

## **Small Industries - Electrical and Electronics Sector in Bangladesh**

### ***SWOT analysis***

### **ELECTRICAL SECTOR**

The main items under SME are:

1. Switches, Plugs, Sockets, Power Indicator, Cut out (wire fuse), Ceiling rose, lamp holder (filament type and fluorescent tube type)
2. Extension cords
3. Electrical heater, iron, Soldering iron
4. Small fans, exhaust fans
5. Table lamps and Pedestal lamps
6. Lamp shades

#### ***Strength***

1. Highly intelligent and skilled manpower can perform skillful manual operations to produce good quality items.
2. Local workshop expertise available for fabricating process equipment that are mechanical and electrical in nature. Most of the existing industries depend on such equipment.
3. Producing quality products need measuring and calibration equipment which are expensive if imported. Expertise to develop such equipment (which are mostly electronic) at low cost exist within the country, which if tapped, may result in significant improvement in quality.
4. Large domestic market.
5. Existence of an efficient chain of independent marketing network for reaching the whole of the country.
6. Low labor cost.
7. Experienced laborers can form new enterprises after they have learned the skill.
8. Indian products that are marginally better than local ones have occupied a substantial market in Bangladesh. This market can be taken up through achievable improvement in quality.

#### ***Weakness***

1. Lack of adequate scientific and technical knowledge. Cannot improve quality beyond a certain level.
2. Do not have adequate funds. Entrepreneurs do not know about collateral free loan providers. Since banks usually ask for collateral, most entrepreneurs avoid banks.
3. Majority does not have proper accounting knowledge required for project evaluation, pricing, etc. They mostly work through crude mind – calculations which may result in failure, particularly when receiving loans.
4. The independent marketing network is beyond the control of the enterprises, rather these distributors play control over them.
5. The pressure from the distributing firms for greater margins to themselves and lack of consumer awareness leads to cheaper and low quality products flooding the market, even though capability exists for producing better quality items. This pressure also makes the local enterprises label products with the names of popular foreign brands. Thus bad

products drive good products away damaging the reputation of local products. This eventually makes road to import of better quality foreign products.

6. Existing Government laws relating to tax and VAT at production level, where corruption is also rampant, discourages these enterprises to expose themselves through exhibitions and advertisements, and in establishing own brands. This keeps them under the control of the distributors, which inhibits efforts to enhance quality as mentioned above.
7. Attitude of customers to go for foreign products, thinking that quality products are not produced in own country. This also results in manufacturers putting labels of foreign brands on local products for easy marketing. This has to be analyzed together with the statements in item 5.
8. There is a high end market in the country where quality rather than price is sought. However, it would be difficult for SME's to enter this market unless quality brands are established.
9. Government is a big buyer in the country. Vested interest groups manipulate policies to make it difficult for local products to enter.

### ***Opportunities***

1. A large domestic market exists for low priced products, which is increasing gradually as people come out of poverty through various Government and Non-Government initiatives.
2. The customers are not yet conscious about consumer rights. This is helpful for start-up enterprises.
3. If the Government policies regarding tax and VAT can be changed so that corrupt officials cannot disturb the entrepreneurs, some enterprises will come out of the shell by trying to improve quality, advertising, and establishing brands. This will initiate a healthy competition. When quality improves, a large export market, both in the Economically Developing countries and in the Economically Advanced countries, can be tapped as well.
4. If favorable policies are adopted (as suggested above) youths with technical education will enter this arena. This will pave the way for producing high quality products in the country.
5. Government can be induced to make purchases from local manufacturers through appropriate lobbying and public opinion formation.

### ***Threat***

1. Better quality products from India and China at reasonable prices.
2. Possibility of dumping from these countries when local producers try to improve quality.
3. Unfavorable Government policies may be taken up due to lobbying of powerful vested interest groups when the local entrepreneurs become a challenge to imported products – both in quality and in price.
4. Most of the products depend on imported raw materials. A large scale disruption abroad may affect the local production, though it is a remote possibility in the present day world.

## **ELECTRONICS SECTOR**

This is a highly potential sector for Bangladesh as the mental abstraction needed to understand the inner unseen working of electronic devices and circuits is special and somehow the people of Bangladesh are very good at it. In the following lists products that have been already been commercialized or are almost ready to be commercialized are given. Here the main items under SME can be divided into the following two categories.

### A. Items using foreign technology (assembly industry)

1. Radio
2. Television
3. VCR, VCP

### B. Items using locally developed or acquired technology

This can be again sub-divided into three

#### *B.1 Items for general consumer use*

- |  |   |
|--|---|
| 1. Electronic Light dimmer, Fan regulator                          | 5. Audio Amplifiers                                 |
| 2. Voltage protection devices (Volt-Guard)                         | 6. Emergency charger light                          |
| 3. Voltage Stabilizers with or without built-in Voltage Protectors | 7. Emergency power systems (e.g IPS)                |
| 4. Surge Suppressors   | 8. Uninterruptible Power Supply for computers (UPS) |

#### *B.2 Items for specialized professional, industrial and educational use*

- |  |   |
|--|---|
| 1. Computerized on-line ECG Monitor                            | 13. pH meter  |
| 2. Computerized EMG equipment                                  | 14. Conductivity meter                              |
| 3. Muscle & Nerve Stimulator                                   | 15. Radiation Survey meter                          |
| 4. Iontophoresis equipment for treatment of excessive sweating | 16. PABX system                                     |
| 5. Industrial temperature controller                           | 17. Conference audio system                         |
| 6. Electrical Energy Meter calibrating equipment               | 18. Hi-Fi audio system                              |
| 7. Electronic Scoreboard                                       | 19. Public Address system                           |
| 8. Traffic Light (using micro-controller)                      | 20. Charge Controller for Solar Photovoltaic system |
| 9. Automatic light sensitive switch                            | 21. Inverter for Solar Photovoltaic System          |
| 10. Taxi meter (using micro-controller)                        | 22. Moving message display                          |
| 11. Trainer board for general electronics teaching             | 23. Counter serial display system                   |
| 12. Trainer board for teaching Radio, Television               | 24. Computer interface trainer system               |
|  | 25. Micro-controller trainer system                 |
|  | 26. Microprocessor trainer system                   |

