP products. Similarly, power generation, IT/BPO service, and tourism have been selected as industrial clusters that contain a variety of business activities and services. Thus, industries and products included in these clusters and groups are added up to a sizable number.

8.1.3 Prospective Fields for Investment

In terms of investment potential and opportunity, the above industries and products/services are considered prospective fields. They are rearranged according to corresponding industrial sectors as follows.

Electricity sector: Hydro and solar energy

Agricultural sector: Cardamom, lentil, orthodox tea, ginger, coffee, etc.

Light manufacturing sector: MAPs, instant noodles, pashmina, and fruit juice

Light industry sector: Galvanized steel plates, metalworking products, etc.

Tourism sector: Buddhist/historic sites tourism, agro tourism, eco-tourism, adventure outdoor activities

ICT industry sector: Software development and BPO service

A high investment prospect for the electricity sector is evident from the present electricity supply condition in the country. Despite abundant water resources, the sector can only generate and supply electricity that falls far below demand. Investment opportunity exists for not only large hydropower plants but small-scale plants and photovoltaic cell power generation. Although the government, led by the Nepal Investment Board, is soliciting investment, terms and conditions

are not clear in a number of areas, including tax and other incentives for investors, sales of generated electricity, and remittance of profits by foreign companies to home countries. The government should urgently establish legal and other systems and institutions to promote investment in the electricity sector.

As for the agricultural sector, prospective products have been selected in consideration of exportability and marketability. The country's natural environmental conditions, in positive aspects, make cultivation of vegetables, fruits and floricultural products highly prospective. In fact, interest in the export-oriented agricultural sector is expressed by companies in China, Israel and Georgia. Indian companies are investing in herb production. On the other hand, there is a supply shortage of staple food – cereals – in the country, and investment opportunity exists for rice and wheat production too. It should be noted, however, that, to make agricultural products in amounts sufficient for exports by attracting investment, it is imperative to allow large-scale farming by reforming a legal system like making it possible to convert forest areas to farmland (currently all mountain areas are regarded as forest areas even if no trees are there.).

As for the manufacturing sector, investment opportunity is basically found in the light industry sector. In light of the fact that Nepal has still to establish a firm industrial base and has to rely on imported materials, together with a weak technological base in terms of width and depth, it would be safer to promote relatively small investment projects - including foreign direct investment –in the light industry, such as food processing, MAPs, textiles and metalworking. Furthermore, foreign companies need to be fully committed to investment in Nepal by not only bringing capital and technology but also providing marketing channels (in case of export) and technical support relating to human resource development.

On the other hand, as for automobile and other large-scale industries, some big progress is less likely in a short term. Yet, investment attraction for these sectors appears to be feasible in the strategic context that looks for the Indian market. In India, automotive production is expected to increase from 3.1 million units in 2011 to around 10 million by 2020. To meet the forecast, it is important for assemble plants in India to attract suppliers from all over the world. Investment in Nepal can be expected in this context and thus depends on the automotive production trend in India or Pakistan, although there are a lot of hurdles for Nepal to clear before promoting foreign investment.

As for the tourism sector, a prospective area for investment is found in the development of tourist resources, rather than hotels and restaurants, because the country has not made full use of natural resources, including Buddhist sites, the Himalayas and the national parks. In particular, combination of green tourism (agro tourism) with local resources including agriculture (activities and products) can create new tourist attractions. Also, in addition to Nepal's traditional tourist resources based on natural sceneries and cultural heritages, investment opportunity seems to exist

for development of tourist attractions not affected by season or weather, creation of family tour routes, and long stay type tourism that incorporate health care and educational elements, which can target local people as well as foreign tourists.

As for the ICT industry sector, investment projects using the country's young workforce in the software development and BPO fields are feasible. Already, three Japanese companies have made investment. It is desirable to start with a small project and gain customer's confidence gradually, followed by expansion. The government has announced policy to promote investment in this area and is expected to increase incentives for foreign companies if the announced programs are implemented. In particular, the upgrading of the IT Park in Banepa to accommodate foreign companies will serve as a great advantage in comparison to other sectors for which industrial estates suitable for foreign investors are not available.

To successfully promote foreign investment in the above sectors, the improvement of the investment climate is essential in addition to the incentives focusing on specific sectors. It can be achieved by the government's committed efforts on two fronts, namely administrative capacity building and deregulation. At the same time, the enforcement of business laws and regulations can serve to warrant that related policies and programs are formalized, thus helping gain confidence of investors. Finally, efforts to minimize the political risk (cost), including visualization of the policymaking process, are directly linked to the improvement of the general business environment in the country.

8.2 Possible Strategies and Development Patterns relating to Development of the Private Sector

8.2.1 Significance of the Private Sector's Development and Goal Setting

Since 2006, the Nepalese government has been consistently setting the primary goal of economic development as "poverty alleviation and correction of regional inequality." For instance, as discussed in Chapter 2, the ongoing three-year development plan (2009/10 – 2012/13) sets forth the development goal as follows.

"The goal of the plan is to improve living standards of all Nepalese people, reduce poverty, and achieve the MDGs by 2015 through sustainable economic growth, more concretely, generating employment opportunities, reducing economic inequalities, achieving regional balances, and eliminating social exclusions."

At the same time, the Japanese government set the following goals (as of December 2012) for official assistance in Nepal's development and undertook activities in a variety of fields.

Overall goal (basic policy)

To assist the country in promoting consistent and sustainable economic growth with an aim to grow out of the LLDC status.

Intermediate goals (immediate priorities)

(1) Power reduction in rural areas
⇒Upgrading and diversification of agricultural activities and products in terms of higher value added and the improvement of income generating opportunity through local processing of agricultural products

(2) The establishment and maintenance of the peace and a steady transition to democracy
⇒To support a further progress of the democratization process

(3) Development of the social environment and foundation to ensure sustainable and balanced economic growth
⇒To provide support in relation to infrastructure development including power supply.

On the basis of the development policies announced by the two governments, the present Study is designed to find desirable directions of the private sector's development. In this connection, however, it should be pointed out that poverty reduction cannot constitute a direct goal relating to the private sector's development, while it can be set forth as an overall goal for national economic development. Thus the primary goal of the Study in relation to the development of the private sector is expressed as "the achievement of sustainable and balanced economic growth."

Under the setting, the following three intermediate goals are established, followed by the setting of a strategic direction toward the accomplishment of the primary goal.

The primary goal of the private sector's development is
"To achieve sustainable and balanced economic growth"

Intermediate goals:

1) To build up the industrial base that serves as an engine for sustainable economic development;
2) To promote trade and investment with an emphasis on the establishment of the "Made in Nepal" brand; and
3) To revitalize local economy by using locally available resources.

These goals, both the primary one and intermediate ones, are ultimate goals in the private sector development in Nepal. Achieving intermediate goals lead to achieving the primary goals. That is, intermediate goals are direct goals in the private sector development, and the primary goal is achieved when the intermediate ones are achieved.

The first intermediate goal, to build the industrial base, does not target the manufacturing sector only. All industrial sectors whose industrial base is not solid are targeted. Second one, to establish the "Made in Nepal" brand means that trying to meet international quality and be competitive against imports from the beginning, instead of settling for lower quality which is yet acceptable in the domestic market. Third one is for local economy which has various constraints as well as many regional resources. As already said, achieving each of the intermediate goals lead to achieving the primary goal.

In particular, the private sector's development in Nepal needs to be worked out from perspective of balanced industrial promotion in terms of geographical distribution to benefit the whole country including hilly and mountainous regions, not to mention a conventional approach focusing on the buildup of the industrial base and trade and investment promotion.

8.2.2 Desirable Development Strategies for Promotion of International Trade and Investment

Nepal is changing from an agricultural economy to a service-oriented one (the service sector accounts for more than 50% of GDP), without a full-fledged transition to industrialization. When the government shifted to regulation and economic liberalization in the early 1990s, the country experienced high economic growth and migration of agricultural labor force in rural areas to industrial sectors in urban areas. However, these moves did not lead to the development of a firm industrial base as the country continued to depend heavily on India as a major exporter and importer and followed trade practice to take advantage of import quota provided by Europe and the U.S. As a result, the industrial sector remains susceptible to the foreign market trend and the

changing trade policies and systems of other countries. Foreign investment in the industrial sector continues to be dominated by India, thus not helping promote the country's industrial development in depth and width.

In promoting its international trade and investment, the country needs to focus on the accomplishment of the three intermediate goals (above-mentioned). More precisely, it is recommended to implement the following measures that clearly aim for promotion of trade and investment.

8.2.2.1 Recommended measures for trade promotion

(1) Formulation of product-specific export promotion strategy

As discussed earlier, Nepal has already set forth broad strategies for export promotion, including analysis of the current state, in "Trade Policy 2009" and "Nepal Trade Integration Strategy 2010 (NTIS)." Unfortunately, however, they have not been translated to specific action plans. For instance, Trade Policy 2009 specifies 13 working policies but fails to propose schemes to implement them. Similarly, NITS stops at analysis of exportable items, identification of issues, and proposition of action items, not going into specific measures to be undertaken. The MoCS, which has formulated these strategies, seems to present them to other ministries, the private sector and international donor organizations in the hope that they take a lead in implementing them and/or provide necessary support and assistance. This is a typical example of the failed working of policies and programs, which is attributable not only to budget constraint but also to the disregard for enforceability of broad policies, which has resulted in the lack of consistency and integrity with related policies and programs.

The study team proposes a strategic export promotion approach, which means the formulation of export promotion plans that are expressed by "5W1H," i.e., specific actions, methodology, resources, and time schedule. The most important export strategy for the country is to create a champion product that serves as a model case to follow. For instance, the government is striving to promote pashmina products by having "Chyangra Pashmina" registered as a collective trademark in various countries. Clearly, trademark registration alone is not sufficient. To develop pashmina to a champion product among Nepal's export items, it is essential to develop and implement an export promotion strategy that works well in the global market. For instance, the country's present supply capacity cannot meet the needs of the world pashmina market, which overshadows the high quality and low price advantages. The small amount of exports does not help increase recognition in the world market. The similar conditions are found in relation to other items having high export potential. The export promotion strategy should represents the country's committed efforts to develop a champion products, which should include integration of the production process, technical support for selection and processing of raw materials, product inspection, and effective promotion and advertisement in foreign markets. It is therefore recommended to conduct detailed market

survey for products with export potential, which results will form the basis of developing an effective export promotion strategy.

(2) Capacity building for the public supporting institution

As discussed earlier, the government's trade promotion system has various weaknesses. In particular, the Trade and Export Promotion Center, which was established to accelerate the country's export policy efforts, fails to serve as a prime engine for trade promotion. Clearly it is essential to define a primary role and function of TEPC before increasing the manpower and budget. The major challenge for export companies in Nepal (or development of export products) is to satisfy international quality standards. Many companies complain about low levels of technology, insufficient equipment, and low quality of raw materials, but they have to learn the ways to overcome the problems by making innovative efforts, while knowing the actual needs of the foreign markets. In so doing, adequate information should be collected and provided by a public organization, which is a primary role expected to be played by TEPC. At present, it provides only information on the local market. TEPC should go back to the starting point and needs to build up capacity required to fulfill its original role and function (as for development of networks, see (3) below).

(3) Accelerated building of networks to collect foreign market information

As discussed earlier, the lack of useful information on foreign markets and buyers constitutes a major bottleneck for Nepal's export promotion. Many products exported from Nepal are made on a contract basis and according to customer's specifications. It is far from exports on the basis of an elaborate strategy to satisfy the needs of specific markets by in-depth market survey. Today, leading buyers in industrialized countries evaluate product proposals by suppliers prior to the competitive bidding for contract manufacturing. Also, smaller buyers search good suppliers all over the world by using various information sources, such as trade promotion organizations run by government (JETRO of Japan, KOTRA of South Korea, MATRADE of Malaysia, and chambers of commerce and industry and trade representative offices of Europe and the U.S). This means Nepalese export companies are expected to have the ability to explore market opportunities by offering attractive product proposals. What the country needs at first is a formal organization and mechanism to collect and supply foreign market information that leads to the development of products that impress foreign buyers.

It is therefore important to build up information networks by strengthening cooperation with foreign trade promotion organizations and chambers of commerce and industry, while using international organizations and their resources, such as UNCTAD's Trade Point and the International Trade Center (ITC). Also, Fair Trade Organization's Nepal office is considered to be a useful information source. Women's Skills Development Organization in Pokhara has learned the needs of foreign markets and has successfully found buyers through effective promotional activity. This serves as a model case to be followed by many companies.

