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Status of Textile Industry in Nepal and Policy and Programme of HMG

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INTRODUCTION

The textile industry is of major importance to the economy of Nepal. Textile sector covers a vast number of sub-sectors. According to the Nepal Standard Industrial Classification (NSIC), the textile sub-sector comprises of the following industries:

NSIC 321 Manufacture of Textiles

321.1 Spinning, Weaving and finishing of textiles
321.2 Non-wearing textile goods
321.3 Knitting mills
321.4 Carpets and Rugs
321.6 Jute manufacture

NSIC 322 Manufacture of Wearing Apparel except footwear

In the case of Nepal the non-weaving textile goods is only of minor importance. The carpet industry has been dealtwith separately and jute manufacture also constitutes a separate category. The manufacture of wearing apparel (or garments) has also developed into a significant industry of Nepal in terms of foreign currency earning, and hence needs to be considered separately. This paper deals with only the sub-sector 3211 or spinning, weaving and finishing of textiles.

Historically, most countries started their industrial development through the textile industry, as also did Nepal, because textile is a basic necessity of human beings. It is a labour intensive industry, and a good catalyst for economic development. The textile sub-sector has backward and forward linkages which generate employment and value added opportunities throughout the economy. Most significant are the linkages within the textile sector.

HISTORICAL BACKGROUND

Textile weaving activities in the household of rural and semi-urban areas have been a way of life for many centuries. Normally these households wove cloth for their own use. Modern weaving was brought to Nepal in 1921 A. D. by Mr. Tulsi Mehar Shrestha, who had learnt about spinning and weaving in the Ashram of Mahatma Gandhi, in exile. The Rana Prime Minister, Chandra Samsher had provided him the Charkha and cash support. The establishment of a trust named Tri-Chandra Kamdhenu

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Charkha Pracharak Mahaguthi in 1926 heralded the new era in textile spinning and weaving. A handloom textile factory was established in the central Jail for the prisoners. Weaving training programs were also introduced in 1930 along with cotton cultivation in Kathmandu.

In 1939, the *Nepal Kapada and Gharelu Eelam Prachar Adda* was established in Kathmandu for promotion of weaving cloth. It provided training and also distributed looms on installments. Till 1942, the hand-loom, or throw shuttle loom dominated the scene. Gradually the fly scuttle loom (pedal loom) began to take the place of the throw shuttle loom. The Department of Cottage and Village Industry Training and Development was set up in 1955 with the assistance of Ford Foundation and in 1956, the Cottage Industry Handicraft Sales Emporium was set up to provide raw materials, equipments, and designs to the various weaving units, as well as to market their products. The Government continuously involved itself in the textile industry at the cottage level, providing all necessary support services.

However, the beginning of the modern textile industry in Nepal was heralded in 1942, with the establishment of the Morang Cotton Mills Ltd. This factory had a capacity of 13,000 spindles and 162 powerlooms. After the end of the Second World War, the textile industry revived in India, and this infant unit could not survive the fierce competition of the Indian products. Inexperienced management and financial trouble hastened it to close down.

During 1960's many textile weaving units with powerlooms were set up, to produce synthetic textiles, with yarns imported from Japan. Their products were chiefly exported to India. But because of the introduction of restrictive provisions on export to India in the Nepal India Trade Treaty in 1971, many such textile units closed down. The textile industries have been since then encouraged to meet the domestic demand. The Balaju Kapada Udyog Ltd. with 119 powerlooms and finishing plant was set up in 1971.

The rehabilitation of textile mills was started in the 1970's The Morang cotton Mills Ltd. was auctioned off by the government. It was renamed as Ganapati Cotton Mills Ltd. In 1976, the Gopi Kapada Karkhana was established and in 1979 the Hetauda Textile Mills Ltd., constructed with the cooperation of the People's Republic of China, started production. It has 14688 spindles and 486 looms. This is the only integrated textile mill with a fully equipped finishing plant. Many other cotton and synthetic textile fabric (Power loom) industries have been established during the last two decades. Major among them are Eastern Textile Industry, Annapurna Textile Industry, Pashupati Textile Industry, Ganesh Textile Industry, Purna Lalit Textile Industry etc. Two spinning units Butwal Spinning Mill Ltd. and Jyoti Spinning Mills Ltd. have also been set up to supply yarn to the numerous textile industries, specially those in the cottage sector.

