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*Economic Policy Reform and
Competitiveness Project*

Current status of Mongolian Textile Industry

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ABBREVIATIONS AND ACRONYMS

EPRC	Economic Policy Reform and Competitiveness Project
GDP	Gross Domestic Product
NGO	Non-Governmental Organization
USAID	United States Agency for International Development

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SECTION I: PRELIMINARIES

The visit, supported by USAID, follows the invitation of “Foundation for Development of Wool and Cashmere Enterprises” a Mongolian NGO, for delivering consultancy to several local companies and courses on wool and cashmere chemistry.

SECTION II: CURRENT STATUS OF MONGOLIAN TEXTILE INDUSTRY

Over the last 16 years of country transition to a market economy, the animal fibre processing industry have been struggling to ensure smooth and steady operation and to accumulate capital. This allows them to invest in acquiring machines and to further expand their production lines. On the other side, the emergence on market raises new challenges to the companies, in terms of quality and productivity. Problems like pilling and handle focus the attention on the yarn quality and to finishing.

It is worthwhile to underline that textile industry is the most dynamic sector of the Mongolian manufacturing industry. It accounts, already, for one third of the contribution of the manufacturing sector to the GDP, being overtaken by food industry only. This is strongly supported by the traditionally strong livestock of the country. With 12.0 million sheep, 9.6 million goats, 0.3 million camels, not to count the yaks, Mongolia produces some 21 000 tons greasy wool, 4 500 tons of cashmere, 1200 tons of camel hair and 300 tons of yak hair.

The stock of goats, in response to the high demand for cashmere, doubled in the 1990s, while the number of sheep, after a decline in the first half of the 1990s, came back to the previous figure over the last years. The Mongolian cashmere counts for about a quarter of the worldwide cashmere, after China which has 70%.

Currently there are 54 companies processing speciality animal fibre in Mongolia. They are primary processing plants, knit garment manufacturers or vertically integrated companies. Most of the companies are processing the speciality fibres (cashmere, yak, camel hairs); wool is directed for interior textiles (carpets mainly).

The main challenge facing Mongolian textile industry is to sell the local production on an international market dominated by China.

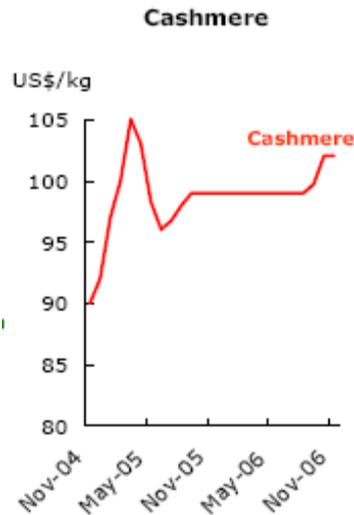
I consider that the problem may be encountered by acting on two directions:

1. Matching the market demands, by ensuring a controlled and reproducible level of quality, and
2. Creating and promoting an international visibility for the local (Mongolian) manufactured products

1. Quality

a) Cashmere Products

The demand for classic cashmere garments comes from the luxury segments of European, American and Japanese markets. Strongly influenced by fashion trends, the demand has periodic peaks, reflected in prices (see figure below).



Mongolia is the second largest producer of raw cashmere, accounting for a quarter of world production after China's 70%, and the effect of the price fluctuation, corroborated with the status of the fibre among the Mongolian commodities, influences strongly the revenue of the country.

On the international market, fine dehaired Chinese cashmere sells at a higher value than Mongolian cashmere due, mainly, to two technical advantages:

- a) it is slightly finer (1-2 microns difference), and
- b) it is whiter, and therefore suitable for producing pastel shades, which dominate the women knitwear market. Mongolian cashmere is thus pushed to the lower value market of darker shades.

On the other hand, the Mongolian cashmere fibre:

- a) is 10-15% longer than Chinese cashmere (a result of longer harsh winters), and
- b) has a softer handle that consumers can recognize. This translates for spinners into an easier-to-spin fibre which pills less in the yarn.

For these reasons, Mongolian cashmere is commonly blended with Chinese cashmere fibres; the mixture spins better while having a good whiteness degree. This boosts the desirability and price of raw Mongolian cashmere, but also leads to alterations of the mixture, as many spinners are tempted to mix Mongolian cashmere with white fine wool.

Many cashmere processing and garment manufacturing plants invested in sophisticated dehaired, spinning, dyeing, weaving and knitting equipment.

The cashmere industry comprised in fact of three types of companies, each with its own characteristics, markets and opportunities.

The first type consists of early-stage processing plants, which procure raw greasy cashmere from herders or traders, scour it, and produce fine dehaired cashmere for exporting mainly to China, Europe and Japan.