(4) Promotion of "Made in Nepal" brand

The establishment of a national brand is a major challenge for export promotion by any country. As Nepalese companies mostly export their products in response to orders by foreign buyers, leading export items, such as tea and pashmina, are not widely recognized in the international market. Only one brand widely known in foreign market is "Wai Wai" for instant noodles. At present, efforts are being made to have pashmina registered as a trademark on a global scale. Similar opportunities seem to be available for several other products, including orthodox tea and organic coffee. In doing so, the government is expected to provide auxiliary support, including foreign registration of trademarks, participation in international trade shows, and crackdown on imitations sold in and outside the country (including those sold at souvenir shops), which would help reinforce market confidence on Nepalese products as a whole.

(5) Promotion of exports to India and China

Nepal's geographical position bordering India and China means massive market opportunities within easy reach. However, this advantage has not been utilized effectively, and instead, it has resulted in high dependency on imports from the two countries. Clearly, the country and its industry cannot directly compete with these colossal economies. Instead, efforts should be made to use the tariff differentials with these countries and explore niche markets not covered their industries. Such efforts vary in size, ranging from a sizable project to small improvements.

For instance, the lack of standardization is considered to be major factor to prevent Nepal's agricultural products from being marketed in India's distribution channels. While the achievement of uniform quality including taste may take some time, size standardization can be accomplished by economical efforts within a short period of time. Also, proper washing and packaging of products, including the standardization of shipment units, can be largely dealt with by small efforts in the field, rather than sizable investment. Also, the government can play a leadership role in development of uniform systems and standards, the streamlining of inspection and other procedures, and information service via the Internet.

8.2.2.2 Recommended measures for investment promotion

(1) Formulation of strategic investment promotion plans

As seen in export promotion, the government does not have strategic action plans for investment promotion. For instance, the government and other organizations have already listed prospective industries and products for export and investment, without waiting for the Study. Unfortunately, however, they do not have an effective strategy to link the prospective industries and products with realistic investment promotion measures. For instance, although a negative list showing fields not open to foreign investment exists, there is no list presenting those

that welcome foreign investment[18]. Also, incentives for investment in priority areas are not distinctively different from those offered for other areas.

Investment promotion activity should differ in a manner of approaching potential investors between infrastructure and other large-scale projects and those relating to the development of private sector, such as light industries, tourism, and information service. While investment promotion activity is not undertaken at significant level, the government should have strategic investment promotion plans that focus on specific sectors, especially light industries, tourism and IT industry.

(2) Upgrading and strengthening of public relations and promotional activities relating to investment promotion

The lack of effective information promotion activity is inevitably accompanied by the lack of investment information on Nepal available to potential investors, not to mention a limited means of publicizing information. At present, the Confederation of Nepalese Industries (CNI) is developing the portal site "Invest Nepal" in cooperation of the MoI and under assistance of USAID. It is considered to be very useful for foreign investors by providing comprehensive information on Nepal's business environment and industries in English, including investment-related procedures and regulations. However, a question should be asked to the Nepalese government: Why is this type of information service provided by CNI, a private organization? It is highly desirable to provide information service and consultation for potential investors by the same organization.

Information service provided for the purpose of investment promotion is mainly targeted at India, while little investment promotion activity, including transmittal of information, has been carried out for other countries and regions. Nevertheless, the largest number of applications for foreign investment projects comes from China in the past five years, and applications by Korean companies are on the rise. Thus, promotional activities targeting countries other than India, on the basis of an elaborate strategy to make an effective appeal to each country and its industries, are expected to contribute significantly to the development of the private sector in Nepal. Thus, on the basis of investment promotion plans formulated as recommended in (1) above, efforts should be made to redefine and upgrade investment promotion activity for each of the countries selected as major targets, including methodology used for information dissemination, advertisement and promotion.

[18] Investment Board Act 2010 lists investment projects under IB's jurisdiction, which are mainly concerned with large-scale projects, such as infrastructure (such as airports, roads, railroads, waste treatment facilities, bridges, and hydropower plants), fertilizer plants, petroleum refineries, and hospitals with 300 or more beds. On the other hand, the DoI's negative list bars foreign investment in real estate, small industries (including retailers) and the manufacturing of fire arms.

(3) Investment promotion targeting local investors

Investment promotion activity, while not being conducted aggressively, has largely targeted foreign investors. However, the government's promotional efforts should try to explore as many investment projects as possible, which include local companies (including joint ventures) and entrepreneurs. They could also lead to vitalization of local industries by providing incentives as well as the business environment that supports new investment projects. At the same time, the government can establish standards and rules to be complied with by local investors, thereby to help improve competitiveness of local industries and create synergetic effects with other policies such as regional development.

Finally, promotion activity targeting local investors needs to be combined with public support relating to financing, land development, and marketing, in addition to investment seminars to disseminate useful investment information. For example, investment promotion should be packaged with the establishment of a startup loan program, nationwide deployment of business incubation service, and the establishment of industrial estates specialized in cottage and small industries, and the construction of an agricultural product processing and distribution center.

(4) Restructuring of the investment promotion system

The Nepalese government's investment related service is provided by the IB and the DoI, depending on the amount of investment (with the border line at Rs.10 billion). Note that service provided by the two organizations is limited to consultation and investment approval procedures, whereas there is no organization responsible for implementation of investment promotion activity. While there seems to be a tacit understanding on the government side that the IB and the DoI are also responsible for investment promotion, neither of them has human resources or the budget to conduct promotional activity. This explains why CNI, a private organization, undertakes investment promotion activities, including the development of an information portal site for potential investors.

Under these circumstances, priority should be given to the restructuring of the investment promotion system led by the government because the country needs to formulate and implement investment promotion plans under the leadership of a government organization having legal authority. Under the present system, investment projects demanded for the purpose of developing the private sector are generally not under the jurisdiction of the IB, while the DoI that should handle them fail to conduct investment promotion activity. If investment is to be positioned as a national policy priority, the investment promotion system should be reshuffled to ensure effective and sustainable implementation of investment promotion efforts under the unified leadership, e.g., concentration of power and authority in the IB so that it becomes responsible for investment promotion targeting both local and foreign investors regardless of project size.

8.2.3 Strategic Direction for Vitalization of Local Economy

Nepal's industrial resources mainly consist of agricultural products, water resources, and diverse tourist resources. Yet, rural areas endowed with rich resources (especially the mountain region and the Himalayas) are greatly handicapped in all aspects, including roads, telecommunications, human resource, goods, and capital. Coupled with the increase in outflow of people to overseas for work, they are lagged behind in the national development process. Under these circumstances, industrial development in rural areas constitutes a major agenda for the development of private sector in the sense that it will contribute to productive utilization of local resources and vitalization of local economy. In the section, possible strategies for vitalization of local economy are proposed.

Among the 24 products listed in the section 8.1.2, Selection of Products having High Growth Potential, eleven are listed as OVOPs, and thus the OVOP movement in Nepal serves as an industrial and trade promotion activity. If quality and production technology improve through the OVOP movement, exports of these products can boost. In that sense, the direction of revitalizing local economy through the OVOP movement is related to what development strategies for promotion of international trade and investment should be like, which is covered in the section 8.2.2.

(1) Road construction as infrastructure to drive industrial development in rural areas

Table 8.2-1 shows geographical distribution of medium-sized and large enterprises registered with the MoI[19] and cottage and small industries in 15 zones. As seen in the table, most companies are located in the central, hill and eastern (Terai) regions, including the Kathmandu metropolitan area, while very small percentages are found in the far-western, mid-western, and Himalayan regions. As these tables account for all the industries except for commerce, the distribution patterns shown are considered to represent geographical distribution of Nepal's industry as a whole.

Table 8.2-1 Geographical Distribution of Medium and Large Enterprises

	Far Western	Mid Western	Western	Central	Eastern
Mountain	0%	0%	0%	1%	1%
Hill	0%	0%	5%	65%	1%
Terai	1%	2%	5%	10%	8%

Source: DoI

[19] The category includes small enterprises owned by foreign investors according to the relevant regulation, while foreign companies are not counted in Table 8.2-2.

Table 8.2-2 Geographical Distribution of Cottage and Small Enterprises

	Far Western	Mid Western	Western	Central	Eastern
Mountain	1%	1%	0%	1%	1%
Hill	1%	4%	11%	36%	3%
Terai	3%	4%	8%	14%	11%

Source: DoCSI and CSIDB

On the other hand, Table 8.2-3 shows the percentage of paved roads by region. A general pattern somewhat corresponds to geographical distribution of companies; the percentage is very low in the mountain and hill areas in the western region as well as in the Himalayas. Clearly, poor access to transport caused by bad road conditions impedes development of tourist resources in the far-western, western and Himalaya regions, which would otherwise provide a precious investment opportunities for these regions. For example, the area around the lake Chhubhal in the Far West region has high potential as a tourist site, but the development of road and flight connection is delayed.

Table 8.2-3 Paved Road by Region

	Far Western	Mid Western	Western	Central	Eastern
Mountain	0.0%	0.0%	1.2%	7.1%	0.0%
Hill	18.3%	10.0%	28.8%	28.5%	13.9%
Terai	20.9%	14.1%	26.0%	20.8%	31.1%

Source: Department of Road

In other words, infrastructure development, especially road construction, is the prerequisite to the development of rural industries including tourism. Although voices are raised to demand construction of local airports to establish a transportation route over rough terrains widely seen in the country, access roads must be constructed to link an airport with surrounding communities if air transport service is to be used as the springboard for rural development. In this connection, it is encouraging to see that some road construction projects are implemented under the PPP model. To accelerate the pace of industrial development in rural areas, road construction must be made by using available resources including partnership with the private sector and other organizations.

(2) Fostering of local leadership for industrial development in rural areas

Rural industrial development, be it the type to use local resources or the one to attract a new industry, should be planned and implemented under a strong local initiative and leadership. In doing so, local leaders play an essential role in generating an original idea that leads to a development project by sharing it among local stakeholders. At present, however, there are few persons who are capable of serving as a true leader because many of the existing leaders are accustomed to follow the lead of the central government and its development programs. A primary example is seen in the OVOP movement that was conducted for five years, starting in

July 2006. As it was launched as a top-down, government-led development project, local people participated without a strong commitment and carried out activities planned and directed by the government, without contributing their own ideas. Although some leaders and staff members of FNCCI's district offices feel the need for local initiative and leadership, there is no formal mechanism to take it up at the central government level or no attempt to disseminate or discuss possibility of spontaneous development at the local level.

At present, there is a serious shortage of human resource, goods, and money that can be allocated to rural development efforts and the fostering of local leaders is not an easy task. Nevertheless, some moves are already made in several areas[20] and local leaders are emerging. To ride on the waves, it is important to provide government support for the establishment of a full-fledged local initiative and leadership and to advertise the successful attempts as a model case to be followed by other areas. Also, the government needs to build up a formal system to allow local leaders to train and nurture leaders in other areas. In this connection, the new OVOP movement as proposed later can be used as a mechanism to empower the fostering of local leadership. Leaders in Dolakha and Kaski attended JICA training in Japan on OVOP, and put in practice what they learnt. Active learning from oversea cases like this is necessary.

(3) Development of a nationwide physical distribution system

In the landlocked country with geographical features to prevent smooth distribution of goods, the lack of a physical distribution system is a major issue facing rural industrial development; it is particularly problematic in the mountain, hill and Himalaya regions. The issue is not only relating to a high distribution cost but also poor or even absence of market access that adversely affects rural economy and its development. Furthermore, poor market access means the lack of market information for producers in rural areas. Even if there are roads connected to a rural area, poor surface conditions often cause product loss or damage on the way to the market. Thus, development of a nationwide physical distribution system is a critical factor for successful development of rural industries. The Shinzuri Road Construction Project and its related project to develop a master plan for dissemination and promotion of higher value added agriculture in areas along the Shinzuri Road (SRCAMP), implemented under JICA's assistance, are considered as model cases toward the goal. In particular, high value added agricultural products and an agri-business model proposed as part of SRCAMP, which take into account local conditions, seem to be applicable to other areas in terms of a new approach adaptable to the entire country. The projects suggest the need for development of a physical distribution system that meets the needs of local industries and products in a specific area.