CURRENT STATUS OF THE INDUSTRY

Hand Spinning and hand weaving have a long tradition in Nepal, and these activities continue to play a major role in the economy, specially as a source of

facilities in the decentralized weaving industry, considerable value addition is deprived. Also the quality of the fabrics could be very much improved by the finishing process. There is a big gap in this process, which needs to be urgently bridged.

Due to the lack of processing facilities most of the cottage sector produce twisted and hand dyed yarns to manufacture loom-finished fabrics. But the synthetic weaving industries have introduced some of modern wet processing technologies such as jet dyeing, hot-stenters, flat-bed screen printing machines, decatising etc.

MANPOWER AND TRAINING

Nepal has a surplus of labour. However, there are shortages of trained manpower. The majority of the labour force lacks education and industrial skills. Therefore, several industries are employing Indian skilled labour.

Skill development trainings are conducted by the department of Cottage and Small Industries and the cottage and Small Industries Development Board. In textile training, generally weaving skills and dyeing and printing skills are imparted. Mobile training is also conducted in different districts as demand from the local textile industries. However, the training facilities are traditional and out-dated. Training is provided in handlooms and semi-automatic looms. But the training programme is being reviewed, and depending on the demand for training modern arrangements are being planned.

Training of skilled people for repair and maintenance of looms, batik printing etc. are also being planned for the coming years to supply the needed manpower. However there is a big need for training middle-level technicians to cater to the growing textile industry. The higher level engineers, designers etc. have to be trained abroad.

On an international basis, Nepal has probably the lowest wage rate for production workers. In 1986 the hourly wage rate in Nepal was estimated at (US) 15 cents compared to 48 cents in India, 22 cents in Bangladesh, 59 cents in Pakistan, 19 cents SriLanka and 22 cents in China. The comparison of wage rates to other developing and some of the developed countries is given in Table 2. The cheap labour gives the textile industry of Nepal a considerable international competitive advantage.

Table 2
Compensation Costs for Production Workers in Textile Mill

(US $/hr.)

Country	1978	1982	1985	1988	Ratio to Nepal Wage
Nepal	-	-	0.15	0.18	1.0
USA	5.32	7.37	8.52	9.31	51.7
UK	3.47	5.20	4.70	7.98	44.3
Sweden	8.50	8.99	8.56	15.17	84.3
Netherlands	9.10	8.85	8.07	-	44.8
Germany	7.73	7.95	7.32	13.78	76.6
France	5.28	6.40	6.07	10.92	60.7
Spain	3.04	4.22	3.70	-	20.6
Italy	5.12	6.44	6.30	11.05	61.4
Ireland	3.40	4.81	5.00	8.54	47.4
Greece	2.61	3.90	3.65	-	20.3
Israel	2.40	3.39	2.78	6.00	33.3
Japan	4.08	4.15	4.71	9.32	51.8
Korea	0.67	0.93	1.06	2.05	11.4
Hong Kong	1.19	1.63	1.74	2.49	13.8
Singapore	0.89	1.72	2.06	2.41	13.4
Taiwan	0.52	1.11	1.39	2.62	14.6
Brazil	1.04	1.48	0.91	-	5.1
Mexico	1.89	2.32	1.99	-	11.1
Thailand	-	-	0.53	-	2.9
India	0.35	0.45	0.48	-	2.7
Bangladesh	-	-	0.22	-	1.2
Pakistan	0.34	-	0.51	-	2.8
China	-	-	0.20	0.23	1.3

Source : ESEC Report on Textile and Leather Sub-sector, 1992

DOMESTIC CONSUMPTION OF FABRICS

Nepal has a relatively small market for textiles. Despite the growth of domestic market over the past years, the current per capita consumption of fabrics is well below the international standard. The per capita consumption of Nepal in 1985/86 is estimated to be about 8.5 meters compared to the Asian average of 23 meters and the global average of 40 meters. The per capita textile consumption in Kg in the world is given in table 3. Assuming 1 Kg of fiber is equal to 6 meters the per capita consumption is also shown in meters.

