Export Performance a Vital Indicator for Measuring Industry Competitiveness: Evidence from Pakistan Textile and Clothing Industry

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Abstract - Federal Bureau of Statistics Pakistan is regularly collecting and maintaining data for exports for industrial sectors (textile, food and other manufacturing commodities) and Service Sector. Export performance is a vital indicator for measuring any industry competitiveness. Pakistan Textile and Clothing Export data from 2005-2006 – 2009-2010 was explored for competitive performance analysis. Sector was further divided into three categories low, medium and high based on their share. Performance was anlaysed using SPSS.19 and Microsoft Excel. It was found that Cotton Yarn, Knit-Wear and Towel had positive compound annual growth rate (CAGR), whereas, Cotton Cloth, Bed-Wear and Ready- Made Garment comprising of 50-60% of the group had negative CAGR. Poor performance were found to be due to low quality, less value added products, weak competitive intelligence, low product mix, lack of skills, weak marketing, high production cost, out dated technology, old manufacturing techniques, electricity and gas shortage and severe competition from China after its integration into World Trade Organizations (WTO) Structures on termination of post quota regime. To achieve sustainable competitiveness, foreign investment should be encouraged through making strategic alliances with major players by exploiting competitive advantage of raw material and low wage labour potential. Moreover, industry should be strengthen upstream and downstream through advancement in biotechnology, development of energy availability strategies, investment in technology, institutionalising workers skills, exploiting low labour cost, improve marketing, and transforming small and medium units into well-organized high quality, high value added, low cost competitive large units.

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1. Introduction

Organizations irrespective of their size and capabilities remain in the quest, other than their domestic market, of global market not just to develop their business but at the same time to survive in the international competitive business community. Descotes and Walliser (2011) validated that organizations capability to acquire timely knowledge and information pertaining to global markets and its timely exploitation plays a vital role in the global economy. Therefore, organizations must be vigilant enough to continuously acquire competitive intelligence and analyse the market trends, and respond accordingly to the turbulent changing dimensions of the international market and avoid to being surprised by their competitors and are forced to reactive mode instead of being proactive and will not be able to achieve sustainable competitiveness. May et al., (2000) also suggest that "Information and its management is even more important in the international setting, where entirely new parameters and environments are encountered". Eusebio et al., (2007b) believed that the business environment characteristics are defined by the competition intensity and market turbulence. For all business (especially Textile and clothing), in such dynamic environment, the export performance is playing a vital role in the development of business among countries. It has been well established that country's economic well-being is positively associated with their foreign trade strength. Developed countries have higher share in international trade as compared to less-developed countries(Held, 1999). A country's exports provide a platform to augment its people quality of life (QoL) by opening more jobs in the exporting sector. Macroeconomic performance based on the export performance of a country determine its competitiveness, whereas, the microeconomics performance rely on the organizational and structural features of companies. The past studies investigated the result from microeconomic perspective and concluded that the global market performance of a company is deeply associated with the institutional performance and environment created by its source country(Porter, 1990). The global competitiveness of an organization depends upon two major pillars, one is its capacity and second is its strategic initiatives (Aaby & Slater, 1989; Leonidou, 1998; Zou & Stan, 1998). Therefore, an

organization before making a decision to enter into export must have a sound rational analysis of organization's internal capabilities and competitive intensity of international market and develop a business strategy and plans which will attain sustainable competitiveness and improve the organization operational, market and financial performance.

In Pakistan, Federal Bureau of Statistics (FBS) collects and analyse data on all the macroeconomic indicators including export. The same is also maintained for reference of individual researchers, organizations and government authorities for further use. Analysis of such data available with Federal Bureau of Statistics and Trade Development Authorities of Pakistan (TDAP) is sufficient enough to investigate the changing trends of the textile export business. This research focused on data exploration of Pakistan Textile and Clothing exports performance considering it a core indicator for measuring industry competitiveness and identification of factors which affects the industry competitiveness and provide recommendations to improve the industry competitiveness.