(4) Redesigning and re-launching of the OVOP initiative

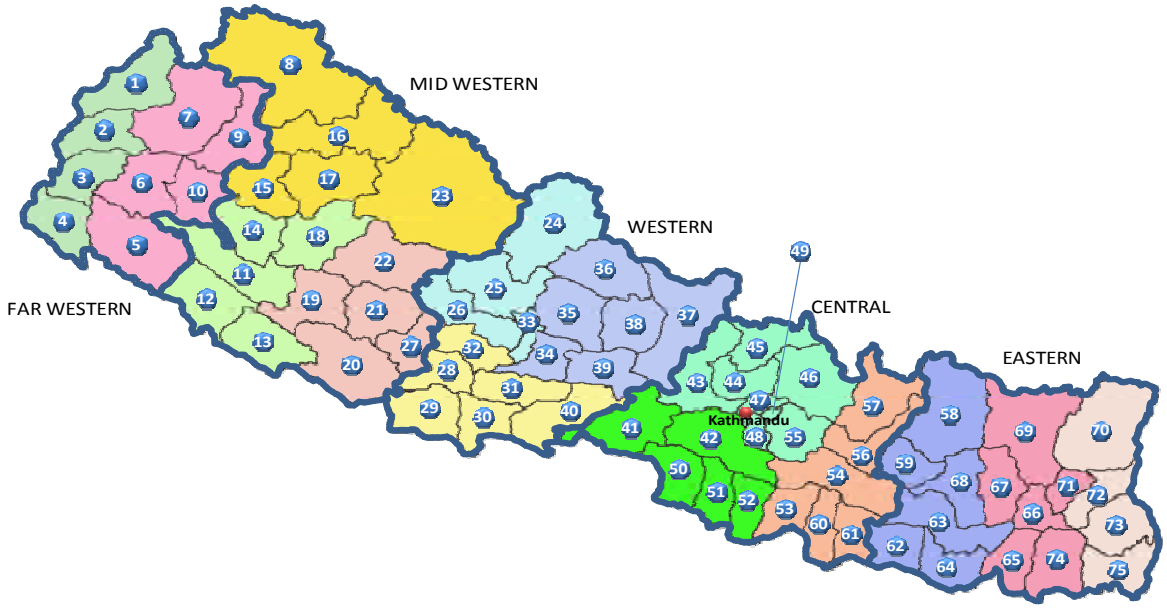
The original OVOP movement that was carried out for the past five years is characterized as an agricultural development program using government subsidy, which is significantly

[20] Including Dolakha, Nuwakot, and Kaski.

deviated from the true OVOP concept. There seem to be several reasons for this. Firstly, the program did not accompany sufficient training for human resources (local leaders), which would serve as a driving force. Secondly, the program focus was placed on expansion of agricultural production, rather than vitalization of local community and economy. Local people seem to have viewed the OVOP as a subsidy program and to have participated without a sense of spontaneity and ownership. Thirdly and finally, the OVOP movement lacked a basic principle in the OVOP movement in Oita in Japan and in Thailand, "think globally, act locally."

At present, a plan to continue the OVOP under a different title (ODOP : one district one product) is under consideration. Table 8.2-4 lists products and services that FNCCI's district offices throughout the country want to promote under the ODOP program. The list differs from the one for the original OVOP in that it includes Buddhist tourism, handicraft products, and special economic zones. It can be seen as an industrial promotion measures applying the OVOP movement. As in the case of the previous movement, these products and services have been selected under local initiative, but no detailed plans have been established as to the actual deployment of the program as a bottom-up movement. Besides, as the original OVOP program was led by the MoA, the OVOP secretariat raised a question about non-agricultural products in terms of their selection process and method. Although it is not clear as to how the program will be deployed until its actual launching, it should be recognized that the OVOP is an innovative instrument to vitalize local community and economy, rather than development and marketing of specialty products in rural areas. Furthermore, its starting point is the training of local leaders and the empowerment of local initiative and ownership.

Table 8.2-4 Selected Products by Each District (ODOP)



1. Darchula (Sheep Farming)	26. Baglung (Lokta (Daphne papyracea))	51. Bara (Potato)
2. Baitadi (Sheep Farming)	27. Puthan (Red Radish)	52. Rautahat (Fish)
3. Dadeldhura (Honey (Beekeeping))	28. Arghakhanchi (Honey)	53. Sarlahi (Turmeric)
4. Kanchanpur (Banana)	29. Kapilvastu (Buddhist Tourism)	54. Sindhuli (Junar (Sweet Orange))
5. Kailali (Agro and Herbal Processing)	30. Rupandehi (Buddhist Tourism)	55. Kavre (Lapsi (Hug Plum))
6. Doti (Jarailo Basmati Rice)	31. Palpa (Ginger)	56. Ramechhap (Junar (Sweet Orange))
7. Bajhang (Olive Oil)	32. Gulmi (Coffee)	57. Dolakha (Lokta (Daphne papyracea))
8. Humla (Eco-Tourism)	33. Parbat (Lapsi (Hug Plum)	58. Solkhumbu (Eco-Tourism)
9. Bajura (Amriso)	34. Syangja (Coffee)	59. Okhaldhunga (Chiraito)
10. Achham (Potato)	35. Kaski (Agro-Tourism)	60. Mahottrai (Mango)
11. Surkhet (Herbs Processing)	36. Manang (Buckwheat)	61. Dhanusha (Religious Tourism)
12. Bardiya (Bel (Aegle marmelous))	37. Gorkha (Tourism)	62. Siraha (Mango)
13. Banke (Flower (Cut flower))	38. Lamjung (Coffee)	63. Udayapur (Goat Farming)
14. Dailekh (Vegetable Seed)	39. Tanahun (Blackgram)	64. Saptari (Mango)
15. Kalikot (Goat Farming)	40. Nawalparasi (Buddhist Tourism)	65. Sunsari (Turmeric)
16. Mugu (Apple)	41. Chitwan (Medical City)	66. Dhankuta (Sugandhawal (Valerina Jatamansi Jones)
17. Jumla (Apple)	42. Makwanpur (Kiwi)	67. Bhojpur (Orange)
18. Jajarkot (Gemstones)	43. Dhading (Fresh Vegetables)	68. Khotang (Gemstones)
19. Salyan (Ginger)	44. Nuwakot (Rainbow Trout Fish)	69. Sankhuwasabha (Herbs)
20. Dang (Goat Farming)	45. Rasuwa (Rainbow Trout Fish)	70. Taplejung (Cardamom)
21. Rolpa (Allo)	46. Sindhupalchowk (Rainbow Trout Fish)	71. Therathum (Ginger)
22. Rukum (Vegetable Seed)	47. Katmandu (Tourism)	72. Panchathar (Cardamom)
23. Dolpa (Jatamansi)	48. Bhaktapur (Handicraft)	73. Illam (Tea)
24. Mustang (Apple)	49. Lalitpur (Lapsi (Hug Plum))	74. Morang (Neem (Azadirachta indica)
25. Myagdi (Timur)	50. Parsa (Special Economic Zone)	75. Jhapa (Areca Nut)

Source: OneDistrict One Product, 2012, FNCCI

8.2.4 Desirable Direction for Cooperation with Donor Organizations

At present, support programs conducted by international donor organizations in relation with the development of the private sector in Nepal are largely concentrated on trade, investment financial access, vocational training, and entrepreneurship. At the same time, capacity building support relating to government's policymaking and implementation is provided with an aim to improve the business environment by helping to develop or build up policies, systems and procedures that lead to effective promotion of the private sector's vitality. Under these circumstances, JICA is expected to assess directions and inclinations seen in a variety of policy agenda by closely monitoring discussions at the Nepal Business Forum, which provides a place for dialogue between the public and private sectors. At the same time, it is import to watch substance of discussion at the economic summit held as part of the ADB's Support for Formulating an Economic Development Vision, as it is effectively linked with the development of the country's long-term economic development vision and medium-term development plans.

(1) Support programs by major donor organizations in the area of the private sector development

The GIZ implements support activities in four districts, under the Inclusive Development of the Economy Programme, for the purpose of improving problem identification and proposal development capabilities of the local chamber of commerce and industry, thereby to encourage productive discussion between the public and private sectors at the local level. The program activities seem to be highly beneficial for other districts, and similar support will help them to understand the needs of the private sector in rural areas and provide effective support accordingly. The study team's interview survey has confirmed that local chambers of commerce and industry feel the need for capacity building in a variety of areas, including those covered by the GIZ's program.

As for business startup support in rural areas, it is desirable to cooperate with DoCSI under the MoI or CSIDB because their maintain district offices, and in fact, donor organizations are effectively using their networks. For instance, the UNDP implements Micro-Enterprise Development Program (MEDEP) in cooperation with the MoI, which consists of the training and certification of facilitators and BDS. It is therefore conceivable to use resources that have been developed and nurtured through the program. Also, skills development training can be undertaken by using instructors of USAID's Nepal Education for Income Generation Program and DFID's Employment Fund Nepal.

At the same time, in light of the fact that MEDEP is implemented for the primary purpose of poverty alleviation, care should be taken to provide startup support for the purpose of industrial development; the program target should focus on a limited number of entrepreneurs who have sufficiently high levels of technical resources in a specific area. Finally, in consideration of human resource constraint facing the DoCSI and CSIDB, the GIZ's support

program (as part of Inclusive Development of the Economy Programme) to provide information on business startup at the local chamber of commerce (in the form of one stop shop), as well as training before and after startup, seems to serve as a model case to be replicated.

As for various agricultural products including orthodox tea, ginger and MAPs, support programs are already underway in an effort to improve key steps of the value chain and to create an effective linkage between farmers and markets. In this connection, information exchange and close coordination are required when a support program is devised for an agricultural product that is already receiving other donor's support, because it may require coordination to avoid duplication of support programs (e.g., the installation of a collective pickup point for exported products), although similar support activities can be carried out in parallel, such as the teaching of cultivation techniques to farmers in different areas.

Support programs to improve financial access are carried out by multiple donor organizations. As they largely focus on the improvement of financial service networks and financial support for agricultural production and marketing in the western and far-western regions (with the exception of IFC's support venture fund development), care should also be taken to ensure information exchange and coordination to avoid duplication of efforts. Finally, questions have been raised about the absence of a formal channel to distribute aid funds effectively (i.e., a financial institution) in Nepal.

(2) Issues relating to donor support

Issues raised by major donor organizations with regard to implementation of support programs in relation to the development of the private sector are roundly classified into the following two categories.

1) Insufficient capability of counterpart organizations in terms of program assessment and implementation planning

Some donor organizations critically view the attitude of counterpart organizations, e.g., they tend to prepare plans and other documents, including priority setting, without careful background check and field survey, or they often fail to assume a leadership role. They also do not have the ability to develop implementable plans or evaluate previous programs, thus unable to hold productive discussion with donor organizations. They even try to use international aids to make up for the shortage of funds due to budget constraint. All in all, they do not always have the ability to evaluate effectiveness of a specific program accurately due to the lack of the working environment, including resources, that enables them to fulfill such function.

2) Lack of coordination capability

The MoI serves as the secretariat for the Nepal Business Forum (NBF) that is a formal place for discussion between the government and the private sector with regard to the

development of the private sector. The NBR often discusses proposals or requests made by the private sector, which require coordination with related ministries and other organizations on the basis of agreement reached at the forum. However, the MoI apparently lacks coordination capability, including coordination with donor organizations, i.e., it has accepted similar support programs proposed by donor organizations. As a result, some donor organizations directly support private organizations such as FNCCI and CNI.

8.3 Desirable Direction for JICA's Support

Finally, a desirable direction for assistance and support by the JICA is examined. Note that the following support schemes are proposed for the purpose of promoting the development of the private sector in Nepal, not necessarily targeting specific industries, so that they are designed to address the challenges and issues commonly seen in various industries and products. The proposals mainly take up the schemes that are classified according to the four key target areas, namely: (1) trade/investment promotion; (2) development of microenterprises and SMEs; (3) development of local industries and vitalization of local economy; and (4) development of tourism and ICT industry. Then, each support scheme contains any of the following six components.

- Capacity building and human resource development
- Development of related legal systems and institutions
- Upgrading of technological capability
- Market development/physical distribution
- Financial service
- Regional development

Note that, this report identifies and analyzes the three major issues that have large impacts on the private sector's development and that need to be properly addressed resolved as the preparation stage for full-fledged industrial development in the country, namely "electricity shortage," "poor road infrastructure," and "political instability." JICA has already assisted democratization and peacekeeping together with other donor institutions. JICA has also been conducting a variety of programs to address electricity shortage and poor road infrastructure. Assuming that support programs to improve electricity supply and road conditions will continue to be carried out by JICA and other donor organizations, together with the Nepalese government, at an accelerated pace, these issues are not addressed in the support schemes proposed herein.

Finally, the support schemes proposed below are presented as necessary measures and actions to be undertaken for the development of the private sector in Nepal, not necessarily indicating that they are to be implemented under assistance or support of the Japanese government. In fact, some of them are already implemented as part of programs initiated by the Nepalese government and/or other donor organizations, so that it is desirable to formulate implementation plans, including methodology, after coordination to avoid duplication of efforts.

8.3.1 Proposed Support Schemes and Outlines for Development

For each of the four target areas for development, the Study proposes the following support schemes.

(1) Trade/investment promotion

Here, common measures for trade and investment promotion are presented in a cross-sectional way. OVOP and local specialties are among support targets.