In 1985/86, the total fabric use in the country was about 141.9 million meters. Only about 30 percent of the total consumption was produced domestically. The rest was imported. However, because of the open border trade with India (and also with China, to some extent) it is difficult to arrive at the exact consumption figures. The apparent domestic consumption of textile fabrics is shown in Table 4. The

consumption seems to be declining. The increase of the unofficial border trade may be the reason for such discrepancy.

Table 3
Per Capita Textile Consumption in the World, 1982

Country	Per capita consumption (kg.)	Average Temperature (c^o)	Per capita Consumption (m)
USA	18.9	12.6	113.4
Canada	14.5	6.7	87.0
W. Germany	19.2	9.5	115.2
Italy	10.5	16.1	63.0
France	14.3	11.4	25.8
UK	14.9	10.8	89.4
Switzerland	17.3	9.8	103.8
USSR	15.8	4.4	94.8
Poland	10.9	7.8	65.4
Australia	20.3	14.8	121.8
Japan	16.9	15.3	101.4
Korea	9.7	11.1	58.2
Egypt	6.8	21.1	40.8
Tanzania	1.8	25.7	10.8
Mexico	5.8	15.1	34.8
Brazil	5.3	23.2	31.8
Iran	5.5	16.5	33.0
Indonesia	2.0	27.0	12.0
Thailand	2.6	28.0	15.6
India	2.0	25.3	12.0
Pakistan	2.1	25.8	12.6
China	4.5	17.8	27.0
Average of West	15.4	-	92.4
Average of Developing Countries	3.4	-	20.4

Source: Feasibility Study Report on Textile Mill, JICA, 1986.

Table 4
Domestic production and Apparent Domestic Consumption of Fabrics

(in '000m)

Year	Domestic Production	Import	Export	Apparent Domestic consumption
	Cotton Textile			
1984/85	34023	81215	257	114981
1985/86	33073	85571	320	118324
1986/87	34922	65450	226	100146
1987/88	27314	62230	120	89424
1988/89	20757	60697	133	81321
	Synthetic Textiles			
1984/85	5910	18920	160	23950
1985/86	9769	13878	73	23574
1986/87	14161	5323	103	19381
1987/88	16163	6661	33	22791
1988/89	13748	3552	147	17153
	Total			
1984/85	39933	100135	417	139651
1985/86	42842	99449	393	141898
1986/87	49083	70773	329	119527
1987/88	43477	68891	153	112202
1988/89	34505	64249	280	98474

Source : Textile Sub-Sector Industrial Plan, UNIDO/HMG Nepal 1992.

TECHNOLOGY AND TREND

The textile technology can be broadly divided into three main categories: Yarn Forming or Spinning, Fabric Making or Weaving and Knitting, and Processing (bleaching, dyeing, finishing). A brief review of the technological development is presented below.

The fibre for making cloth can be natural or man-made. The classification of fibers is given below. The most predominantly used fiber in Nepal for making fabric are cotton and polyster. The age-old hand spinning (or Charkha spinning) can be still seen in the villages. The first mechanization of spinning was done in Europe in the 19th century. It consisted of a number of spindles in a spinning carriage and was powered by mules. The invention of ring spinning in the beginning of this century brought about a real break-though in spinning technology. Various modifications and new spinning

methods have been introduced but, still 75 percent of spinning in the world is done by using ring spinning method.