The second type of cashmere plants consists of garment manufacturers. Most of them produce sewn garments, and some produce knitted cashmere garments using hand-knitting machines. Usually they buy the yarn in China.

The third type of cashmere plants consisted of vertically integrated companies, combining several operations from processing of raw materials, to spinning, dyeing, garment manufacturing, and production of other knitted and woven products.

The interests of these three types of companies do not necessarily coincide. In particular, the first two types respond to short-term changes in domestic and international trade regimes, and not with a view to invest in the long-term expansion of their Mongolian operations.

Raw material

Because grading, sorting and baling are not undertaken at the source by herders and primary traders, mixed grades of fine and coarse cashmere, and cashmere of mixed colours are sorted at the plant level. The quality of the fibres is very much depending on the seasons, like for any other agricultural commodity. For this reason it is required to set up a group of objectively tested parameters for characterising the raw material for ensuring the reproducibility at the industrial level.

To tackle this problem it is advisable to investigate how auctions can be hold regularly, and how herders can obtain premium prices for quality cashmere.

An example of such a parameter which has to be tested is the staple (or fibre) strength. A long and weak fibre is worse than a shorter and stronger one, because the carding operation breaks the weak fibre into pieces, leading to low yields and increased wastes of a valuable material. A long and strong fibre is desirable, because it gives low pilling propensity in end-product. The imposing of a minimum processable strength of the fibre, to cope with the machines at early-stage, is achievable by controlling / testing the parameter by the buyer and offering premium prices to herders. The positive results of such an exercise are expectable within 3-4 years, and will help to create a new vision for trade.

Similarly it can be tackled the problem of whiteness degree. The current way to deal with it is to use the depigmentation and bleaching operations in the company. These are chemical operations which, even when carried out carefully, produce latent damages visible in the end products. Besides they cost energy and chemicals. A schema of premium prices for whiteness degree higher than a minimum acceptable value would save costs and would increase the quality during the industrial processing.

The chemical processing

The claim is that the cashmere end-products have sometimes inferior handle and high pilling. These are problems which come as a result of a sum of factors and cannot be solved only in the dyeing and finishing departments. The first step in improving the quality of the end-products is to deal with the quality of the raw materials. What is required, as it has been underlined above, is to ensure a reproducible quality of the input fibres. This allows setting the processing machines and achieving a reproducible quality of the end-products. The lack of domestic spinning capacity which prompted garment manufacturers to import yarn from abroad is a second factor. This makes some garment producers to ship Mongolian raw material to China for spinning, and to re-import yarn for producing garments in Mongolia. The quality of the yarn is not controlled, and in many cases, as has been noticed by our laboratory, in this operation the composition of yarn is altered with yak, or fine wool. Beside the fact that the behaviour of the end-product will differ, the products are depreciated for European and USA markets, where the purity is strongly required.

The damaging of cashmere fibre during chemical processing is the last stage. This damage cannot be avoided, but limited. The damage occurs by the attack of pH and temperature in

time. Besides, many problems of handle of the end-product come from the quality of water used in dyeing and finishing.

The first stage which may be quickly improved is the control of processing parameters, pH and temperature; it is required to measure and secure a constant value of these parameters at each finishing operation. Only after the control of parameters is in place one may go further to look for improving the quality by changing the values.

The second improvement can be achieved by using sequestering agents, or complexing agents, in water, during the scouring, softening and dyeing. This is because the hardness of water is not controlled and the water for finishing cashmere is required to be very soft (softer than a drinking water). The best would be to arrange for treating waters station for all the waters used in company.

Last but not least, there is necessary to develop the supply of chemical auxiliaries. In most of the cases the products are bought from China, and the price plays an important role. The offer is not very large, and often the chemicals are not properly described. The companies have less experience in acquiring chemical agents. In most of the cases there is a testing of the dyes in house, and similar work should be extended for the other chemicals (washing agents, milling agents, oiling and softeners).

Having a reproducible input of raw materials and controlling the parameters of the chemical operations, the end product may be easily adjusted to the customer's demand.

b) Carpets and Blankets

Mongolia produces an important amount of wool annually, but mostly in the coarse and very coarse region, suitable for little else than carpets, felt footwear, insulating products, and blankets.

There are two major carpet producers (one in Ulaanbaatar and one in Erdenet), and several blanket producers (two in Ulaanbaatar). Their production capacity for scouring, spinning, knitting, weaving and felt making is far in excess of current production volumes.