2. PAKISTAN TEXTILE AND CLOTHING SECTOR

Pakistan Textile and Clothing industry accounts for 50-65% country's export shares, provides 38% employment to the manufacturing labour force and have substantial contribution of 8.5% in the gross domestic production (GDP). Pakistan holds the title of fourth largest in cotton producers and third largest in cotton consumers("Paksitan Economic Survey ", 2005-06; "Paksitan Economic Survey," 2010-11). No other industry or service sector of Pakistan has such gigantic potential to support economy through foreign revenues and at the same time provide employment opportunities at large scale. Pakistan textile and clothing industry holds a significant position in the international market since its inception (four decades ago approximately), but quota system ending has posed a serious challenge to this industry and export share has been seriously affected. From 2004-2009, International textile products trade has amplified from US$ 456.1 billion in 2004 to $527 billion in 2009 at Compound Annual Growth Rate (CAGR) of 2.93%. From 2004-2009, clothing trade grew from 260.6 billion US$ to 316 billion US$ at CAGR of 3.93%, whereas, textile trade grew from $195.5 billion US$ to 211 billion US$ at CAGR 1.53%. Clothing products trade outpaced textile products trade. Pakistan textile and clothing trade has increased from 9.1 billion US$ in 2004 to 9.5 billion US$ in 2009 at CAGR of 0.86% as shown in Figure 1.
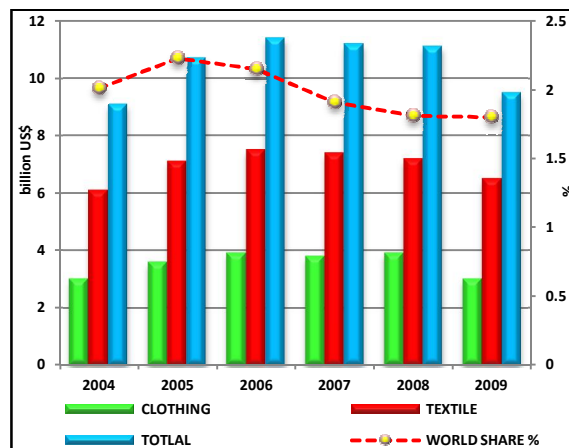

Figure 1. Pakistan export market share from 2005-06 to 2009-10

From 2004-2009 Textile trade grew from 6.1 billion US$ to $6.5 billion US$ at CAGR of 1.28% whereas, clothing trade remained the same from $3 billion US$ to $3 billion US$ with minor fluctuations. Pakistan had a meagre share in the world textile and clothing ranging between 1.8 - 2.23%. Pakistan trade is decreasing as opposite to world trade and is unable to make any significant improvement particularly in clothing sector. Moreover, Textile and Clothing share in overall Pakistan exports decreased from 64% in 2004-2005 to 54.46% in 2009-2010 of total exports at a decreasing CAGR of (-3.1%).

3. Scope

The scope of this study is limited to Pakistan Textile and Clothing sector export performance from 2005-2006 to 2009-2010. The sector is further sub divided into seven sub-sectors as following.

- Cotton Yarn
- Cotton Cloth
- Ready-Made Garments
- Bed-Wear
- Knit-Wear
- Towels
- Others, (comprises of Raw Cotton, Carpets, Canvas, Tents, Synthetic Articles, etc)

The first six sub-sectors Cotton Yarn, Cotton Cloth, Ready-Made Garment, Knit-Wear, Bed-Wear and Towels accounts for 85-90% of the total textile sector export. Therefore, the data of these six sub sectors is considered sufficient enough to analyse the overall industry export performance. The current study based on data exploration for investigation of textile and clothing export performance. The textile and clothing industry data from 2005-2006 to 2009-2010 for five years has been analysed. Statistical

applications such as SPSS.19 and Microsoft Excel were used to perform exhaustive numerical analysis.

4. Results Analysis and Discussion
4.1 Descriptive Statistics

Descriptive statistics of six sub sectors from 2005-2006 to 2009-2010 are calculated as shown in Table 1.

