

LEATHER GARMENTS - III

Setting a Leather Garments Unit

Before making investment decision, one should carefully analyze the risk factors. A SWOT analysis can help in analyzing these factors which can play important role in making the decision.

- Large domestic population of cattle resulting in excess supply of hides and skins.
- Meat eating habits of population.
- Availability of skilled workforce.
- Access to international markets.
- Shortage created in local market due to excess exports of raw and finished leather.
- Requirement of high working capital.
- Tendency of skilled labour to shift to textile sector.
- High cost of electricity, raw material inventory and obsolescence.
- Exports mostly in low to medium end segment
- Quality hides and skins are abundantly and cheaply available immediately after (Bakara Eid). Rest of the year prices are very high.

Opportunities

- Expected recovery in the world economy especially in the western areas.
- Better policies by the government in livestock sector may result in higher availability of hides and skins.
- Low to medium end garments stitching being

H I G H L I G H T S

- *Tanners are using out dated machinery and imported from various countries in the 1970's and 1980's.*
- *The industry failed to create a friendly environmental atmosphere in the process.*
- *The tannery pollution has a dangerous effect on the health of the local population, mainly in the cities of Karachi, Kasur and Sialkot.*
- *PISD will transfer environmental and energy related knowledge and technologies to solve issues of leather sector.*
- *Pakistan is fortunate to have raw material required by the industry that is freely available in the country.*

shifted from China to Pakistan.

- Conducive policies of government for encouraging leather garments exports by providing export and freight rebates.
- Abrupt increase in prices of finished leather due to exports, may result in non availability of leather during peak production season.
- Sudden change in international fashion trend can result in increased inventory of finished leather and accessories.
- Increasing prices of utilities.
- Animal protection rights issue in western markets.
- Concentration in few traditional international markets.

- A high break even of 50 percent requires consistent availability of export orders, availability of consistent quality raw material and accessories
- Knowledge of international fashion trends both in garments and leathers.
- Better production operations management especially in cutting and finishing sections.
- Participation in international trade fairs.

Products

Major products will include leather jackets, biker jackets and over coats for men, women and children. However, the product line can be extended to manufacture all kinds of leather garments.

The size of the total global export market of leather garments in 2009 was around \$3.48 billion. But due to recession in the world economy, the international exports have dropped by 18.80 percent since 2006. However, the expected recovery in international markets will provide promising opportunities in the coming year that show an attractive export opportunity. Pakistan has an inherent advantage due to local availability of quality hides and skins. The country has also developed a large tanning base. As a result, good quality leather for leather garments is easily available.

In addition to easy availability of primary raw material, Pakistan is also well recognized in the international market as a manufacturer of quality leather garments and is ranked third amongst the top three exporters of leather garments in the world. Moreover, because of the presence of large number of leather garments manufacturing units in the country, a pool of trained skilled workers is also available.

Economical Size

The project is based on a unit capable to produce 60 leather garments per day. Total number of stitching machines required to obtain this production is 31.

Cost

Total project cost of a unit producing 60 leather garments per day would be Rs8.92 million. This includes a fixed cost of Rs3.32 million and a working capital of Rs5.60 million.

Production Process

The basic raw material for leather is livestock, which is slaughtered to get meat and also provide hides and skins for leather garments. They are put through the tanning process for conversion to leather. Leather is then converted into finished products, which are either exported or sold in the local market to produce leather products, figure-1.

Imports and exports happen various stops along the value chain, such as imports of raw skins and hides or import of wet blue, semi-processed, leather; chemicals used in the tanning process; import and export of finished leather; import of special chemicals used in making of finished good quality leather and import of accessories used in making leather products.

The process starts with customer providing the manufacturer details regarding quantity requirement, type of leather, design specifications, accessories detail, stitching style etc.

Upon receiving the information, a sample garment is prepared and sent onward to the customer for final approval. Once the sample is approved and order is confirmed, the design template for producing the required quantity are developed by pattern cutting department.

Matching

Leather is made from different skin/hides inherently vary in grain style from each other. In the matching process the grain and colour of leather are matched on per garment requirement. This is the most critical part in the whole process and requires expertise of the matcher.

Figure - 1
Process Flow for Leather Garments Manufacturing



Cutting

After the matching, the cutter cuts different panels of a jacket with the help of the design patterns and knives. The list of panels include front, back, collar, sleeves, cuff etc. Generally, design patterns made of cardboard are used in cutting process. In case single type/design garments are to be manufactured in large quantities, then press machines with metal dyes can also be used. Average wastage of leather in cutting process ranges between 15 to 25 percent. In Pakistan, a cutter cuts 15 to 20 jackets per day per shift in 8 hours.

Assembly

After the cutting process, fusing is added to different panels of the garment, as per design requirement. Fusing machines or electric irons are used for this purpose. Generally, half fusing is done on the end area where stitching is to be done and full fusing is applied on front and back panel for providing garment outlook. Fusing reduces stretchability and

adds stiffness to the leather making it convenient for the stitcher to stitch. In this process, accessories are added and rolled together for stitching. Major accessories include lining (cotton, viscose, satin), zippers (metal, nylon), padding, wadding, shoulder pads, buckles, buttons, labels and thread.