#### *B.3 Components and support items for electronic manufacture*

1. Transformers
2. Cabinets

## ***Strength***

1. Bangladeshi people have a strong mental ability to visualize the actions of unseen abstract designs as demanded by Electronics. In other words our people have a natural ability for electronics which gives it a strong advantage over many nations.
2. This sector has been initiated by relatively educated group of people, particularly people with science and engineering background. This is a good sign for potential product innovation and quality.
3. As mentioned before, having a natural mental ability, laborers are easy to train. They can produce high quality products given necessary facilities and incentive.
4. Potential exists for high quality indigenous product design. Existing local products are better in quality than many items imported from neighbouring countries, which is the reason for their survival in spite of negative Tax and VAT policies that favor importing and goes against local production.
5. Needs a very small fixed investment.
6. Products needed for calibration or automation of other process industries can be designed and fabricated.
7. Mostly innovators have turned into entrepreneurs. This is behind all significant industrial growth in the global history.
8. Local support industries for transformers and cabinets help reduce the cost of products. (Transformers are relatively heavy, and cabinets are bulky, so freight charges in import is high for both these items). In spite of lack of required infrastructure for producing world class cabinets, innovative use of existing capabilities have produced designs that are reasonable, and better than those produced in many exporting countries.
9. Existence of large domestic market, if properly tapped, and if some degree of protection is provided against similar finished imported products.
10. Scope for innovating products matching the needs of local population. Customer design is possible if an innovator becomes an entrepreneur himself. This is also one of the reasons for survival of such groups in spite of fierce competition from cheaper and better looking products from abroad.
11. Some local products are better in quality and service, compared to imported products. Particularly, local Voltage Protectors and Stabilizers are better suited to our conditions than the imported ones.

## ***Weakness***

1. Needs a large working capital.
2. Lack of infrastructure for fabricating high quality cabinets. World-class cabinets mostly use plastics or die shaped sheet metal. Both of these need huge investments and are economically viable for a very large volume for each individual product. Since the existing volume is small the necessary infrastructure has not grown in Bangladesh so far.
3. At a very small scale the industry is very profitable, as marketing is limited within acquainted people around. As soon as one wants to grow to middle tier, restricting Government policies come into play and Marketing becomes difficult as it needs going beyond personal acquaintance level. Show rooms and sufficient advertising are needed which a large working capital and it needs take a while to catch on.
4. No large scale marketing chain exists as is there for electrical products. The manufacturers have to negotiate with retailers directly and the dealers take advantage of the situation. The manufacturers do not get the price regularly and this sector suffers from cash flow crisis.

5. Because of low volume, manufacturers cannot import components directly from component manufacturers abroad. They have to depend on the components brought in by bulk importers. This leads to some reliability problems. Besides, minor design changes have to be made for each batch if components are not available to exact specifications. This needs the presence of an expert in every industry which are based on local design.
6. The above is not a problem with Radio and Television assembly industry since they get all their parts and components in a kit form. However, such assembly-only industries do not build up local technological capability and cannot grow. Therefore such assembly-only industries should get less importance than those based on indigenous technology.
7. Existing Government laws relating to tax and VAT at production level, where corruption is also rampant, discourages these enterprises to expose themselves through exhibitions and advertisements, and in establishing own brands. This keeps them under the control of the retail dealers, which inhibits efforts to enhance quality and to sustain a regular cash flow.
8. Though there is an attitude of customers to go for foreign products, efforts of some capable innovators turned entrepreneurs have changed the scenario to a great extent. People have now more reliance on domestic electronic products.
9. Government is a big purchaser in the country. Vested interest groups manipulate purchase procedures with illegal behind the scene negotiations, where quality is sacrificed for kickbacks. This results in a race which results in quality deterioration.
10. Government purchases often favor foreign products, categorically mentioning places of origin excluding the local ones, even in cases where local products have demonstrated their quality and reliability.

### ***Opportunities***

1. A large domestic market exists for low and medium priced quality products, which is increasing gradually as people come out of poverty through various Government and Non-Government initiatives.
2. The customers are not yet conscious about consumer rights. This is helpful for start-up enterprises.
3. There is ample scope for export. The quality of some of the local products is already of international standard. In fact some products that are imported into this country are inferior to local products.
4. If the Government policies regarding tax and VAT can be changed so that corrupt officials cannot disturb the entrepreneurs, some enterprises will come out of the shell by trying to improve quality, advertising, and establishing brands. This will initiate a healthy competition. When quality improves, a large export market, both in the Economically developing countries and in the Economically Advanced countries, can be tapped as well.
5. If favorable policies are adopted (as suggested above) more people youths with technical background will enter this arena. This will pave the way for producing high quality products in large volumes within the country.
6. Government can be induced to make purchases from local manufacturers through appropriate lobbying and public opinion formation.

### ***Threat***

1. Cheaper and better looking, not necessarily of better quality, products from China.
2. Possibility of dumping from these countries.
3. Unfavorable Government policies already exist against local products, and may continue in future due to lobbying of powerful vested interest groups.

4. Most of the products depend on imported raw materials. A large scale disruption abroad may affect the local production, though it is a remote possibility in the present day world.

(adequate Government policies will be needed to counter some of the threats mentioned above).