Table 1. Descriptive Statistics - Textile and Clothing Export from 2005-06 to 2009-10

Million US$

Cat	Sub Sector	Mean	Std. Deviation	Max	Min	Range
Low	Towels	622.8762	32.43976	668.24	587.64	80.60
Medium	Ready-Made	1329.319	89.54759	1452.48	1230.02	222.46
	Cotton yarn	1331.959	132.44030	1433.09	1114.82	318.27
High	Knit-wear	1817.971	95.71032	1961.05	1740.53	220.52
	Bed-wear	1883.345	139.96593	2038.06	1735.02	303.05
	Cotton-cloth	1980.105	114.57589	2108.18	1800.06	308.13

Moreover, these sub-sectors are further divided in three categories based on their business share, Low (500-1000 US$ Mns), Medium (1001-1500 US$ Mns) and High (1501-2200 US$ Mns) as shown in Figure 2. Three categories based on business share can easily been differentiated.
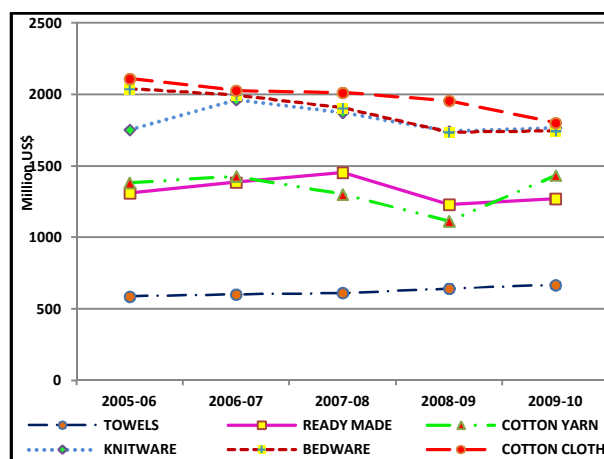

Figure 2. Sub-sectors export market share from 2005-06 to 2009-10

Among the sub sectors, it is found that Towels had the lowest export share with (Mean = 622.87$, Standard Deviation = 32.43) but low standard deviation showed export stability. Ready-Made Garments and Cotton Yarn falls under medium

category with (Mean = 1329.3198, Standard Deviation = 89.54759 and Mean = 1331.95, Standard Deviation = 132.44) respectively. Both showed instability as compared to Towel sector due to high standard deviation. Knit-wear, Bed-wear and Cotton Cloth falls under high value category with (Mean = 1817.9710, Standard Deviation = 95.71032, Mean = 1883.3458, Standard Deviation = 139.96593 and Mean = 1980.1052, Standard Deviation =114.57589) respectively. All three accounts major contribution to the business, however, high standard deviation reflects their significant market share instability.

4.2 Towels Export From 2005-2006 to 2009-2010

Towels sector performance is evaluated as shown in Figure 3 to arrive at following outcomes:
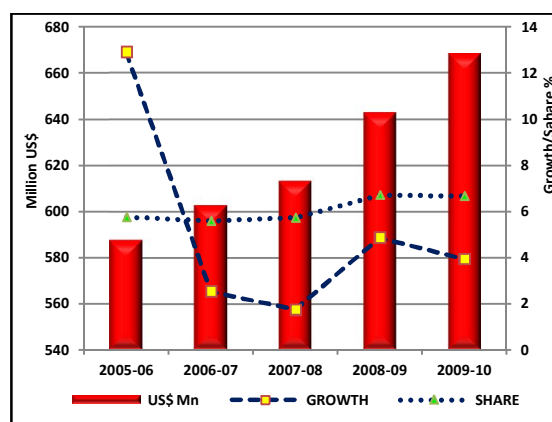

Figure 3. Towels export market share from 2005-06 to 2009-10

- It accounts for 5-6% of the group share
- It was growing at CAGR of 3.27%.
- The major reason for steady growth is due to less competition in the export market. Hence, this sector is showing improvement after post quota era.
- Keeping in view its increasing export potential it is considered best suited for investment.