Stitching

Next to assembly is the stitching of different panels of the garments by using sewing machines. Two stitching methods, depending upon the quantity produced, are currently being employed in the industry.

1. One stitcher one garment
2. Chain process (Assembly Line)

In the first method, one stitcher stitches together all the panels of the garment. It is mainly used by the small units. All the allied processes, folding etc., required during stitching are also performed by one person. Depending upon the garment type and size,

on an average, output per stitcher per shift is between 1 to 2 garments. Mainly used in large units.

The second method is more efficient and average productivity level per stitcher in some cases rises between 4 to 8 garments per day. In the chain process, an assembly line is made in which each stitcher is assigned one specific process, out of the total processes required for garment manufacturing. Ultimately, the stitcher gets specialized by constantly performing one task resulting in production efficiencies and better quality. In each assembly line, there are seven stitchers who perform the following sub-processes: 1. Folding, 2. Lining Stitching, 3. Sleeves, 4. Back, 5. Front, 6. Pocket and 7. Panel Joining.

Finishing

Finishing is the last process in leather garments manufacturing. In the finishing process, buttons/snaps are attached to the garment, extra thread and fibres are clipped off. After this process garments pass through touching process, in which chipped off and out of matching leather grains are treated to give the garment a good look. The garment then moves to ironing stage after which hangtags, price tickets, etc are attached.. The final stage is the quality check by the quality inspectors. Their job is to check the conformance of the manufactured garment to the customer's specifications. The quality check is followed by the final packing of the garment.

Types of Skills Required

Pattern making, designing, cutting and stitching are the primary skills required for running the unit. Matching of leather from different skins also requires an experienced matching expert.

Development of leathers and its timely procurements is an important skill also. Similarly knowledge about international trends in fashion and prices is also comes as a handy skill.

Machinery

Mostly Chinese machinery is being proposed in this project as these have gained market share in the recent years due to improvement in quality. Spare parts and technicians are easily available now.

Stitching machinery from Korea, Taiwan, and Japan is also available in the local market. Second hand machinery is also available and can be used.

Furniture and Fixture

Details of furniture and fixture is given in table-6.

Land and Building

Total land required can be seen in table-7.

Land

The project should be started in a rented building. This will help to reduce the initial capital cost of the project. Premises are available in the commercial/industrial areas of clusters. These premises can be easily hired at approximately Rs50,000 per kanal.

Locations

Suitable locations for leather garments units may be Sialkot, Karachi and Kasur.

Utilities

The required utilities are Electricity, Telephone and Water.

Regulations

Special incentives of 2.42 percent of FOB value of export as rebate on the exports of leather garments by the Government is given, Smeda indicated.

Table - 1
Human Resources

Job Description	Nos.	Salary Rs/Month	Annual (Rs)
Production Staff			
Stitching Supervisor	1	25,000	300,000
Quality Controllers	2	12,000	288,000
Final Inspector	1	14,000	168,000
Electrician (part time)	1	5,000	60,000
Skilled Stitches ⁵	30	350/piece	3,150,000 ⁶
Cutting Masters ⁷	4	40/piece	360,000 ⁸
Semi Skilled Workers	3	8,000	288,000
Total Production Staff	42		4,614,000
Administrative Staff			
Factory Manager/Owner	1	70,000	840,000
Office Assistant	1	12,000	144,000
Accounts/ Store Clerk	1	15,000	84,000
Security Guards	2	9,000	216,000
Marketing Staff			
Merchandiser	1	30,000	360,000
Export Documentation Officer	1	12,000	144,000
Total Marketing & Admin. Staff	7		1,884,000
Total Staff	49		6,498,000

⁵ Each skilled stitcher stitches 2 pieces per day.

⁶ Calculated at 50% production capacity.

⁷ Each cutting master cuts 7-8 pieces per day.

⁸ Calculated at 50% production capacity

Project Economics

The project entails the following costs at the start of project.

Table - 2
Total Costs of the Project

Account Heads	Cost (Rs)
Plant and Machinery	1,720,000
Furniture / Fixture & Equipment	565,000
Pre-operational Expenses ⁹	158,000
Vehicles	580,000
Contingencies	302,300
Total Fixed Cost	3,325,300
Stocks & Raw Material	4,459,275
Up-Front Insurance payment	85,950
Up front for building rental	1,050,000
Total Working Capital	5,595,225
Total Project Cost	8,920,525

Table - 3
Financing Plan

Financing	Ratio	(Rs)
Equity	50%	4,460,263
Debt	50%	4,460,263

Table - 4
Project Returns

IRR	88.87%
NPV (Rs)	63,789,027
Payback Period (Years)	3.71

Raw Material

Pakistan has enough raw material required by the industry in abundance. Local availability of raw materials and low wage cost gives the country a