Support scheme	Outline
1) Support for development of product-specific export promotion strategy	To conduct market study and develop export promotion plans for product items that show high export potential.
2) Reinforcement of TEPC's organization/capacity building	To reinforce organizational strength of TEPC as the trade promotion organization and to improve administrative capability of staff members.
3) Traveling exhibition programs using permanent exhibition facilities in foreign countries	To hold traveling exhibitions to advertise Nepal's high-grade products at permanent exhibition facilities provided by Japan and other industrialized countries (including local governments) for products made in developing countries.
4) Business matching service using foreign trade promotion organizations, the chamber of commerce and industry, and other related organizations	To use market information stored by foreign trade promotion organizations, the chamber of commerce and industry, and other related organizations for export promotion by Nepalese companies (matching service between companies and markets)
5) Implementation of the "Made in Nepal" campaign	To carry out series of export promotion campaigns for Nepalese products by using a variety of media (including the ongoing strategy focusing on international trademark registration).
6) Support for formulation of strategic investment promotion plans	To help formulate strategic investment promotion plans that are effectively linked with the national industrial development and export promotion policies.
7) Reinforcement of organization/capacity building for investment promotion organizations	To restructure the present promotion system by redesigning and strengthening the function and role of IB and DoI to allow implementation of strategic promotion plans.
8) Amendment of the Investment Board Act and redesigning of incentives	To amend the act and redesign incentives for investors according to the new strategic investment promotion plans.
9) Support for productivity improvement of export-oriented companies	To implement a productivity improvement program for export-oriented manufacturers, mainly consisting of factory diagnosis and field guidance.

(2) Development of MEs/SMEs

Support schemes	Outline
1) Rural deployment of business incubation service	To establish BICs in major cities in other regions than Kathmandu (only one BIC at present).
2) Reinforcement of organization/capacity building for BDS providers	To promote capacity building of local BDSs, including FNCCI.
3) Launching of a startup support fund (seed money) program	To upgrade the MoI's SME Fund (grant) to a new financial support program for startup business that provides low interest loans.
4) Two-step loan program for export-oriented SMEs	To establish a loan program to assist export-oriented SMEs (with the export ratio of over 35%) in renewal and upgrading of production equipment.
5) Establishment of FNCCI's credit guarantee program	To establish a credit guarantee system that is operated by FNCCI in collaboration with the MoF and local financial institutions, with an aim to alleviate collateral requirements for borrowers. This program will include a training program for borrowing companies to teach credit management and related knowledge.
6) Restructuring of organizations in charge of promotion of cottage and small industries	To reorganize the DoCSI and CSIDB.

(3) Development of local industries/vitalization of local economy

Support scheme	Outline
1) Development of a physical distribution system in rural areas	o formulate plans for development of a nationwide physical distribution system (including shipment, storage, selection, and packaging) for local products, especially agricultural products, by dividing the country into 10-12 zones, and to build facilities and provide equipment in each zone.
2) Support of the OVOP movement	To launch a new OVOP initiative with the primary purpose of vitalizing local economy and community, which integrates activities relating to the development and promotion of a specialty product in each locality.
3) Support for projects to promote joint operation and establish collective facilities	To help install collective facilities for local farms, including selection, cleaning and storage facilities. Note that various instruments and arrangements used for the previous OVOP movement will be used where applicable.
4) Program for upgrading of design and packaging technology	To provide technical assistance and guidance for packaging and design relating to locally produced agricultural products.
5) Collaboration with Fair Trade Organization	To implement an export promotion program for local products by using Fair Trade Organization's networks in and outside of the country.

(4) Development of tourism/ICT industry

Support scheme	Outline
1) Formulation of a development master plan for Buddhist tourism	To formulate a development plan for Buddhist tourism sites in Lumbini and Kaplivastu, together with those in North India (for Lumbini, an existing development plan will form the basis of the new development plan).
2) Promotion of agro-tourism development	To promote nationwide development of agro-tourism using local resources and tourist attractions and to provide technical advice where possible.
3) Technical advice on tourism promotion activity in foreign countries	To provide technical advice on methodology to encourage rediscovery of tourist attractions in Nepal and advertise them to foreign tourist agencies and tourists in an effective manner.
4) Formulation of revitalization plans for the Banepa IT Park and attraction of investors	To develop plans to revitalize and upgrade the IT Park in Banepa and to attract companies.
5) Introduction of IT skill standard (ITSS)	To provide support for development and implementation of plans to introduce ITSS in Nepal by using India's experience as a model case.

The four approaches listed in the cross-sectional way broadly target all geographical area of Nepal, and yet the direction of support can be divided into "trade and investment promotion in the Terai" and "economic revitalization of hilly and mountain areas". That is, the two directions serve as two pillars of the private sector development in Nepal.

(5) Beneficiary (counterpart) organizations

Beneficiary (counterpart) organizations for the above support schemes are listed below (for acronyms for some organizations, see the list shown at the beginning of the report).

Table 8.3-1 Beneficiary Organizations of Support Schemes

	Capacity Building & HR	Legal system and institutions	Technological Capability	Market Development	Financing	Regional Development
Trade/Investment Development	IB, DoI, TEPC, CNI	MoI, MoCS,	TEPC,CNI	FNCCI,Local brokers, local CCI	RSB, Local banks	FNCCI,FNCSI
SME Development	DoCSI/ CSIDB, local CCI	MoI	FNCCI's Association/ local CCI	FNCCI's Association/ local CCI	FNCCI、Local banks	DoCSI/ CSIDB
Local industries	AEC/FNCCI/ MoA/local CCI	MoI	Local producers、DoFTQC, local CCI	FNCCI、FNCSI, local CCI	Local producers	DoCSI/ CSIDB
Tourism/ICT	BoT, LDT, local CCI	MoTCA	Local tourist agents, Guides	LDT	Local tourist agents	LDT、FNCCI

Annex-I Surveys of Manufacturing Establishments by the Central Bureau of Statistics

Annex-I Surveys of Manufacturing Establishments by the Central Bureau of Statistics

In Nepal, two statistical surveys are conducted to grasp the current state of the manufacturing sector, namely Census of Manufacturing Establishments (CME) and Survey of Small Manufacturing Establishments (SSME). CME is conducted every five years for manufacturing establishments with 10 or more engaged persons, and SSME is undertaken every ten years for those with less than 10. The most recent CME was conducted in 2006/07 and SSME in 2008/09. In the following, the current state of manufacturing establishments in the country is outlined on the basis of the results of the two statistical surveys.

(1) Census of Manufacturing Establishments 2006/2007

CME 2006/07 counted 3,446 establishments having 10 or more engaged persons, which had the total workforce of 177,550 persons, of which 169,891 were employees (49.3 per company on average). Their combined value of fixed assets was Rs.78.9 billion, with the annual value added totaling Rs.41 billion. In comparison to the previous survey in 2001/02, the number of enterprises increased by 7.2%, while the number of employees decreased by 7.5%.

Table AI-1 shows the number of establishments, the number of engaged persons, value of fixed assets, and value added for each of NSIC 2-digit industries. Industries with a large number of companies include food and beverage (863 establishments, 25.0% of total), other non-metallic mineral products (657, 19.1%), textiles (519, 15.1%), furniture (306, 8.9%), and wood and cork products (271, 7.9%), which together account for three fourths of the total. Top three industries in terms of the number of persons engaged are same; 68.2% are in them. In terms of value added, food and beverage (24.8% of total), tobacco products (17.9%), textiles (10.7%) and other non-metallic mineral products (8.6%) produce 90% of the total value added by the manufacturing sector. Roughly, it can be said that they are major manufacturing sub-sectors in Nepal. Although small in number, there are companies engaged in manufacture of electrical machinery and apparatus, other machinery and equipment, motor vehicles, trailers and semi-trailers, and television and communication equipment and apparatus,.

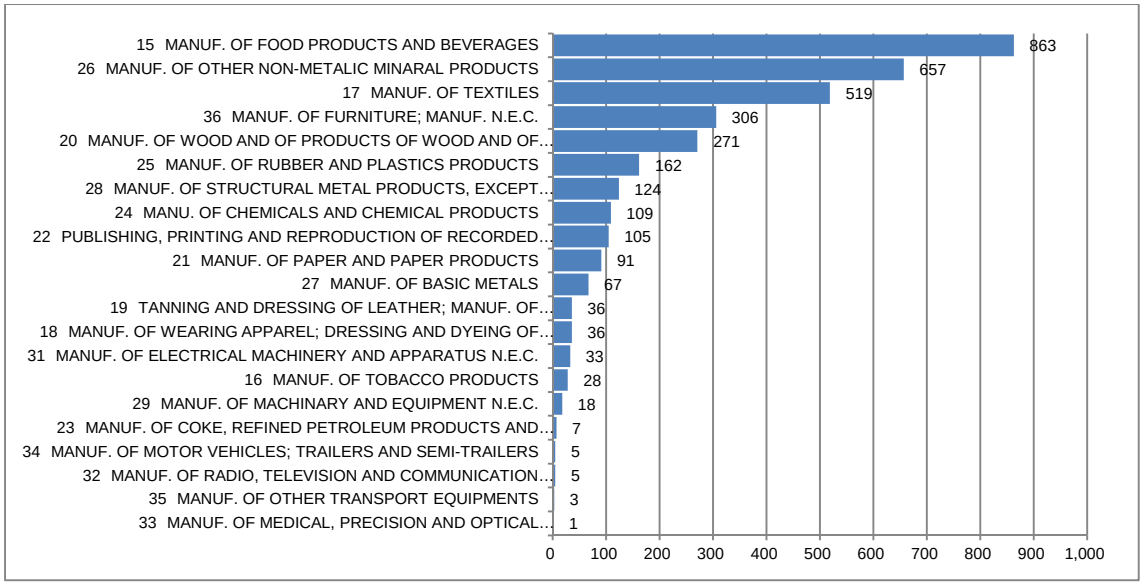
Table AI-1 CME 2006/07: Distribution of Enterprises according to NSIC 2-digit Classification

(Gross Fixed Assets and Value Added: Rp.1,000)

NSIC	Number of Establish-ment	Number of Persons engaged	Employ-ees	Gross Fixed Assets	Total Value Added
15 MANUF. OF FOOD PRODUCTS AND BEVERAGES	863	30,895	28,628	18,542,006	10,186,717
16 MANUF. OF TOBACCO PRODUCTS	28	2,618	2,545	706,580	7,328,996
17 MANUF. OF TEXTILES	519	41,126	40,232	12,316,391	4,400,256
18 MANUF. OF WEARING APPAREL; DRESSING AND DYEING OF FUR	36	4,864	4,797	725,873	406,925
19 TANNING AND DRESSING OF LEATHER; MANUF. OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS	36	1,227	1,164	425,239	244,587
20 MANUF. OF WOOD AND OF PRODUCTS OF WOOD AND OF PRODUCT OF WOOD AND CORK	271	5,046	4,493	932,017	505,113
21 MANUF. OF PAPER AND PAPER PRODUCTS	91	3,784	3,549	2,174,979	1,791,445
22 PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA	105	3,997	3,753	845,929	494,741
23 MANUF. OF COKE, REFINED PETROLEUM PRODUCTS AND NUCLEAR	7	434	427	107,777	904,198
24 MANU. OF CHEMICALS AND CHEMICAL PRODUCTS	109	8,287	7,907	18,393,112	3,000,788
25 MANUF. OF RUBBER AND PLASTICS PRODUCTS	162	7,218	6,902	3,726,874	1,799,959
26 MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	657	48,999	47,766	8,984,523	3,512,819
27 MANUF. OF BASIC METALS	67	3,677	3,542	3,524,098	2,094,475
28 MANUF. OF STRUCTURAL METAL PRODUCTS, EXCEPT MACHINARY AND EQUIPMENT	124	6,127	5,802	2,833,857	2,932,389
29 MANUF. OF MACHINARY AND EQUIPMENT N.E.C.	18	351	332	94,069	119,500
31 MANUF. OF ELECTRICAL MACHINERY AND APPARATUS N.E.C.	33	2,151	2,062	472,102	462,291
32 MANUF. OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS	5	370	361	51,054	110,009
33 MANUF. OF MEDICAL, PRECISION AND OPTICAL INSTRUMENTS, WATCH AND CLOCKS	1				
34 MANUF. OF MOTOR VEHICLES; TRAILERS AND SEMI-TRAILERS	5	213	202	47,380	20,397
35 MANUF. OF OTHER TRANSPORT EQUIPMENTS	3	169	166	57,134	32,036
36 MANUF. OF FURNITURE; MANUF. N.E.C.	306	5,076	4,377	811,302	421,269
85 TOTAL	3,446	177,550	169,891	78,889,352	41,001,263