4.3 Ready-Made Export From 2005-06 to 2009-10

Ready-made sector performance is evaluated as shown in figure 4 to arrive at following outcomes:
- It accounts for 12-13% share of the group.
- It showed a negative CAGR of (0.785%).
- It showed a constant negative growth till 2008-09 and then a marginal improvement of 3.19% in 2009-2010.
- Primarily, the poor performance is due to low quality, low value added and less innovative

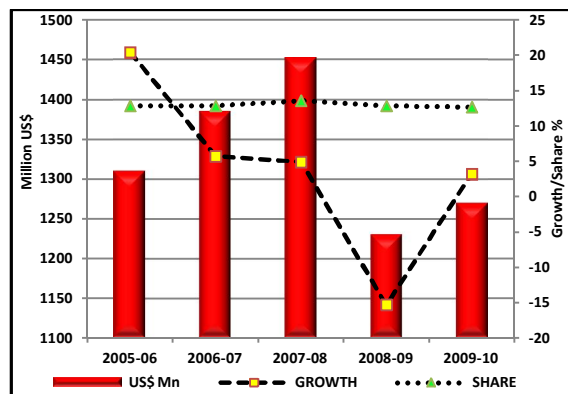products, low product mix, poor workers skills, weak marketing and high production cost.

Figure 4. Ready-made export market share from 2005-06 to 2009-10

- The unexpected upsurge in utilities cost, (power, transport, fuel and gas,) has impacted viability. The power and gas shortage have further deteriorated capacity utilization.
- Non adaptability of lean and agile manufacturing practices to eliminate product and process waste and to response diversified market demands respectively.
- The world export trend has been showing a tremendous shift from textiles to high value clothing. Whereas, Pakistan's textile exports continue to focus on textile items (cotton, yarn, grey fabric, etc.) rather on the value-added segment of ready-made garments. Moreover, Pakistan is actually a raw material supplier to its own competitors (China and Bangladesh).
- Pakistani textile industry did not effectively built downstream capacities by developing value added garment. Moreover, this Industry is distributed in small, medium and large scale units most of them having 50 machines and below which results high variation in product quality.

4.4 Cotton Yarn Export From 2005-2006 to 2009-2010

Cotton yarn sector performance is evaluated as shown in Figure 5 to arrive at following outcomes:
- It accounts for 14 – 15 % share of the group.
- It showed a CAGR of 0.895%.
- It showed a constant negative growth from 2005-2006 to 2008-2009 and then there was a major improvement making 28% improvement in 2009-2010.

- Primarily, low performance is due to the production of low value-added yarns i.e. in coarse and medium counts.
- Secondly, the primary concern of this sector was non-availability of electricity and gas which seriously affected the effective capacity utilization. Major players have installed their own generation plants which made it non cost-effective and less competitive in the international market.
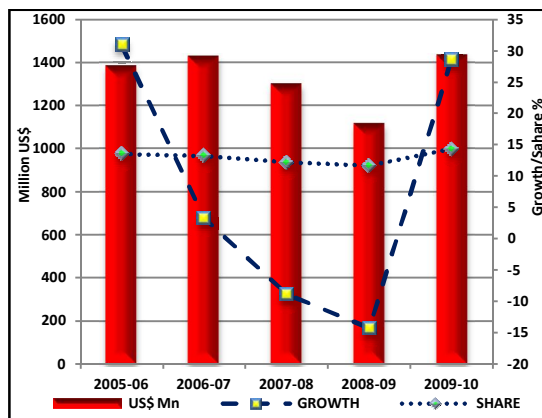