**Table - 5
Machinery List**

Machinery and Other Equipment	Machines	Cost / Machine (Rs)	Total Cost (Rs)
Lock Stitch Machine Single Needle (Chinese)	30	24,000	720,000
Lock Stitch Machine Double Needle (Chinese)	1	35,000	35,000
Fusing Machine (Local)	1	80,000	80,000
Skiving Machine	1	120,000	120,000
Snap Attachment Machine (manual)	2	10,000	20,000
Over lock Machine 3-Threads(Chinese)	1	23,000	23,000
Electric Iron	2	5,000	10,000
Strapping Machine	1	75,000	75,000
Other Equipment			
Electric wiring (per machine)	35	1,000	35,000
Machine base table	31	2,000	62,000
Generator (30 KVA)	1	400,000	400,000
Weighing Scale (100kg)	1	40,000	40,000
Total Cost			1,720,000

**Table - 6
Furniture and Fixture**

Furniture & Fixture	Required	Cost (Rs)	Total (Rs)
Factory Tables	15	7,000	105,000
Office Chairs	10	3,000	30,000
Office Tables	5	10,000	50,000
Computer with UPS	5	35,000	175,000
Printer (Laser)	2	25,000	50,000
Telephone	5	1,000	5,000
Fax Machine	1	20,000	20,000
Curtains/Carpets/etc	1	20,000	20,000
Air-conditioners (Split 18,000 BTU)	2	40,000	80,000
Miscellaneous	1	30,000	30,000
Total Cost			565,000

**Table - 7
Covered Area**

Description	Area (Sq. ft)	Construction (Rs / Sq. ft)	Total
Raw Materials Store	1,000	900	900,000
Matching & Cutting Section	1,000	900	900,000
Role Checking and Fusing	625	900	562,500
Stitching Hall	1,650	900	1,485,000
Finishing	625	900	562,500
Inspection & Packing Section	625	900	562,500
Manager Office	150	1,200	180,000
Accounts / Export Section	350	1,100	385,000
Cafeteria	500	1,100	550,000
Misc. (washrooms)	250	1,100	275,000
Pavements/Driveway	400	300	120,000
Free Space	700		
Total Construction Cost	7,875		6,482,500

competitive edge in the world market.

The following are the types of basic raw materials which are being used by this industry: Cow & buffalo hides, goat and sheep skins.

Buffalo

Buffalo are the specialty of Pakistan in the world, because of its ample availability in Pakistan.

Cow

The cow raw material is considered a superior raw material upon buffalo because of its fine, tight and comparatively uniform structure.

Goat

It is good for making shoe upper leathers, garments and other goods of leather.

Sheep

Leather made from sheep raw materials has a very good and softer touch and considered best for leather garments due to high price.

The industry is meeting its 75 percent demand of raw hides from local resources while rest of the 25 to 30 percent is met through imports.

Pakistan imports leather from Saudi Arabia, Iran, and China, Dubai, Sudan, Kenya, Australia and Italy.

In the leather industry the raw materials are by-products of the meat industry, with the meat having higher value than the skin. Taxidermy also makes use of the skin of animals, but generally the head and part of the back are used. Hides and skins are also used in the manufacture of glue and gelatin.

The primary tanning sources of raw material for the tanning industry are hides and skins from animals that have been accepted as fit for processing for human consumption at approved slaughter houses,

where the handling and treatment of cattle fully meets the appropriate animal welfare and hygiene requirements.

Production Process of Leather

There are a number of processes whereby the skin of an animal can be formed into a supple, strong material commonly called leather.

Vegetable tanned leather is tanned using tanning (hence the name “tanning”) and other ingredients found in vegetable matter, tree bark, and other such sources. It is supple and brown in color, with the exact shade depending on the mix of chemicals and the color of the skin. Vegetable-tanned leather is not stable in water; it tends to discolor, and if left to soak and then dry it will shrink and become less supple and harder. In hot water, it will shrink drastically and partly gelatinise, becoming rigid and eventually brittle. Boiled leather is an example of this where the leather has been hardened by being immersed in hot water, or in boiled wax or similar substances.

Historically, it was occasionally used as armour after hardening, and it has also been used for book binding. This is the only form of leather suitable for use in leather carving or stamping.

Chrome tanned leather, invented in 1858, is tanned using chromium sulfate and other salts of chromium. It is more supple and pliable than vegetable-tanned leather, and does not discolor or lose shape as drastically in water as vegetable-tanned. Also known as wet-blue for its color derived from the chromium. More esoteric colors are possible using chrome tanning.

Aldehyde tanned leather is tanned using glutaraldehyde or oxazolidine compounds. This is the leather that most tanners refer to as wet-white leather due to its pale cream or white color. It is the main type of leather used in chrome-free leather often seen in infant’s shoes and in automobiles that prefer a

chrome-free leather. Formaldehyde tanning (being phased out due to its danger to workers and the sensitivity of many people to formaldehyde) is another method of aldehyde tanning. Brain-tanned leathers fall into this category and are exceptionally water absorbent. Brain tanned leathers are made by a labor-intensive process which uses emulsified oils often those of animal brains.

They are known for their exceptional softness and their ability to be washed. Chamois leather also falls into the category of aldehyde tanning and like brain tanning produces a highly water absorbent leather. Chamois leather is made by using oils (traditionally cod oil) that oxidise easily to produce the aldehydes that tan the leather.