Classification of Fibers

Natural Fibers	Vegetable Fibers	- Cotton, Jute, Flex etc
	Animal Fibers	- Silk, wool, etc.
	Mineral Fibers	- Asbestos
Chemical Fibers	Regenerated Fibers	- Rayon - Polynosic - Cupro
	Semi Syntheti Fibers	- Acetate - Triacetate - Promix
	Synthetic Fibers	- Nylon - Polyester - Acryl - Vinylon - Polypropylene - Polymethane - Polyvinyl chloride - Polyethylene - Vinylidene
	Inorganic Fibers	- Metallic - Glass - Carbon - Others

Fabric Making

Fabric making is done by three methods: weaving, Knitting and Non-weaving. In weaving two series of warp and weft threads interlace each other in definite pattern to weave cloth. In Knitting one series of thread (warp of weft) makes fabrics in different loop structures. In the case of non-woven fabric, fibre layers are laid in different patterns then bonded together by needle punching or fusion method. Each of the above methods has made rapid technological strides, but the weaving technology is still predominant in making fabrics.

Traditional hand weaving still exists in developing countries. But production of 4/5 metric tons on handlooms to 400/500 metric tons per day in jet looms is peak of spectacular technological evolution that has taken place in the last few decades.

Among unconventional spinning techniques only the rotor spinning is gaining commercial success because of higher productivity. Other processes have limited applications. But the conventional ring spinning has been greatly improved and the spindle speeds have been increased from 1000 to 25,000 rpm. Also the long ring frames of upto 1008/1200 spindles (from 480/500) have been made possible with mobile automatic doffing and computer controls etc.

Equally impressive is the improvement in production technology of synthetic fibre. Easy care and durability properties combined with elegant look and feel has popularised the man-made fibers. Today more than 40 percent textile fabrics are made artificial fibers mostly in blended forms. Texturising of man-made filament yarn has added new dimension in textiles, also making it cheaper.

Processing

Processing of fabric is done to enhance its aesthetic appeal. It consist of the following main steps:

- Desizing, Scouring, Bleaching
- Dyeing
- Printing
- Finishing

Hand dyeing and block printing is still practiced in the cottage sector. Bleaching, dyeing and printing can be done at the yarn stage or fabric stage as required.

Conventional processing machines have been gradually replaced by high speed production machines to bring down the cost and improve the quality. Processing technology got real boost with the use of synthetic fibers, because man-made fibers demanded precision machines with perfect controls on processing parameters. Along with the development of machines like Pressure Jiggers, Jet and Beam dyeing machines, special dyes, chemicals etc. were also developed.

In recent years, much research and development efforts are directed in improving dyeing and printing techniques. Operations like washing, hydroextraction, drying, padding etc. are fully automated. With computerization of colour matching and colour processor it is now possible to manipulate dyes and colour selection and improve quality. In short, spectacular all round technological developments have taken place in textiles industry. But the developing countries should carefully select appropriate technology to balance the high unemployment rate.

PROBLEMS AND CONSTRAINTS

The textile sector produces the types of commodities for which Nepal should expect to have a great comparative advantage, because it uses simple manufacturing technology and cheap labour of minimal skills. The prospects for the textile industry is good, but the following problems are the most serious ones hindering the balanced growth of this industry.

- The lack of adequate domestic raw material base, cotton or synthetic fibers.
- The low level of technology and labour productivity.
- The low level of skills and education of Nepalese labour and management.
- Inadequate infrastructure in the country, like transportation, storage, power and various industrial support services.
- Inappropriate investment incentives, specially with respect to implementation.
- High transport costs to the sea-port both in terms of money and time spent.
- Small size of the domestic market and
- Foreign Exchange and finance constraint.

Most of the constraints are endemic to the Nepalese economy. Hence the solutions to these problems are macro-oriented and economy-wide. HMG recognizes the need to combat these constraints. The major thrust of the new Industrial Policy is to encourage private investment.

POLICIES AND PROGRAMMES

The textile industry is of crucial importance to the national economy, but, it has not received due attention by way of policy and institutional support. The policy framework has broadly two components. The first is a set of macro-economic policies which promote industrialization in general. The second set of policy and institutional mechanism are those which are specific to the textile sub-sector.

The new Industrial Policy, 1992 has taken care of most of the first set of considerations. The textile industry has been Included in the list of Industries of National Priority.

Textiles constitute an essential basic item of mass consumption with a substantial volume of growing demand, which if not met through local production, have to be imported spending a lot of valuable foreign exchange. The industry can provide substantial employment in manufacturing as well as cotton growing. The technology is not complex and can be absorbed easily.