Figure 5. Cotton yarn market share from 2005-2006 to 2009-2010

4.5 Knit-Wear Export From 2005-2006 to 2009-2010

Knit-wear sector performance was evaluated as shown in Figure 6 to arrive at following outcomes:
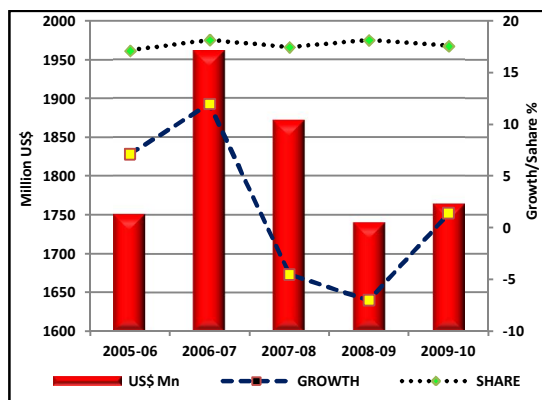

Figure 6. Knit-wear market share from 2005-2006 to 2009-2010

- It accounts for 17 – 18.5 % share of the group and showed a CAGR of 0.188%.
- It showed a negative growth from 2005-2006 to 2008-2009 and then there was a marginal improvement of 1.39% in 2009-2010.
- Poor performance is due to lack of skilled manpower and outdated technology.

4.6 Bed-Wear Export From 2005-2006 to 2009-2010

Bed-wear performance was evaluated as shown in Figure 7 to arrive at following outcomes:

- It accounts for 18 – 20 % share of the group and showed a negative CAGR of (3.817%).
- It showed a constant negative growth from 2005-2006 – 2008-2009 and then there was a minor improvement of 0.5% in 2009-2010.
- Outdated processing technology being used by the industry is not adequate to meet the requirements of the quality market.
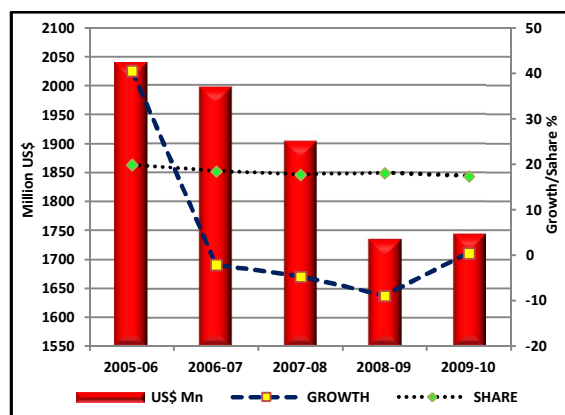- Lack of skilled manpower in design, development and processing fields also affected the product quality.

Figure 7. Bed-wear export market share from 2005-2006 to 2009-2010

4.7 Cotton Cloth From 2005-2006 to 2009-2010

Cotton cloths sector performance was evaluated as shown in figure 8 to arrive at following outcomes:
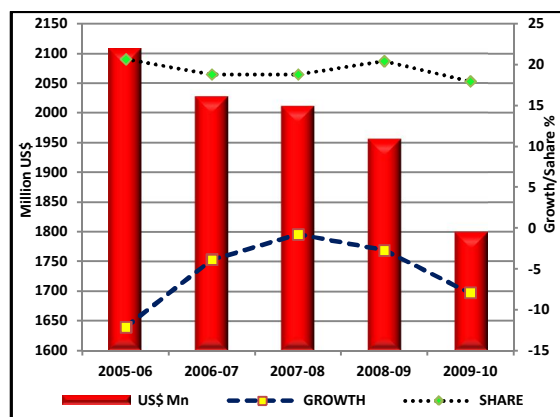

Figure 8. Cotton-cloth export market share from 2005-2006 to 2009-2010

- It accounts for 19 – 21 % share of the group and showed a negative CAGR of (-3.873%).

- It showed a constant negative growth from 2007-2008 to 2009-2010.
- This segment is making relatively low value added grey cloth of mostly inferior quality. Inability to meet the demand of high quality cloth in the international market and being low quality producer this sector would be unable to sustain its competitiveness.
- Poor performance is due to out-dated Power looms technology, shortage of quality yarn and deficiency of formal financing.
- Constant negative growth is seriously going to affect the overall textile export sector performance as it belongs to high value sub-sector.