Synthetic tanned leather is tanned using aromatic polymers such as the Novolac or Neradol types. This leather is white in color and was invented when vegetable tannins were in short supply, i.e. during the Second World War. Melamine and other amino-functional resins fall into this category as well and they provide the filling that modern leathers often require. Urea-formaldehyde resins were also used in this tanning method until dissatisfaction about the formation of free formaldehyde was realized.

Alum tanned leather is tanned using aluminum salts mixed with a variety of binders and protein sources, such as flour, egg yolk, etc. Purists argue that alum tanned leather is technically “tawed” and not tanned, as the resulting material will rot in water. Very light shades of leather are possible using this process, but the resulting material is not as supple as vegetable tanned leather.

Raw hide is made by scraping the skin thin, soaking it in lime, and then stretching it while it dries. Like alum-tanning, rawhide is not technically “leather”, but is usually lumped in with the other forms. Rawhide is stiffer and more brittle than other forms of leather, and is primarily found in uses such as drum heads where it does not need to flex significantly; it is also

cut up into cords for use in lacing or stitching, or for making many varieties of dog chews.

Stages of Leather Formation

1. Warehousing and Sorting

In the raw material area the skins are preserved in salt, stored in controlled cool rooms and before processing, presorted for quality and weight.

2. Soaking

The skin is soaked to remove dirt and salt.

3. De-Fleshing

During this process tissue, flesh and fat remnants are removed by a roller mounted knife.

4. Liming

By adding lime and sulphur compound the hair is removed from the skin.

5. Bating, Pickling, Tanning

During bating and pickling the skins are treated with acid and salt in preparation for tanning. During tanning the skin fibres absorb the tanning agents. That’s when the skin becomes leather.

6. Samming

During this process water is removed.

7. Splitting

In order to achieve an even specified thickness the leather is reduced in substance. The resulting split-leather can then be processed further as suede.

8. Skiving

The grain leather is brought to an even thickness. Irregularities are removed from the reverse side and the leather is separated into color batches.

9. Sorting

The leather is sorted into various quality grades.

10. Neutralizing, Filling Out, Dyeing and Greasing

The acid resulting from the tanning process is neutralized. Then the dyeing takes place, where appropriate with anilin-dye-stuffs. The greasing procedure will finally achieve the correct softness.

11. Drying

Two methods are used to dry leather. The vacuum process during which moisture is removed by suction and the hanging process, when leather is hung and taken through ovens.

12. Staking

Following drying the leather is mechanically staked in order to soften it. Further processes take place in preparation for finishing.

13. Finishing

Here the leather is given its final surface treatment and look. Through processes of base coat, coloring, embossing, ironing the leather becomes, depending on the demands of fashion, matt or shiny, two-tone or uni-coloured, smooth or grained. The art of finishing lies in working in wafer-thin layers without disturbing the natural look of the leather and its characteristics such as suppleness and breath ability.

14. Quality Control

In between every process quality is controlled. Final control checks to ensure each individual production is to specification and sortation into various trades.

15. Dispatch

The leather is measured electronically, wrapped

and dispatched.

Technical Level

The tanning industry in Pakistan uses machinery which are out dated and was imported from various countries in the 1970's and 1980's. Though, the country took advantage of these second hand machines by bringing in a large amount of foreign earnings, it failed to create a friendly environmental atmosphere in the process. A large part of the country is subjected to air pollution due to the burning of residual into the atmosphere. This pollution has a dangerous effect on the health of the local population, mainly in the cities of Karachi, Kasur and Sialkot.

The leather industry has implemented many progressive interventions and technologies in the past to deal with its numerous environmental and energy challenges. The representative association of leather industry i.e. Pakistan Tanners Association (PTA) has long been facilitating a number of initiatives to address the environmental issues of the industry. This has resulted into a more competitive, sustainable and progressive leather industry of Pakistan. For sustainability of already implemented steps and in view of the continuous needs of the leather and tanning sector, PISD will transfer environmental and energy-related knowledge and technologies to address the ongoing issues of leather sector of Pakistan. Cleaner Production Institute (CPI) has started the Programme for Industrial Sustainable Development (PISD). Cleaner (Energy Efficiency) Technology Project for Karachi Tanneries (CTP-KT) is a component project of PISD. CTP-KT intends to provide free of cost technical services to Karachi-based leather processing units in implementing energy efficient and environment friendly technologies.

Problems Faced by the Industry

Quality: Good quality leather is mostly exported and is not available for high value-added Leather

Garments and Leather Products: Leather garments in Pakistan are made mostly from low grade and medium grade leather. Lack of proper training and inadequacy of skills in slaughtering are among the most important factors leading raw hides and skins towards lower grades or even to rejection.

Furthermore, inadequate knowledge of preservation techniques and lack of sufficiently designed collection and storage facilities may cause problems that are associated with the lowering of the quality and quantity of raw material. Hence, the need for strengthening training facilities for manpower at all levels through hiring of experts.

The quality of raw hides and skins generally depends upon the quality of livestock. The hides and skins removed out of young and healthy cattle may be taken as the best in its quality provided the conditions in which these are removed and also their collection, preservation and storage is satisfactory.