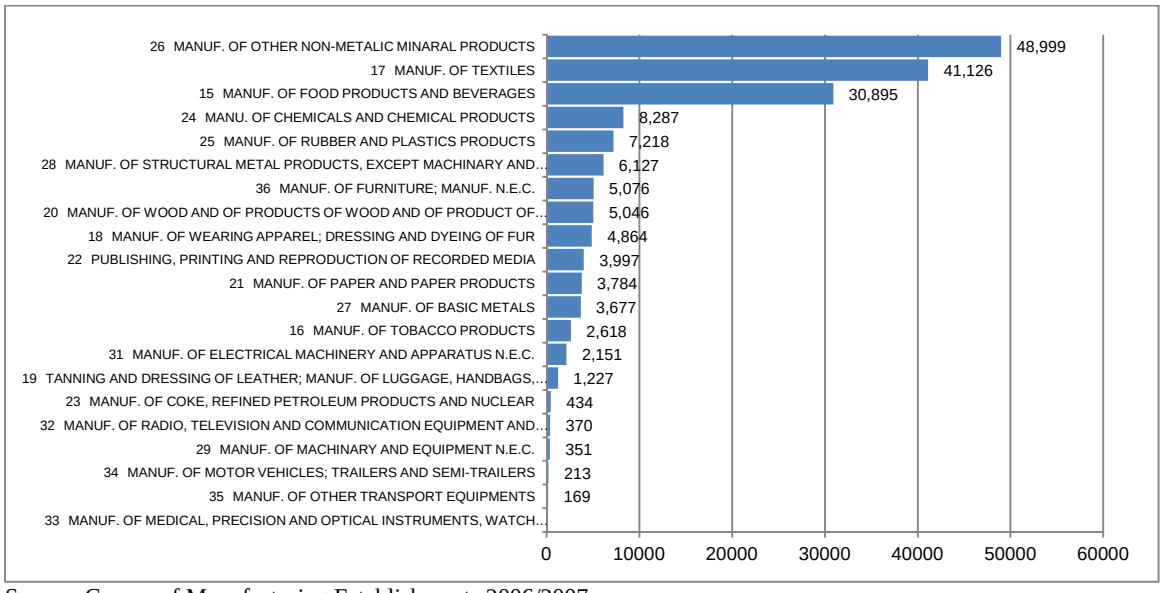
Source: Census of Manufacturing Establishments 2006/2007

Figure AI-1 to AI-3 show Table AI-1 in graphs to make the distribution of establishments more visible.



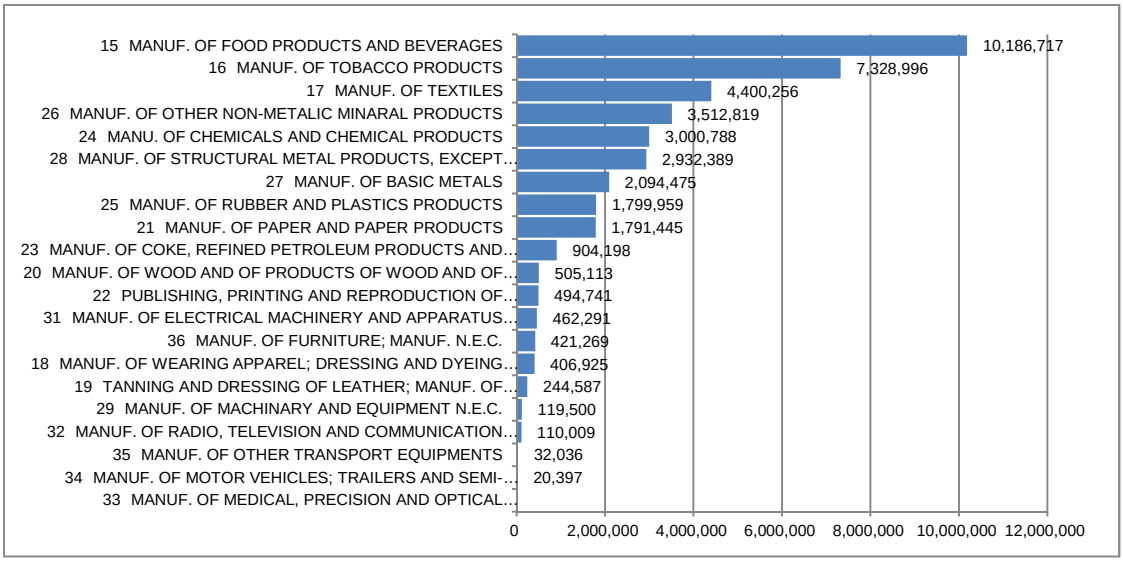
Source: Census of Manufacturing Establishments 2006/2007

Figure AI-1 CME 2006/07 NSIC 2-digit Classification: Number of Establishments



Source: Census of Manufacturing Establishments 2006/2007

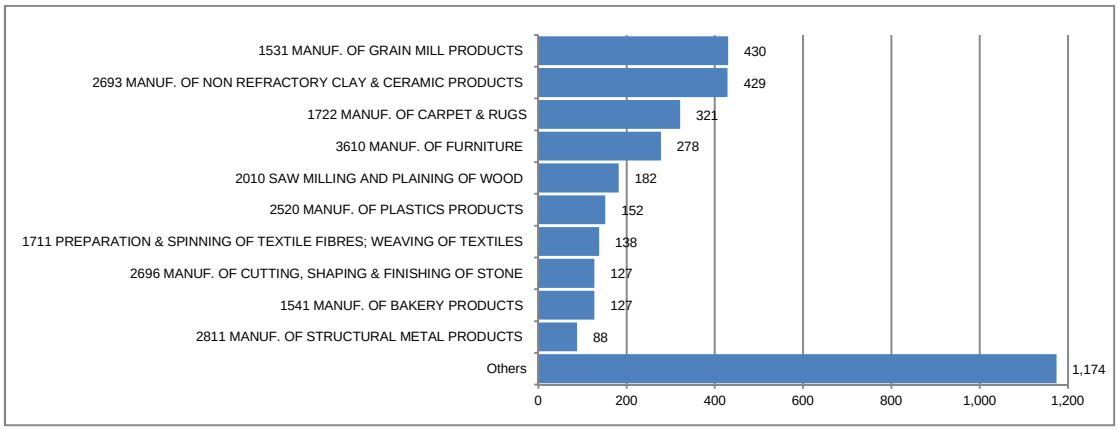
Figure AI-2 CME 2006/07 NSIC 2-digit Classification: Number of Persons Engaged



Source: Census of Manufacturing Establishments 2006/2007

Figure AI-3 CME 2006/07 NSIC 2-digit Classification: Accumulated Value Added

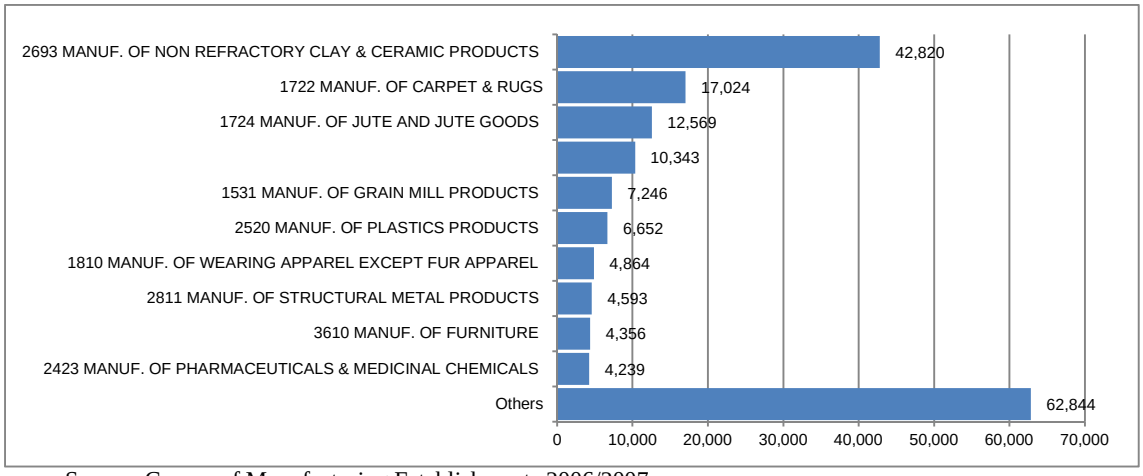
Under the NSIC 4-digit classification, a total of 85 kinds of manufacturing activities are confirmed. Figure AI-4 lists top ten NSIC 4-digit industries in the number of establishments. The manufacturing of grain mill products is the largest (430 establishments, 12.5% of total), followed by non-refractory clay and ceramic products (429, 12.4%), carpet and rugs (321, 9.3%), and furniture (278, 8.1%). The top ten industries account for a combined total of 65.9%.



Source: Census of Manufacturing Establishments 2006/2007

Figure AI-4 CME 2006/07 NSIC 4-digit Classification: Top 10 Industries in terms of the Number of Establishments

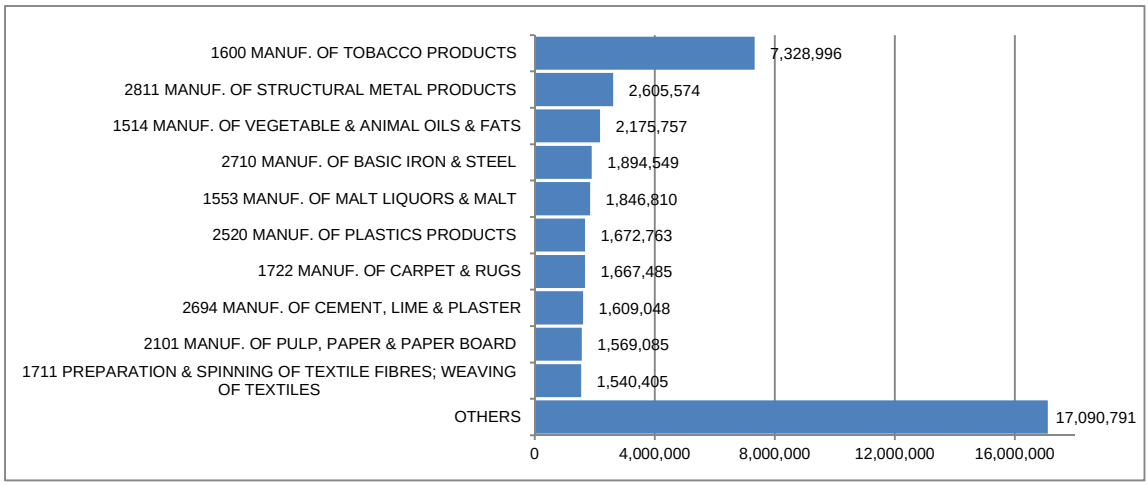
Table AI-5 lists top ten industries in the number of persons engaged. In comparison to the top 10 industries in the number of establishments (Table AI-4), saw milling, bakery products, and cement, lime and plaster are replaced with jute products, apparel products (not including fur products), and pharmaceuticals and medicinal chemicals.



Source: Census of Manufacturing Establishments 2006/2007

Figure AI-5 CME 2006/07 NSIC 4-digit Classification: Top 10 Industries in terms of Persons Engaged

As shown in Table AI-6, tobacco manufacturers hold a predominant share of 17.9%, followed by structural metal products (6.4%), vegetable and animal oils and fats (5.3%) and basic iron and steel (4.6%) in terms of value added. Note that four industries – structural metal product, plastics products, carpet and rugs, and textiles – are included in top ten in all the three categories (number of establishments, number of persons engaged, and value added).



Source: Census of Manufacturing Establishments 2006/2007

Figure AI-6 CME 2006/07 NSIC 4-digit Classification: Top 10 Industries in terms of Accumulated Value Added

Table AI-2 lists top 10 districts in terms of the number of establishments, number of persons engaged, and value added. The largest number of establishments, 480 establishments accounting for 13.9%, is in Kathmandu, followed by Morang (295, 8.6%), Rupandehi (225, 6.5%), Parsa (218, 6.3%). 64.6% are in the top 10 districts, all of which are either in the or in the Central hills except Kaski which are located in the West hills. In terms of the number of persons engaged, Nawalparasi in the West Terai is among the top 10 replacing Kaski. Comparing the top 10 in the number of persons engaged with those in value added, Jhapa and Bhaktapur are replaced with Makwanpur in

the Central hills and Dhanusha in the Central Terai; all top 10 districts in the categories are either in the Terai or in the Central hills.