There is a potentially large market for machine-made carpets especially in China, but also in other countries that are presently supplied by Belgium, Turkey and Egypt. In addition, there is a potentially large demand for hand-woven carpets presently supplied by Nepal, Pakistan and others. Handmade carpets form only a small share of total carpet production.

The carpet and wool industry faces quite similar constraints like cashmere industry. The first one is the quality of the raw material. Besides the lack of control of the locally available wool, carpet and blanket industry requires in many cases wool from other sources, like New Zealand, in order to be able to diversify the products for answering the international market demands.

Also, like in the case of cashmere industry, there is a lack of control of the processing parameters: pH and temperature, which together damage the fibres. The quality of the water is also not controlled and it is also required the use of water softeners. The offer of chemical agents for washing and milling is also very narrow and the companies are not used to have different products for different qualities.

The possible remedies are similar to those from cashmere industry:

- The first is to introduce a control for ensuring reproducible raw material in the company.
- Secondly is to monitor temperature in the scouring lines and to control pH of the products during the operation chain (pH of the aqueous extract).

- Finally, to control the quality of the water used for production as well as the quality of the steam.

The chemical products

The limited choice of auxiliaries (chemical products for finishing) affects both cashmere and wool industry and is partly responsible of a poor finish of the end-products. It is basically due to the low development of the local chemical industry.

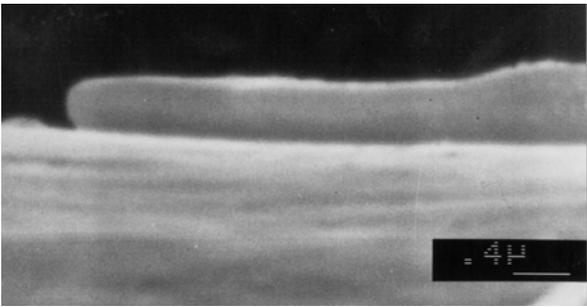
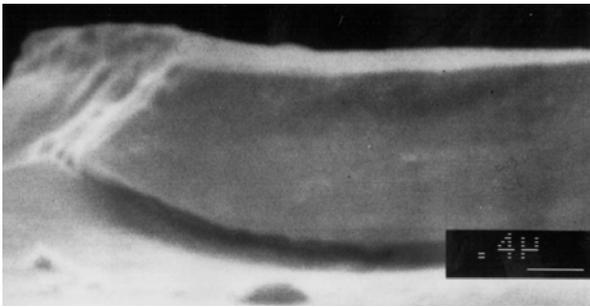
In the absence of the representatives of the big chemical suppliers, the problem might be addressed by small entrepreneurs willing to buy concentrates from some strong producers, formulating the products according and sell them locally. The setting of a 100 tons storehouse of auxiliaries concentrates would give to the manufacturers a larger range of alternative products.

2. Visibility

Both cashmere and wool industry meet the problem of limited own distribution and marketing channels. In most of the cases, the local manufacturers do not distribute their products on the international market by themselves, and therefore miss out the largest component of the value chain, namely distribution, marketing and own-label branding. In contrast, Chinese competitors have developed their distribution and marketing channels and their own labels, and have access to part of the large profit margins. They can thus easily afford to pay a higher price to secure more raw materials.

The carpet industry – or at least Erdenet company – are already participating to international trade fairs and introduced their name. They have also applied for the Woolmark licence, which will give them more authority to claim their brand.

By contrast, domestic cashmere garment producers are still in the phase of developing their own marketing and distribution channels and a niche luxury market, on their own or with strategic partners. For this industry, as well as for the cashmere producers (herders) it is required a strategic move to create a brand and to support it internationally. There is a mark proposed for promoting the image of local industry, “Cashmere of Mongolia”, but the full schema behind it is lacking. The mark requires a sign, to be advertised internationally, a set of technical requirements which can be met only by Mongolian cashmere (or only by the best part of it) and a laboratory to undertake the control (police) of the mark. The laboratory needs to be equipped at least with a scanning electron microscopy, which is the standard device for differentiating cashmere fibre from other keratin fibres (see below the required magnifying scale for such a differentiation).

	
Cashmere	Wool

It is desired that such a promotion exercise to be supported jointly by cashmere industry and cashmere producers, being in their common interest, and requiring quite a lot of capital. Other similar marks from textile market, like Woolmark or Wools of New Zealand, may be used as source of inspiration for the campaign and for the construction of the technical specifications for the products.

SECTION III: THE VISITED COMPANIES

- Erdenet carpet Co: carpets and felted products.
- Goyo: cashmere knitwear
- Mongol Nehmel: wool blankets
- Gobi: cashmere knitwear
- Ulaan Baatar: carpets
- Altai Cashmere: cashmere knitwear
- Eermel: knitwear & blankets