There are many factors which affect the quality of leather at pre-slaughtering, during slaughter and post-slaughtering stages. It is estimated that around 20 to 25 percent of the hides and skins are affected by pre-slaughtering damages, like skin-cuts, rashes, diseases, injuries etc.

Cost of Production: Cost of production is also very high in Pakistan as compared to the competitors like China and India.

The high cost of various inputs especially utilities and taxes make the products uncompetitive in international markets.

The Issue of Chrome

Chromium III salts are used extensively in the tanning process. Approximately 90 percent of the leather manufactured is tanned using chromium III. This is because chromium is the most efficient and versatile tanning agent available and it is relatively cheap. It has been used in the leather industry for

almost 100 years and when it was introduced as an alternative to vegetable tanning extracts from oak bark and similar sources, it heralded a new era for the leather industry. It reduced the time taken within the tanning process from months to days, and offered leathers with properties that were previously unattainable. The leather industry only uses chromium in its safest and most stable form - chromium III.

However, due to misconceptions about chromium and a failure to recognize the distinctions between chromium III and chromium VI, which is generally understood to be toxic, the tanning industry has often been placed under unwarranted pressure by regulatory bodies with regard to both the use and disposal of chromium and chromium-containing materials. Chromium VI compounds are not used by the tanning industry.

Energy Issues: Generally, a leather unit consumes over 0.97-1.87 MJ i.e. 270 to 300 KW of energy to produce 100ft of finished leather. The absence of energy efficient technologies and lack of proper maintenance of steam pipes, steam traps and insulation are causing wastage of significant amount of energy in most leather processing units. Moreover 10 to 12 hour load shedding also destroying hides and skin's quality.

Environmental Challenge: Leather tanneries in Pakistan produce all three categories of waste: wastewater, solid waste and air emissions. However, wastewater is by far the most important environmental challenge being faced by Pakistan's tanneries.

Wastewater: Although the exact quantity varies widely between tanneries, a normal requirement of around 50 to 60 liters of water per kilogram of hide is suggested. ETPI's sample audits of tanneries in Pakistan show that in some cases overall water discharge also demonstrates a high degree of seasonal and daily fluctuation. For most part, the current practice is to discharge this water into the local environment without any treatment.

Solid Waste: Two types of solid wastes (tanned and untanned) are generated from leather production processes. Solid waste include dusted curing salts, raw trimmings, wet trimmings, dry trimmings, wet shavings, dry shavings, buffing, and packaging material. It is estimated that for a tannery averaging 10,000 kilograms of skins per day, a total of some 5,500 kilograms of solid waste would be produced per day.

It was found that solid wastes from tanneries, except for dusted salt, have secondary users in the local market. Glue manufacturing and poultry feed makers are a major user group of this waste.

An important problem with this use is the presence of chromium in it. The use of chrome contained solid waste for poultry feed preparation could cause serious health problems for poultry consumers.

Air Emissions: There are two sources of air pollution from tanneries in Pakistan. The first relates to emissions from generators (diesel-based and operated only during power breakdowns) and from boilers. Emissions were found to be well below the NEQS level. Ammonia emission during processing and washing of drums, though intermittent but important has adverse effects on workers health.

Hydrogen sulphide emission during mixing of acid and alkaline wastewater in drain is also a serious health hazardous. Segreg Segregated discharge of acidic and alkaline effluent can help to avoid the hydrogen sulphide gas emission.

Solid Waste: The solid wastes do have secondary use in glue manufacturing and poultry feed making etc. However, the use of chrome containing solid waste for poultry feed preparation can cause serious health problems for poultry consumers.

Pricing Strategies

The leather grading system employed by leather upholstery manufacturers and suppliers is used as a

means of differentiating and marketing individual types of leather by price, based on quality or style.

The grading system is the method manufacturers use to present their pricing structures to retail dealers. Leather suppliers also use a grading system to distinguish their leathers and prices to manufacturers.

This classification works efficiently and is simple to understand within the context of each individual leather line, but problems crop up if one attempts to compare or contrast leathers from line to line or from manufacturer to manufacturer.

With lower grades typically beginning at “A” or “1”, one producer’s “C” may be another’s “5” or “6”. Problems arise because the system is far from uniform. The thing about grades that makes it confusing is there is no industry standard. The grade represents the cost that the manufacturer pays for the leather. Leathers can look distinctly different but reflect the same price. Leather craft’s grading system features five grades, but 90% of the line primarily addresses its four lower grades and contrasting price points, encompassing 350 SKUs and 40 patterns.

The lower grades represent various different leather qualities ranging from pigmented hides to corrected hides to anilines. But the fifth or top grade is reserved for select European premium skins — not its typical tonnage.

Presently, the price of a cow hide ranges from Rs1,600 to Rs1,900, goat Rs240 to Rs250 per skin and for sheep the price stands at Rs370 to Rs400 per skin.

Governments Policies and Incentives

To stem decline in leather exports, the government has announced a number of steps for giving a boost to leather apparel industry in its 3 year strategic trade policy framework 2009-12. These steps, as announced by federal minister for commerce, on July 26, 2009, include facilities from Export Investment Support Fund for procurement

of expert advisory services, matching grant to establish design studios/centres and establishment of research and development centres in Karachi and Sialkot. In addition, this sector would be able to avail EIS Fund facilities that include sharing 25 percent financial cost of setting up laboratories and matching grant for setting up of effluent treatment plants.