Table AI-2 CME 2006/07 Top 10 Districts in the Number of Establishments, Number of Persons Engaged, and Value Added

(Value Added: Rp.1,000)

	Top 10 in the Number of Establishments	Number of Establishments	Top 10 in the Number of Persons Engaged	Number of Persons Engaged	Top 10 in the Value Added	Value Added
1	KATHMANDU	480	KATHMANDU	23,411	BARA	10,480,744
2	MORANG	295	MORANG	21,234	NAWALPARASI	3,948,751
3	RUPANDEHI	225	SUNSARI	17,644	KATHMANDU	3,919,801
4	PARSA	218	BARA	15,708	MORANG	3,458,214
5	SUNSARI	216	JHAPA	9,299	DHANUSHA	3,350,421
6	BARA	192	LALITPUR	8,772	PARSA	3,027,177
7	LALITPUR	186	PARSA	8,458	MAKWANPUR	2,485,271
8	KASKI	145	RUPANDEHI	7,962	SUNSARI	2,153,773
9	JHAPA	137	BHAKTPUR	6,726	RUPANDEHI	1,752,391
10	BHAKTPUR	132	NAWALPARASI	5,856	LALITPUR	838,503
-	OTHERS	1,220	OTHERS	52,480	OTHERS	5,586,217
	TOTAL	3,446	TOTAL	177,550	TOTAL	41,001,263

Source: Census of Manufacturing Establishments 2006/2007

Table AI-3 shows top 3 industries in terms of value added in the top 10 districts in value added. It can be said that they are major industries in these districts. The total value added is the highest in Bara district, mainly thanks to the agglomeration of the tobacco industry. Yet, value added by other major industries, food products and beverages, and structural metal products except machinery and equipment is also high. In Nawalparasi, three establishments engaged in paper and paper products account for 32% of the value added in the district. A lot of textile establishments are in Kathmandu, creating high value added. In Morang, a large number of establishments produce rubber and plastics products and wood products, but those in textiles and structural metal products industries come next to food products and beverages in terms of value added

Table AI-3 CME 2006/07 Major Industries in the Top 10 Districts in terms of Value Added

(Value Added: Rp.1,000)

District//SIC 2-digit Clasiffication		Number of Establish-ment	Number of Persons Engaged	Value Added
1. BARA		192	15,708	10,480,744
16	MANUF. OF TOBACCO PRODUCTS	6	509	3,987,499
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	65	2,408	1,545,964
28	MANUF. OF STRUCTURAL METAL PRODUCTS, EXCEPT MACHINARY AND EQUIPMENT	10	1,721	1,236,911
2. NAWALPARASI		72	5,856	3,948,751
21	MANUF. OF PAPER AND PAPER PRODUCTS	3	838	1,262,214

District//SIC 2-digit Clasiffication		Number of Establish-ment	Number of Persons Engaged	Value Added
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	36	875	74,379
26	MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	12	1,163	39,481
3. KATHMANDU		480	23,411	3,919,801
17	MANUF. OF TEXTILES	271	13,433	1,538,127
22	PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA	29	2,082	322,175
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	31	1,493	316,207
4. MORANG		295	21,234	3,458,214
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	68	1,881	747,888
28	MANUF. OF STRUCTURAL METAL PRODUCTS, EXCEPT MACHINARY AND EQUIPMENT	15	411	646,875
17	MANUF. OF TEXTILES	18	8,934	627,007
5. DHANUSHA*		69	4,311	3,350,421
26	MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	29	1,725	89,048
20	MANUF. OF WOOD AND OF PRODUCTS OF WOOD AND OF PRODUCT OF WOOD AND CORK	11	114	24,251
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	16	187	18,808
6. PARSA		218	8,458	3,027,177
27	MANUF. OF BASIC METALS	9	328	597,833
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	82	1,410	479,600
17	MANUF. OF TEXTILES	23	2,537	371,876
7. MAKWANPUR		51	3,590	2,485,271
24	MANU. OF CHEMICALS AND CHEMICAL PRODUCTS	9	654	1,153,459
26	MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	9	811	265,987
25	MANUF. OF RUBBER AND PLASTICS PRODUCTS	7	320	224,547
8. SUNSARI		216	17,644	2,153,773
17	MANUF. OF TEXTILES	12	7,158	812,650
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	86	2,500	403,095
24	MANU. OF CHEMICALS AND CHEMICAL PRODUCTS	11	520	150,091
9. RUPANDEHI		225	7,962	1,752,391
26	MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	53	2,881	538,863
28	MANUF. OF STRUCTURAL METAL PRODUCTS, EXCEPT MACHINARY AND EQUIPMENT	12	934	291,107
15	MANUF. OF FOOD PRODUCTS AND BEVERAGES	79	1,099	279,443
10. LALITPUR		186	8,772	838,503
17	MANUF. OF TEXTILES	56	2,393	345,911
26	MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	34	3,678	156,754
25	MANUF. OF RUBBER AND PLASTICS PRODUCTS	12	222	77,595

*Note: CME 2006/07 shows data on the number of persons engaged and value added of specific industries when there are three or more establishments in them. In Dhanusha, the value added accumulated in the industries in which three or more establishments are operating, which suggests that some of the following industries with only one or two establishments accumulate high value added; tobacco products, tanning and dressing of leather, paper and paper products, chemicals and chemical products, electrical machinery and apparatus n.e.c., and furniture; manuf. n.e.c.

Source: Census of Manufacturing Establishments 2006/2007

Figure AI-7 shows a map locating the districts among top 10 in terms of the number of establishments, the number of persons engaged, or value added. Five districts, namely Morang, Parsa, Rupandehi, Dhanusha and Jhapa, have a gateway city connected to India (Biratnagar, Birgunj, Siddharthanagar, Bhairahawa, Jaleswar and Kakarbhitta, respectively). Except Kaski where Pokhara is located, establishments with which 10 or more persons engaged concentrate in these areas convenient for trade or Kathmandu and its neighboring districts.

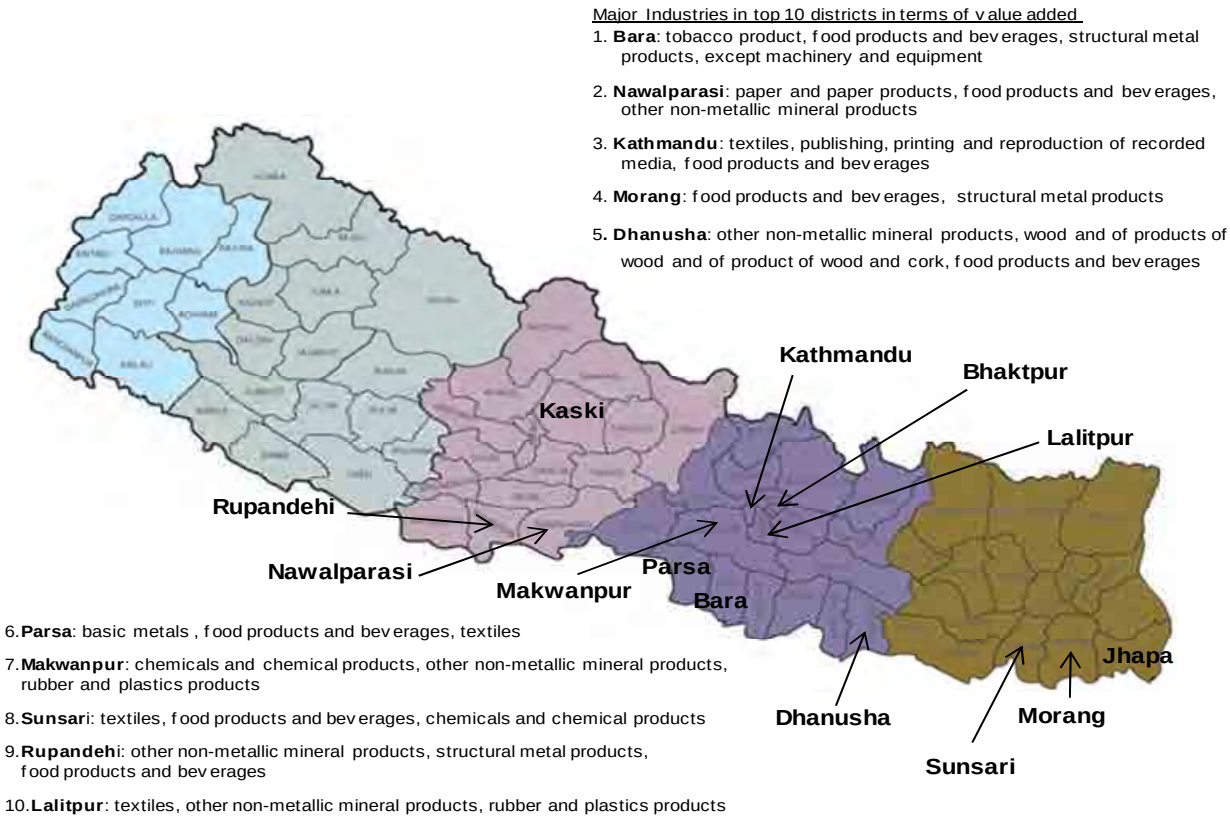


Figure AI-7 CME 2006/07 Top 10 Districts in the Number of Establishments, the Number of Persons Engaged, and Value Added

These 3,446 companies ship 269 kinds of products under CPC 4-digit classification, of which 109 products are exported to India. The total value of shipments are Rs.150.1 billion, of which Rs.110.1 billion (73.4% of total) are shipped to local markets and Rs.35.1 billion (23.4%) to India. Table AI-4 shows top 20 items in terms of the total value of shipments and Table AI-5 top 20 items in the value of shipments to India. They are basic items. Of the items in the total value of shipments, eight items are also included in the top 20 ranking of the value of shipments to India, including iron, steel and aluminum sheets, yarns of manmade filaments, animal or vegetable ghee, and fruit and vegetable juices. Whereas 11 items are sold mostly (over 90%) in the domestic market, around 80% of yarn of manmade filaments, carpets & other textile floor coverings, and fruit and vegetable juices are for foreign markets. 40 to 60 % of sheets of steel, aluminum and iron, animal or vegetable ghee, and woven fabrics of manmade filaments of yarn are exported too. All the top 20 products exported to India are among the top quartile of 269 products in terms of shipment value; including yarn of jute only 7.7% of which are sold at the domestic market, 12 out of the 20 items are exported-oriented (i.e., over 50% of production is exported). These figures suggest that some enterprises are export-oriented although few enterprises the JICA Study Team visited export their products.

To produce the 269 kinds of products, the manufacturers purchase 281 kinds of products. Table AI-7 shows top 20 items in the value of purchase. Imports from India account for 35.5% of the total purchase cost, or Rs.35.5 billion. The ratio is as high as 80-90% for some products. Furthermore, there seem to be many cases where products imported from India are purchased through Nepalese companies, and thus the dependency on Indian products should be even higher than the statistical figures.

Table AI-4 CME 2006/07: Top 20 Products (in terms of Value) Shipped by the 3,446 Establishments

(in 1,000 Rupees)

CPC CODE	PRODUCT	To NEPAL	To India	To Third Country	Total
4219	SHEETS OF STEEL, ALMUNIUM AND IRON	8,446,314	5,909,975	0	14,356,289
2501	CIGARS, CHEROOTS, CIGARILLOS & CIGARETTES OF TOBACCO	9,889,714	1,500	0	9,891,214
2169	ANIMAL OR VEGETABLE GHEE	3,414,699	4,190,856	81,239	7,686,794
2316	RICE, SEMI- OR WHOLLY MILLED	7,493,219	0	0	7,493,219
3744	CEMENT	7,214,094	180,387	0	7,394,481
2642	YARNS OF MAN MADE FILAMENTS	1,337,408	4,440,625	166,393	5,944,426
2165	SOYABEAN, SUNFLOWER-SEED & MUSTARDS OIL, REFINED	5,233,026	0	0	5,233,026
4127	IRON PIPE & PIPE FITTING PRODUCTS	2,856,099	1,189,513	17,246	4,062,858
3532	SOAP & DETERGENTS, PERFUME & TOILET PREPARATIONS	3,019,952	893,545	0	3,913,497
4124	IRON RODS	2,533,185	1,119,748	0	3,652,933
2353	SUGAR	2,898,190	0	0	2,898,190
2721	CARPETS & OTHER TEXTILE FLOOR COVERINGS	576,941	81,007	2,221,428	2,879,376
2671	WOVEN FABRICS OF MAN MADE FILAMENTS OF YARN	1,074,064	1,478,261	0	2,552,325
2431	BEER MADE FROM MALT	2,310,679	4,744	1,124	2,316,547
3735	BRICK, BLOCK AND TILES	2,268,582	0	0	2,268,582
3529	OTHER PHARMACEUTICAL PRODUCTS	1,967,266	179,332	0	2,146,598
2211	PROCESSED LIQUID MILK	2,110,575	0	0	2,110,575
2449	SQUASH, COCA-COLA, PHANTA	2,060,553	8,576	890	2,070,019
2140	FRUIT JUICES & VEGETABLE JUICES	412,214	1,545,500	0	1,957,714
2413	ALCOHOL	1,950,686	0	0	1,950,686
Others		41,074,907	13,842,546	2,413,776	57,331,229
Total		110,142,367	35,066,115	4,902,096	150,110,578
%		73.4%	23.4%	3.3%	