The total demand for all fabrics are estimated at 277 million meters in 1994/95 and 432 million metes in 1999/2000, whereas the current level of production is only about 35 million meters. It is not possible or desirable to aim at self-sufficiency, because of the order of investment required and the trained manpower needed. Hence the programs and policies for the expansion of the textile sector in the coming years have aimed at slow and steady growth. Also, because of transportation problem and distant scattered markets it is desirable to allow decentralized handloom and power loom industries.

The policies and programmes followed by the government illustrated in the context of liberal industrial policy as follows:

- The yarn and fabric production textile industry is relatively capital intensive. Hence Nepal does not have any significant advantage in export of these products.

But being a basic need item, the thrust is in import substitution, and manufacture of typical fabrics for supporting the readymade garments industry.

- Cotton textile will remain the main demand item of the domestic market, hence the policy has been promote local cotton growing through the services of Cotton Development Board.

- Two spinning mills have been promoted in the last decade to cater to the scattered weaving industry, and bring about backward integration.

- The blending of cotton with synthetic fibers have been allowed according to the consumer preference. The cotton yarn demand in 1994/95 in 1999/2000 is expected to reach 10,500 MT and 17,400 MT respectively, hence additional spinning capacity has to be promoted.

- The textile industry is given complete freedom to produce the variety of cloth (coarse, medium, and fine) for popular end use.

- Integrated textile mills from fibre to fabric are also encouraged according to production costs and economies of scale.

- The expansion of spinning and weaving capacities are being planned in the coming five year plans.

- Since local production of synthetic fibers is not cost effective at present demand level, the policy is to allow free import of such raw materials.

- The policy has been to encourage the growth of the textile industry in the organized sector to be cost effective, and also encourage the handloom cottage industry for employment promotion and social justice at the rural level.

RECOMMENDATIONS

Textile being a basic need item, there is always a growth in demand all over the world. In Nepal, too the demand for textiles is over growing, but most of the demand at present is being met by imports. There is already a tradition of textile production in Nepal to build on, yet there is a very lethargic growth pattern of this industry. This clearly suggests that there is no favourable policy and environment for its growth. Hence the root causes have to be annalist and policy adjustments made. Some recommendations are given below:

- The prevailing duty structure on fabrics does not seem to favour the efficient growth of textile industry. This has to be reviewed to provide an effective protection of about 30 percent to the industry.

- The weaving industry should be allowed to grow on a decentralized basis in clusters of powerlooms. This would encourage the private sector. Yarn production can also be decentralized, with flexibility to produce cotton and

blended yarns. Independent finishing units should also be established to provide such facilities to small production units.

- The overall investment envisaged in the textile industry is quite great. Priority should be given to investment funds in the textile sector

- The raw material should be freely provided to the industry either locally or through import. There should also be freedom to import yarns by the power-loom industry.

- The Production policy should provide complete freedom to the mills to produce any type of fabric, using any type of fibers, so that the industry can respond to the changing market conditions automatically.

- The present duty structure puts cotton textile industry at a great disadvantage vis-a-vis synthetic textiles tending to distorted development. This should be corrected to make both of them work on equal footing.

- Self-sufficiency should not be planned at any cost. But a greater balance between spinning and weaving capacity within the industry should be aimed for.

- The Textile Board was established under the Ministry of Industry some years ago, but it seems to be non-functioning at present. Such a Board, manned with adequate professional staff is essential for the growth of textile industry.

CONCLUSION

The textile sub-sector is a vast industry. The yarn spinning and fabric weaving industry is basically for import substitution. This industry has not grown satisfactorily as compared to the other related sub-sector industries like woolen carpets and readymade garments, which are basically export-oriented. But because the textile is a basic needs product, it is a very important industry. If the fabrics are not locally produced, the demand has to be met by imports, spending valuable foreign exchange. At present, the major chunk of the fabrics demand is met by imports. Hence there is sufficient score for expansion of the textiles industry. The very fact that is not growing in a healthy manner despite the vast demand, asks for deep analysis and review of policies and incentives provided to this industry.

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