The commerce minister announced that a scheme is also likely to be launched to compensate inland freight cost to exporters of leather garments and some other items.

To ensure predictability of electricity supply, commerce minister said, the ministry of water and power and electricity distribution companies will enter into agreements with cluster of industries whereby electricity will be supplied at mutually agreed times. The agreements would have punitive and compensation clauses and the compensation could be in the form of electricity charges credit.

Chairman, Leather Exporters Association, has commended the government decision to release funds for hiring experts for research and product development. He said, this will considerably help in improving exports. However, the target of 6 percent increase in exports this year is low as the country has much more potential and the government should have aimed for a higher target, if it solved the problems of the industry.

Chairman Tanners Association, termed the new trade policy to be “hopeless for the leather sector. The foremost demand was to provide rebate on exports which other regional countries enjoy. For instance most of the regional countries get up to 15 percent rebate on all leather product exports. Pakistani exporters getting less than one percent rebate from the government.

Trade Policy

The leather garments industry strongly recommended for imposition of 20 percent export

duty on export of semi finished and finished leather proposed in the trade policy. This would help availability of good quality leather produced locally.

Fox Furs are much in demand abroad. This should be removed from negative items list under import/export order. Export of garments using allowable fox fur trimmings for decoration should also be permitted for boosting export of value added leather garments.

There is an urgent need for establishment of a Leather Board in Pakistan which should operate as an independent body and funded by the government from export development fund. The board should be headed by a person exporting leather products.

Value added exports like leather garments where further value addition is not possible should be exempted from Export Development Surcharge.

Re export of temporarily imported goods supplied by buyers should be allowed without sight letter of credit or advance payment if supplied as free of cost. The present policy does not provide provision for export of such goods in original and unprocessed form due to cancellation of export order or changes in design/style of the order.

The exporters may also be allowed to retain 5 percent of their export earnings for international advertisements and commission etc.

After WTO & Future Perspectives

As far as the implications of WTO on the leather industry are concerned, the Agreement on Technical Barriers to Trade (TBT) and the Agreement on the application of Sanitary and Phytosanitary Measures (SPS) can have significant impact on Pakistan’s ability to increase the exports in this sector. However, the environmental issues related with the leather industry in Pakistan could have significant negative effects on its exports. Another problem could be related to the quality of Pakistan’s leather exports. If the Pakistani exporter does not improve the quality of the product,

the current competitive advantage that Pakistan has in this field could quickly fade away.

Leather products like jackets, shoes and gloves account for more than two-thirds of leather exports while tanned unfinished leather accounts for a third. But the industry is struggling to compete in an increasingly tough market.

China and India are fighting for market share by beating Pakistan with cheaper input costs.

The exporters of leather garments want exports of raw leather to be restricted to give them a competitive advantage of cheaper raw material. But the tanners claimed every rightly to fetch the best price for their products.

Hides and skins and leather are covered under the Agreement on Agriculture of WTO. Moreover, the Agreement on Agriculture also has indirect implications for the sector through meat and dairy policies. However, leather and leather products are covered under the general provisions of the GATT 1994.

No import tariffs are applied to raw hides and skins in Pakistan at present. Tariff escalation is an issue for leather and leather products as import tariffs vary according to the level of processing; i.e. finished leather, leather bags, leather shoes etc, carry high tariffs in some countries.

Table - 8
Machinery Assumptions

Number of Machines Installed	35
Maximum Capacity Utilization	100%
Capacity Utilization (Year 1)	50%
Total Production of units per day (garments)	60
Total Production of units per month	1,500
Total Production of units per year	18,000
Total Production of units in Year 1	9,000

Table - 9
Operating Assumptions

Hours operational per day	8
Days operational per month	25
Days operational per year	300

Table - 10
Economy-Related Assumptions

Electricity growth rate	10%
Wage growth rate	5%

Table - 11
Cash Flow Assumptions

Accounts Receivable cycle (in days)	45
Accounts payable cycle (in days)	30
Raw material inventory (in day)	30
Equipment and spare part inventory (in months)	1

Table - 12
Revenue Assumptions

Production capacity in first year	50%
Sale price per unit in year 1 (in Rs.)	6,160
Sale price growth rate	5%
Export sales	100%
Rupee Dollar Exchange Rate	Rs 88 / \$

Table - 13
Expense Assumptions

Administrative & Factory overhead (% of Sales)	3.5%
Office expenses (stationery, entertainment etc)(% of Sales)	0.25%
Machine maintenance (per piece)	Rs. 3
Machine maintenance growth rate	1%
Pre-paid building Rent (months)	12
Rent growth rate	10%
Petrol Oil & Lubrication(% of Sales)	0.5%
Raw Material Price Growth Rate	5%
Insurance rate (% of net fixed assets)	3%
Freight Charges/Piece (in Rs)	\$ 1