Source: Census of Manufacturing Establishments 2006/2007

Table AI-5 CME 2006/07: Top 20 Products (in terms of Value) Shipped to India by the 3,446 Establishments

(in 1,000 Rupees)

CPC CODE	PRODUCTION	NEPAL	India	Third Country	Total	Ranking in T3.2-12	% of domestic sales
4219	SHEETS OF STEEL, ALMUNIUM AND IRON	8,446,314	5,909,975	0	14,356,289	1	
2642	YARNS OF MAN MADE FILAMENTS	1,337,408	4,440,625	166,393	5,944,426	6	
2169	ANIMAL OR VEGETABLE GHEE	3,414,699	4,190,856	81,239	7,686,794	3	
2140	FRUIT JUICES & VEGETABLE JUICES	412,214	1,545,500	0	1,957,714	19	
2671	WOVEN FABRICS OF MAN MADE FILAMENTS OF YARN	1,074,064	1,478,261	0	2,552,325	13	
4127	IRON PIPE & PIPE FITTING PRODUCTS	2,856,099	1,189,513	17,246	4,062,858	8	
4124	IRON RODS	2,533,185	1,119,748	0	3,652,933	10	
2638	***YARN OF ZUTE***	***93,441***	***1,119,493***	***0***	***1,212,934***	***34***	
2715	***SACKS & BAGS FOR THE PACKING OF GOODS***	***160,601***	***1,083,154***	***5,060***	***1,248,815***	***33***	
4151	***BRASS***	***245,018***	***1,048,268***	***0***	***1,293,286***	***32***	
2661	***WOVEN FABRICS OF COTTON***	***818,669***	***1,010,391***	***9,125***	***1,838,185***	***22***	
3699	***ARTICLES OF PLASTICS N.E.C. TANKI ETC***	***371,257***	***950,202***	***60,180***	***1,381,639***	***29***	
3532	SOAP & DETERGENTS, PERFUME & TOILET PREPARATIONS	3,019,952	893,545	0	3,913,497	9	
2365	***CHOCOLATE & COCA (BULK FORM)***	***495,540***	***672,700***	***0***	***1,168,240***	***35***	
9990	***OTHER***	***806,166***	***554,233***	***2,705***	***1,363,104***	***30***	
3641	***SACKS & BAGS OF PLASTIC***	***323,710***	***553,066***	***0***	***876,776***	***45***	
3639	***SHEET, FILM, FOIL & OTHER STRIP OF PLASTIC***	***285,443***	***527,350***	***354,136***	***1,166,929***	***36***	
4291	***DOMESTIC METAL PRODUCTS***	***498,419***	***460,299***	***0***	***958,718***	***44***	
2391	***COFFEE & TEA***	***607,497***	***453,953***	***82,324***	***1,143,774***	***38***	
4153	***ALUMINIUM ALLOYS***	***1,275,851***	***438,816***	***0***	***1,714,667***	***25***	
2636	***COTTON YARN (OTHER THAN SEWING THREAD)***	***74,448***	***432,597***	***0***	***507,045***	***57***	
Others		81,798,538	5,547,803	4,126,393	91,472,734		
Total		110,142,367	35,066,115	4,902,096	150,110,578		

Note: goods shown in bold letters are not included top 20 products in Table 3.2-12.
Source: Census of Manufacturing Establishments 2006/2007

Table AI-6 CME 2006/07: Top 20 Items (in terms of Value) Procured by the 3,446 Establishments

(in 1,000 Rupees)

CPC CODE	RAW MATERIAL	NEPAL	INDIA	THIRD COUNTRY	TOTAL	% of INDIA
4123	OTHER FLAT ROLLED PRODUCTS	293,550	8,295,120	65,432	8,654,102	95.9%
113	PADDY	7,379,966	1,396	0	7,381,362	0%
3631	PVC RESIN, PVC & PLASTIC GRANULES	1,654,349	2,484,864	2,388,612	6,527,825	38.1%
2164	PALM OIL, COCONUT, PALM KERNEL, LINESEED, CRUDE OIL	893,686		929,971	6,166,067	0%
4126	FOLDED PRODUCTS OF IRON & STEELS	354,685	4,342,410	374,031	5,071,126	85.6%
2163	SOYABEAN, GROUNDNUT, OLIVE & MUSTARD CRUDE OIL	206,756	19,661	3,564,236	3,790,653	0.5%
9990	OTHER	2,351,443	601,733	710,135	3,663,311	16.4%
2641	FIBERS	455,468	1,690,749	1,117,069	3,263,286	51.8%
3743	CEMENT CLINKERS	90,628	2,814,635	0	2,905,263	96.9%
182	SUGARCANE	2,387,886	2,591	0	2,390,477	0.1%
3935	REMELTING SCRAP OF IRON OR STEEL	191,375	1,826,983	141,839	2,160,197	84.6%
4151	BRASS SCRAP, GUN METAL , TIN PLATE ETC	225,403	911,005	934,055	2,070,463	44.0%
3532	SOAP & DETERGENTS, PERFUME & TOILET PREPARATIONS	9,104	20,532	1,811,279	1,840,915	1.1%
291	RAW MILK	1,823,458	1,457	0	1,824,915	0.1%
3549	CHEMICALS ACCORDING TO RESPECTED INDUSTRY	432,884	731,000	453,920	1,617,804	45.2%
4124	IRON RODS	182,970	976,253	440,163	1,599,386	61.0%
4153	ALUMINIUM ALLOYS	148,427	642,761	786,369	1,577,557	40.7%
2617	LOKTA & ARGELI, RESHA OF ZUTE	614,300	533,285	223,567	1,371,152	38.9%
4154	LEAD, ZINC & TIN OR THEIR ALLOYS	214,357	393,777	661,564	1,269,698	31.0%
143	MUSTARD SEEDS, SUNFLOWER	555,695	295,177	409,374	1,260,246	23.4%
Others		19,432,434	8,982,491	5,497,932	33,912,605	
Total		39,898,824	35,567,880	20,509,548	100,318,410	
%		39.8%	35.5%	20.4%	100%	

Source: Census of Manufacturing Establishments 2006/2007

(2) Survey of Small Manufacturing Establishments (SSME) 2008/09

SSME 2008/09 counted 32,326 companies having less than 10 persons engaged, which had the total workforce of 122,200 persons, of which 67,376 were employees (2.1 per company). Their combined value of fixed assets was Rs.22.9 billion, with the annual value added totaling Rs.11.5 billion.

Table AI-8 shows the number of establishments, the number of employees, value of fixed assets, and value added for each of NSIC 2-digit industries. Industries having the largest number of companies are food and beverage (14,767 establishments), followed by furniture and other products (5,716) and apparel (5,402). The top three sectors account for around 80% of the total number of companies and nearly 70% of total value added.

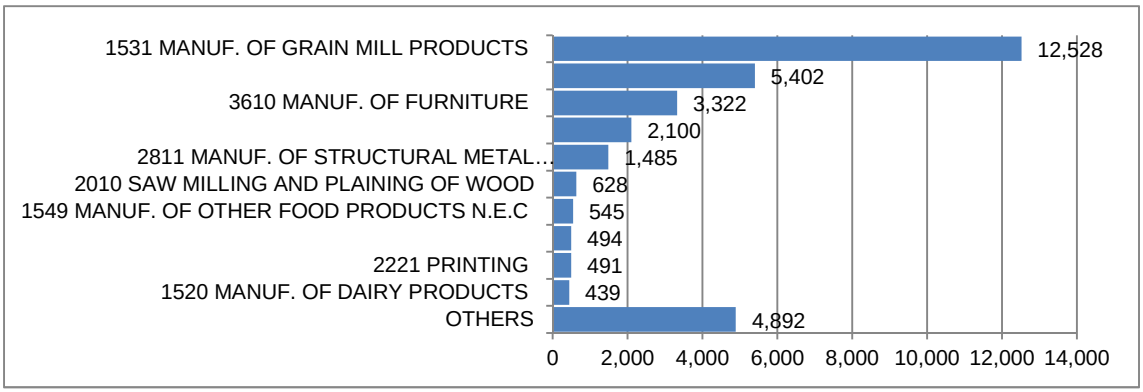
Table AI-8 SSME 2008/09: Distribution of Enterprises according to NSIC 2-digit Classification

(Unit: 1,000 Rupees)

NSIC	Number of Establish-ment	Number of Persons engaged	Employ-ees	Gross Fixed Assets	Total Value Added
15 MANUF. OF FOOD PRODUCTS AND BEVERAGES	14,767	42,416	17,157	11,405,469	3,334,507
16 MANUF. OF TOBACCO PRODUCTS	47	135	49	33,197	12,190
17 MANUF. OF TEXTILES	807	5,049	3,456	1,172,998	722,087
18 MANUF. OF WEARING APPAREL; DRESSING AND DYEING OF FUR	5,402	19,977	10,753	866,778	1,574,186
19 TANNING AND DRESSING OF LEATHER; MANUF. OF LUGGAGE, HANDBAGS, SADDLERY AND HARNESS	323	909	390	26,759	83,955
20 MANUF. OF WOOD AND OF PRODUCTS OF WOOD AND OF PRODUCT OF WOOD AND CORK	1,199	6,134	4,358	1,516,599	675,128
21 MANUF. OF PAPER AND PAPER PRODUCTS	152	1,215	873	69,080	45,927
22 PUBLISHING, PRINTING AND REPRODUCTION OF RECORDED MEDIA	550	2,684	1,762	723,372	251,839
24 MANU. OF CHEMICALS AND CHEMICAL PRODUCTS	202	940	534	190,493	131,925
25 MANUF. OF RUBBER AND PLASTICS PRODUCTS	124	675	489	445,089	95,249
26 MANUF. OF OTHER NON-METALIC MINARAL PRODUCTS	993	8,066	6,026	1,515,058	742,660
27 MANUF. OF BASIC METALS	103	484	272	195,492	51,971
28 MANUF. OF STRUCTURAL METAL PRODUCTS, EXCEPT MACHINARY AND EQUIPMENT	1,811	7,824	5,002	1,022,681	782,090
29 MANUF. OF MACHINARY AND EQUIPMENT N.E.C.	46	223	153	14,404	19,643
31 MANUF. OF ELECTRICAL MACHINERY AND APPARATUS N.E.C.	7	31	24	9,653	4,260
32 MANUF. OF RADIO, TELEVISION AND COMMUNICATION EQUIPMENT AND APPARATUS	1				
33 MANUF. OF MEDICAL, PRECISION AND OPTICAL INSTRUMENTS, WATCH AND CLOCKS	1				
34 MANUF. OF MOTOR VEHICLES; TRAILERS AND SEMI-TRAILERS	68	446	344	29,498	55,186
35 MANUF. OF OTHER TRANSPORT EQUIPMENTS	7	37	29	2,120	5,185
36 MANUF. OF FURNITURE; MANUF. N.E.C.	5,716	24,883	15,655	3,599,626	2,855,517
75 TOTAL	32,326	122,200	67,376	22,860,914	11,458,478

Source: Survey of Small Manufacturing Establishments 2008/09

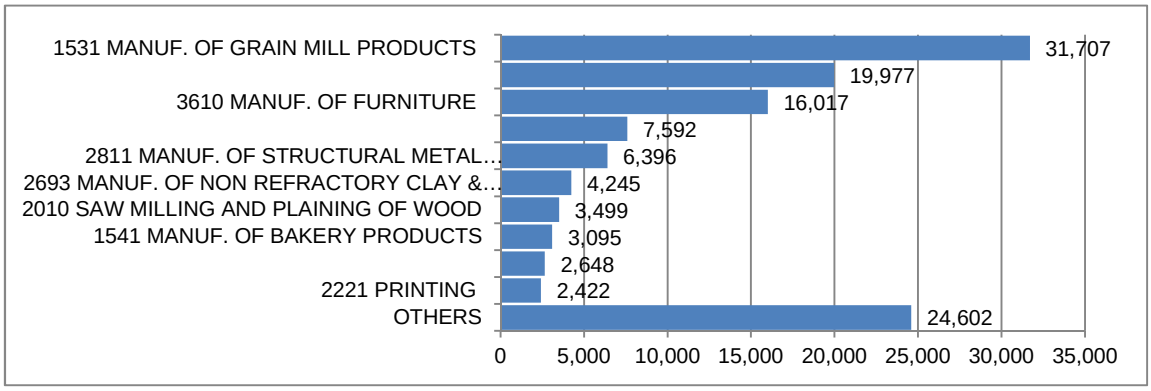
A total of 75 kinds of manufacturing activities are found under the NSIC 4-digit classification. As shown in Figure AI-8, manufacturers of grain mill products are the largest in number (12,528 companies) and account for 84.8% of the food and beverage industry. Then two industries that rank high under the NSIC 2-digit classification – apparel (5,402) and furniture (3,322) – ranked second and third, followed by jewelry and related products (2,100).