Table - 14
Financial Assumptions

Project life (years)	10
Debt	50%
Equity	50%
Interest rate on long-term debt	14%
Interest rate on short term debt	14%
Debt tenure (years)	5
Debt payments per year	1
Discount rate (weighted Avg. cost of capital for NPV)	20%
Minimum Cash Balance Required	Rs.50,000

Table - 15
Projected Income Statement

	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10
Sales	55,440,000	75,675,600	75,675,600	97,796,160	114,559,033	127,362,690	133,730,824	148,218,330	155,629,247	163,410,709
COST OF GOODS SOLD										
Raw Material	44,592,750	46,822,388	49,163,507	51,621,682	54,202,766	56,912,905	59,758,550	62,746,477	65,883,801	69,177,991
Payroll (Production Staff)	4,614,000	5,075,400	5,582,940	6,141,234	6,755,357	7,430,893	8,173,982	8,991,381	9,890,519	10,879,571
Machine Maintenance	27,000	35,451	44,068	47,291	47,764	51,079	51,590	55,001	55,551	56,106
Direct Electricity	357,159	392,874	432,162	475,378	522,916	575,208	632,728	696,001	765,601	842,161
POL	277,200	378,378	378,378	488,981	572,795	636,813	668,654	741,092	778,146	817,054
Stationary	138,600	189,189	189,189	244,490	286,398	318,407	334,327	370,546	389,073	408,527
Freight	792,000	1,029,600	1,267,200	1,346,400	1,346,400	1,425,600	1,425,600	1,504,800	1,504,800	1,504,800
Total	50,798,709	53,923,280	57,057,444	60,365,456	63,734,396	67,350,905	71,045,432	75,105,297	79,267,491	83,686,210
Gross Profit	4,641,291	21,752,320	18,618,156	37,430,704	50,824,637	60,011,785	62,685,392	73,113,033	76,361,755	79,724,499
OPERATING EXPENSE										
Payroll (Admin)	1,236,000	1,359,600	1,495,560	1,645,116	1,809,628	1,990,590	2,189,649	2,408,614	2,649,476	2,914,423
Payroll (Marketing and Sale)	648,000	712,800	784,080	862,488	948,737	1,043,610	1,147,972	1,262,769	1,389,046	1,527,950
Fixed electricity	270,220	297,242	326,966	359,662	395,629	435,191	478,710	526,582	579,240	637,164
Insurance Expense	85,950	77,355	68,760	60,165	51,570	42,975	34,380	25,785	17,190	8,595
Administrative & Factory Overheads	1,663,200	2,285,403	2,300,690	2,993,151	3,529,802	3,950,816	4,176,468	4,660,386	4,926,776	5,208,505
Amortization (Pre-operational Expenses)	46,030	46,030	46,030	46,030	46,030	46,030	46,030	46,030	46,030	46,030
Depreciation	286,500	286,500	286,500	286,500	286,500	286,500	286,500	286,500	286,500	286,500
Total	4,235,900	5,064,930	5,308,585	6,253,113	7,067,895	7,795,713	8,359,709	9,216,665	9,894,257	10,629,167
Operating Profit	405,392	16,687,390	13,309,571	31,177,591	43,756,742	52,216,072	54,325,684	63,896,368	66,467,499	69,095,332
NON-OPERATING EXPENSE										
Financial Charges on Running Finance	892,053	1,914,858	431,845	0	0	0	0	0	0	0
Building Rental	1,050,000	1,155,000	1,270,500	1,397,550	1,537,305	1,691,036	1,860,139	2,046,153	2,250,768	2,475,845
Total	1,942,053	3,069,858	1,702,345	1,397,550	1,537,305	1,691,036	1,860,139	2,046,153	2,250,768	2,475,845
PROFIT BEFORE TAX	(1,536,661)	13,617,533	11,607,226	29,780,041	42,219,437	50,525,036	52,465,544	61,850,215	64,216,730	66,619,487
Tax	0	3,404,383	2,901,806	7,445,010	10,554,859	12,631,259	13,116,386	15,462,554	16,054,183	16,654,872
PROFIT AFTER TAX	(1,536,661)	10,213,150	8,705,419	22,335,031	31,664,578	37,893,777	39,349,158	46,387,661	48,162,548	49,964,615

Table - 16
Projected Cash Flow Statement

	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10
Operating activities										
Net profit	(1,536,661)	10,213,150	8,705,419	22,335,031	31,664,578	37,893,777	39,349,158	46,387,661	48,162,548	49,964,615
Amortization (Pre-operational Expenses)	46,030	46,030	46,030	46,030	46,030	46,030	46,030	46,030	46,030	46,030
Depreciation	286,500	286,500	286,500	286,500	286,500	286,500	286,500	286,500	286,500	286,500
Accounts receivable	(8,316,000)	(3,035,340)	0	(3,318,084)	(2,514,431)	(1,920,548)	(955,220)	(2,173,126)	(1,111,637)	(1,167,219)
Equipment Spare Parts Inventory	(2,250)	(704)	(718)	(269)	(39)	(276)	(43)	(284)	(46)	(46)
Up-Front Insurance payment	8,595	8,595	8,595	8,595	8,595	8,595	8,595	8,595	8,595	8,595
Stocks-RM	(222,964)	(234,112)	(245,818)	(258,108)	(271,014)	(284,565)	(298,793)	(313,732)	(329,419)	6,917,799
Accounts payable	4,927,724	246,445	258,766	271,655	285,214	299,498	314,448	330,194	346,679	(362,356)
Cash provided by operations	(4,809,026)	7,530,564	9,058,774	19,371,350	29,505,432	36,329,011	38,750,676	44,571,838	47,409,249	55,693,918
Financing activities										
Long term debt principal repayment	0	0	0	0	0	0	0	0	0	0
Add: building rent expense	1,050,000	1,155,000	1,270,500	1,397,550	1,537,305	1,691,036	1,860,139	2,046,153	2,250,768	2,475,845
Building rent payment	(1,155,000)	(1,270,500)	(1,397,550)	(1,537,305)	(1,691,036)	(1,860,139)	(2,046,153)	(2,250,768)	(2,475,845)	(2,723,430)
Addition to long term debt										
Running Finance Repayment	(4,460,263)	(9,574,288)	(2,159,224)	0	0	0	0	0	0	0
Issuance of share										
Cash provided by/ (used for) financing activities	(4,565,263)	(9,689,788)	(2,286,274)	(139,755)	(153,731)	(169,104)	(186,014)	(204,615)	(225,077)	(247,585)
Total	(9,374,288)	(2,159,224)	6,772,500	19,231,595	29,351,702	36,159,907	38,564,662	44,367,223	47,184,172	55,446,333
Investing activities										
Capital expenditure										
Cash (used for)/ provided by investing activities	(9,374,288)	(2,159,224)	6,772,500	19,231,595	29,351,702	36,159,907	38,564,662	44,367,223	47,184,172	55,446,333
Net Cash										

Table - 17
Projected Balance Sheet

	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9	Year-10
Current Assets										
Cash	200,000	200,000	6,972,500	26,204,095	55,555,796	91,715,704	130,280,366	174,647,588	221,831,761	277,278,094
Equipment Spare Parts Inventory	2,250	2,954	3,672	3,941	3,980	4,257	4,299	4,583	4,629	4,676
Up-Front Insurance payment	77,355	68,760	60,165	51,570	42,975	34,380	25,785	17,190	8,595	0
Stocks and Inventory	4,682,239	4,916,351	5,162,168	5,420,277	5,691,290	5,975,855	6,274,648	6,588,380	6,917,799	0
Receivable	8,316,000	11,351,340	11,351,340	14,669,424	17,183,855	19,104,403	20,059,624	22,232,750	23,344,387	24,511,606
Pre-paid building rent	1,155,000	1,270,500	1,397,550	1,537,305	1,691,036	1,860,139	2,046,153	2,250,768	2,475,845	2,723,430
Total	14,432,844	17,809,905	24,947,395	47,886,611	80,168,933	118,694,738	158,690,874	205,741,260	254,583,016	304,517,805
Gross Fixed Assets	2,865,000	2,865,000	2,865,000	2,865,000	2,865,000	2,865,000	2,865,000	2,865,000	2,865,000	2,865,000
Less: Accumulated depreciation	286,500	573,000	859,500	1,146,000	1,432,500	1,719,000	2,005,500	2,292,000	2,578,500	2,865,000
Net Fixed Assets	2,578,500	2,292,000	2,005,500	1,719,000	1,432,500	1,146,000	859,500	573,000	286,500	0
Intangible Assets										
Pre-operational Expenses	414,270	368,240	322,210	276,180	230,150	184,120	138,090	92,060	46,030	0
Total	414,270	368,240	322,210	276,180	230,150	184,120	138,090	92,060	46,030	0
Total Assets	17,425,614	20,470,145	27,275,105	49,881,791	81,831,583	120,024,858	159,688,464	206,406,320	254,915,546	304,517,805
Current Liabilities										
Running Finance	9,574,288	2,159,224	0	0	0	0	0	0	0	0
Accounts payable	4,927,724	5,174,169	5,432,935	5,704,590	5,989,804	6,289,302	6,603,750	6,933,944	7,280,623	6,918,267
Total	14,502,012	7,333,394	5,432,935	5,704,590	5,989,804	6,289,302	6,603,750	6,933,944	7,280,623	6,918,267
Long-term liabilities										
Long-term Loan	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Equity										
Paid-up Capital	4,460,263	4,460,263	4,460,263	4,460,263	4,460,263	4,460,263	4,460,263	4,460,263	4,460,263	4,460,263
Retained Earnings	(1,536,661)	8,676,489	17,381,908	39,716,939	71,381,516	109,275,294	148,624,452	195,012,113	243,174,661	293,139,276
Total	2,923,602	13,136,751	21,842,171	44,177,201	75,841,779	113,735,556	153,084,714	199,472,376	247,634,923	297,599,539
Total Liabilities And Equity	17,425,614	20,470,145	27,275,105	49,881,791	81,831,583	120,024,858	159,688,464	206,406,320	254,915,546	304,517,805

Note: For further information please contact SMEDA Office in Balochistan.