Source: Survey of Small Manufacturing Establishments 2008/09

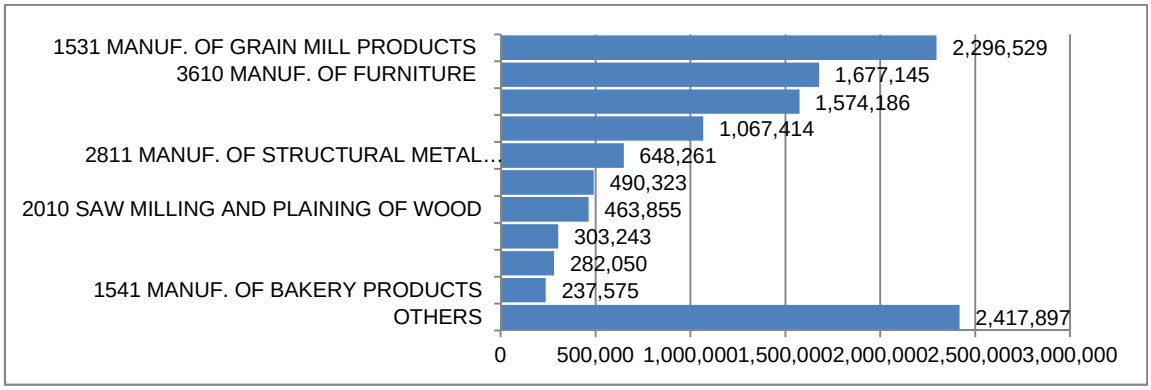
Figure AI-8 SSME 2008/09 NSIC 4-digit Classification: Top 10 Industries in terms of the Number of Establishments

The top three ranking is the same for the number of persons engaged and value added; companies in the three industries absorb 55.4% of the workforce in small manufacturers and 48.4% of the total value added (Figure AI-9 and Figure AI-10, respectively). Note that, as for value added, companies engaged in preparation of textile fibers and cutting and shaping of stone ranked relatively high, 6th (4.3%) and 8th (2.6%) respectively, in contrast to a relatively small number of companies and employees.



Source: Survey of Small Manufacturing Establishments 2008/09

Figure AI-9 SSME 2008/09 NSIC 4-digit Classification: Top 10 Industries in terms of the Number of Persons Engaged



Source: Survey of Small Manufacturing Establishments 2008/09

Figure AI-10 SSME 2008/09 NSIC 4-digit Classification: Top 10 Industries in terms of Value Added

The 32,326 companies are reported to ship 154 kinds of goods and purchase 186 kinds of raw materials (Table AI-9). Their shipment destinations and procurement sources are mostly inside the country, suggesting that most of small manufacturers with less than 10 engaged persons complete transactions within Nepal (although some domestically procured products should be imports). No clues are in the statistics, but they may prefer selling their products to traders to looking for buyers abroad or making trade procedures by themselves (or they are not able to find foreign buyers by themselves).

Only 4 items – other pharmaceutical products, oil cakes, blankets, and vegetable and fruit juices – are reported to be shipped to India. However, the largest value of shipments (other pharmaceutical products) is less than Rs.40 million (Table 3.2-21). On the other hand, 48 items are imported from India, and rice, aluminum alloys, and news printing paper account for 77.6% of the total purchase from India.

Table AI-9 SME 2008/09: Top 20 Products Shipped by the 32,326 Establishments

(IN THOUSAND RUPEES)

CPC	CPC NAME	NEPAL	INDIA	3RD COUNTRY	TOTAL
3824	JEWELLERY AND OTHER ARTICLES OF PRECIOUS METAL OR OF METAL CLAD WITH PRECIOUS ME	6,917,643	0	0	6,917,643
2316	RICE, SEMI- OR WHOLLY MILLED	4,803,171	0	0	4,803,171
4212	DOORS, WINDOWS AND THEIR FRAMES AND THRESHOLDS FOR DOORS, OF IRON, STEEL OR ALUM	2,268,779	0	0	2,268,779
2315	OTHER CEREAL GRAIN PRODUCTS (INCLUDING CORN FLAKES)	1,933,333	0	0	1,933,333
3110	WOOD, SAWN OR CHIPPED LENGTHWISE, SLICED OR PEELED, OF A THICKNESS EXCEEDING 6 M	1,793,369	0	0	1,793,369
3814	OTHER FURNITURE N.E.C	1,715,114	0	0	1,715,114
3812	OTHER FURNITURE, OF A KIND USED IN OFFICES	1,650,549	0	0	1,650,549
3160	BUILDERS' JOINERY AND CARPENTRY OF WOOD (INCLUDING CELLULAR WOOD PANELS, ASSEMBL	1,113,216	0	0	1,113,216
3769	OTHER WORKED MONUMENTAL OR BUILDING STONE AND ARTICLES THEREOF; OTHER ARTIFICIAL	1,092,443	0	0	1,092,443
2823	WEARING APPAREL, OF TEXTILE FABRIC, NOT KNITTED OR CROCHETED; BRASSIERES, CORSET	940,925	0	0	940,925
2165	SOYA-BEAN, GROUND-NUT, OLIVE, SUNFLOWER-SEED, SAFFLOWER, COTTON-SEED, RAPE, COLZ	721,737	0	0	721,737
2661	WOVEN FABRICS OF COTTON, CONTAINING 85% OR MORE BY WEIGHT OF COTTON, WEIGHING NO	509,655	0	0	509,655
3260	REGISTERS, ACCOUNT BOOKS, NOTE BOOKS, LETTER PADS, DIARIES AND SIMILAR ARTICLES,	501,858	0	0	501,858
2211	PROCESSED LIQUID MILK	475,060	0	0	475,060
2331	PREPARATIONS USED IN ANIMAL FEEDING N.E.C.	438,312	0	0	438,312
3756	OTHER ARTICLES OF CEMENT, CONCRETE OR ARTIFICIAL STONE	430,386	0	0	430,386
3754	TILES, FLAGSTONES, BRICKS AND SIMILAR ARTICLES, OF CEMENT, CONCRETE OR ARTIFICIA	366,336	0	0	366,336
2352	REFINED CANE OR BEET SUGAR AND CHEMICALLY PURE SUCROSE, IN SOLID FORM, NOT CONTA	354,765	0	0	354,765
2399	OTHER FOOD PRODUCTS	338,930	0	0	338,930
2341	CRISPBREAD; RUSKS, TOASTED BREAD AND SIMILAR TOASTED PRODUCTS	328,872	0	0	328,872
OTHERS					
TOTAL		35,019,226	42,719	1,000	35,062,945
		99.9%	0.1%	0.0%	

Source: Survey of Small Manufacturing Establishments 2008/09

Table AI-10 SSME 2008/09: Top 20 Items Procured by the 32,326 Establishments

(IN THOUSAND RUPEES)

		NEPAL	INDIA	3RD COUNTRY	TOTAL
4132	GOLD (INCLUDING GOLD PLATED WITH PLATINUM), UNWROUGHT OR IN SEMI-MANUFACTURED	5,528,713	0	0	5,528,713
113	RICE, NOT HUSKED	5,337,671	0	0	5,337,671
3110	WOOD, SAWN OR CHIPPED LENGTHWISE, SLICED OR PEELED, OF A THICKNESS EXCEEDING 6 M	2,296,719	0	0	2,296,719
4123	OTHER FLAT-ROLLED PRODUCTS OF IRON OR STEEL	1,529,281	24,612	0	1,553,893
311	LOGS OF CONIFEROUS WOOD	1,391,522	0	0	1,391,522
291	RAW MILK	723,808	0	0	723,808
1513	GRANITE, SANDSTONE AND OTHER MONUMENTAL OR BUILDING STONE	635,069	0	0	635,069
143	SUNFLOWER, SESAMUM, SAFFLOWER, RAPE, COLZA AND MUSTARD SEEDS	538,993	2,999	0	541,992
4131	SILVER (INCLUDING SILVER PLATED WITH GOLD OR PLATINUM), UNWROUGHT OR IN SEMI-MAN	488,117	0	0	488,117
2311	WHEAT OR MESLIN FLOUR	410,510	0	0	410,510
3212	NEWSPRINT, HAND-MADE PAPER AND OTHER UNCOATED PAPER AND PAPERBOARD OF A KIND USKEg	298,552	109,607	0	408,159
119	OTHER CEREALS	404,356	0	0	404,356
3141	PLYWOOD CONSISTING SOLELY OF SHEETS OF WOOD	379,892	0	0	379,892
2671	WOVEN FABRICS OF MAN-MADE FILAMENT YARN, OBTAINED FROM HIGH TENACITY YARN OF NYL	297,665	2,026	0	299,691
112	MAIZE (CORN)	287,487	0	0	287,487
3631	MONOFILAMENT OF WHICH ANY CROSS-SECTIONAL DIMENSION EXCEEDS 1 MM, RODS, STICKS	234,402	0	46,800	281,202
182	SUGAR CANE	272,198	0	0	272,198
2661	WOVEN FABRICS OF COTTON, CONTAINING 85% OR MORE BY WEIGHT OF COTTON, WEIGHING	267,256	1,483	0	268,739
3744	PORTLAND CEMENT, ALUMINOUS CEMENT, SLAG CEMENT AND SIMILAR HYDRAULIC CEMENTS,	259,670	0	0	259,670
OTHERS					
TOTAL		25,079,258	460,704	49,411	25,589,370
		98.0%	1.8%	0.2%	

Source: Survey of Small Manufacturing Establishments 2008/09

(3) Capacity Utilization

Table AI-11 shows capacity utilization of establishments surveyed in CME 2006/07. The largest number of respondents (39.8% or 1,362 establishments) runs their factories at the operation rate between 40 and 60 %. 29.6% or 1,015 establishments do at 60 to 80%. Whereas 9.3% or 318 of them operate at over 80% of capacity, the operation rate of over 20% of them is at 40% or less.

Table AI-11 CME 2006/07: Capacity Utilization of the 3,446 Establishments

LESS THAN 20	PERCENT 20-40	PERCENT 40-60	PERCENT 60-80	PERCENT ABOVE 80 %	NO. OF ESTBS.
144	586	1362	1015	318	3,425
4.2%	17.1%	39.8%	29.6%	9.3%	100.0%

Source: Census of Manufacturing Establishments 2006/2007

Similarly, Table AI-12 shows the distribution of capacity utilization of 32,326 establishments which were surveyed in SSME. Just like that of establishments with 10 or more engaged persons, the largest number of them (41.9%, 13,535 establishments) operates at 40 to 60%; 24.3% or 7,841 of them do at 60 to 80%; and about one fourth run their factories at 40% or less.

Table AI-13 SSME 2008/09: Capacity Utilization of the 32,326 Establishments

LESS THAN 20	PERCENT 20-40	PERCENT 40-60	PERCENT 60-80	PERCENT ABOVE 80 %	NO. OF ESTBS.
1,664	6,827	13,535	7,841	2,460	32,326
5.1%	21.1%	41.9%	24.3%	7.6%	100%

Source: Survey of Small Manufacturing Establishments 2008/09

Overall, the number of manufacturing establishments, especially medium and large ones, is small. CME 2006/07 covers those with 10 or more engaged persons, a considerable number of which are classified as small enterprises according to Industrial Enterprises Act 1992. Regardless of sizes, many of them are in Kathmandu and nearby areas or the Terai. Recently, the production of metal products such as iron billets and GI pipe has increased and advanced production like assembling of automobiles has also emerged. However, they are by only a part of large establishments, and light industries including food and beverages and garment account for a large part of the manufacturing sector in Nepal. In general, they procure raw materials from abroad and serve for the domestic market; some raw materials (rice, sugarcane) are all from Nepal, and some products (carpets, fruit juice, and manmade filament) are mainly for foreign markets, but they are exceptions. Almost all transactions by small-scale establishments with 9 engaged persons or less are made within the countries. Although it seems that accessories, a major goods made by small industries, are exported in the end, they do not have direct business relationship with foreign buyers. In this sense, they do not look outward. A large part of

establishments run at 40 to 60%, suggesting that electricity and labor issues, which does not seem as serious as before, are blunting their operation.

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