4.8 Compound Annual Growth Rate From 2005-2006 to 2009-2010

CAGR of subsectors gives a clear picture of the entire sector as shown in Figure 9.
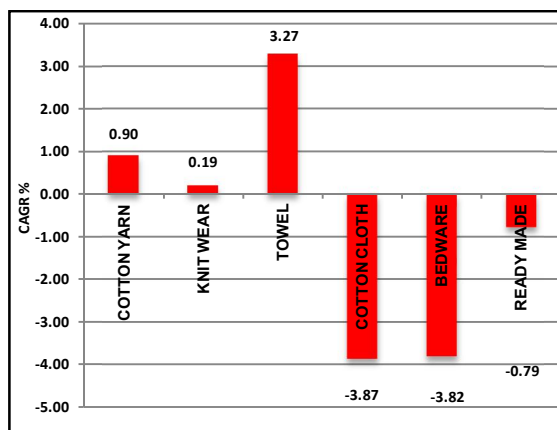

Figure 9. Compound Annual Growth Rate (CAGR) from 2005-2006 to 2009-2010

Towel, Knit-Wear and Cotton Yarn had positive CAGR, on the other hand, Ready-Made Garment Bed-Wear and Cotton Cloth sectors holding a major share 50-60% of the group had negative CAGR. Poor performance of Cotton Cloth, Bed Wear and Ready-Made Garments being a member of high and medium category was a major reason of industry poor performance.

4.9 Machinery Investment

A substantial investment has been made in import of textile machinery from 2001-2002 to 2009-2010 as shown in Figure 10. Textile machinery import is the major component of new investments in the textiles division. The trend in imports of textile machinery depicts the overall mind set of the textile

and clothing entrepreneurs and their future business plans. The foremost investment was made in weaving spinning followed by processing (dyeing, printing and finishing) sector neglecting stitching sector which is major cause of poor performance in readymade garments sector. Moreover, a negative investment trend in machinery is observed from 20005-2006 to 2008-2009 which also contributed in negative growth of complete sector for the same period
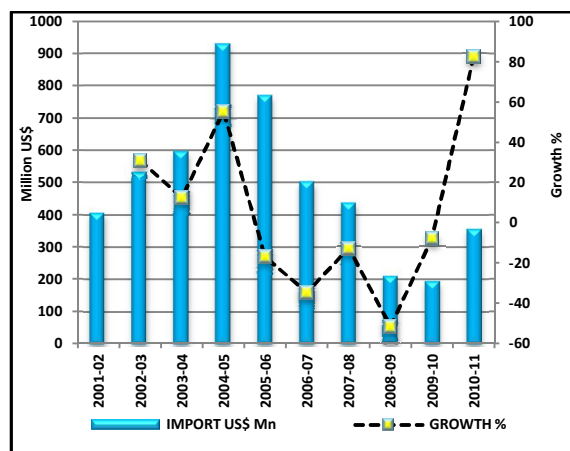

Figure 10. Investment in machinery from 2001-2002 to 2009-2010

5. Findings

The data mined for subsectors was exhaustively analysed. It resulted into following findings.

- Among all six sub-sectors the towel sector was the best performer in export though it had little share.
- All other sub-sectors beard negative growth form 2006-2007 – 2008-2009. It was due to the phase out of traditional quota regime and China's integration into World Trade Organization (WTO) structures. Moreover, the global financial crisis since late 2007 adversely impacted the trade in textiles.
- Cotton Yarn, Knit Wear and Ready-Made garments had shown positive growth of 28%, 1.39% and 0.895% respectively in 2009-2010 and have future positive growth prospects.
- Cotton Cloth and Bed-Wear had serious negative growth and being member of high category seriously affected the overall group export performance.
- There was a major shift in global demand from low value to high value garments.
- Poor export performance in different sectors was due to low product quality, less value added, lack of innovation, low product mix, lack of skilled workers, weak marketing and

high production cost and out dated technology.
- The power and gas shortage have worsened capacity utilization and number of units has been shut down or working below effective capacity also caused a forced labour un-employment.
- Power loom sector problems are poor technology, scarcity of quality yarn and lack of institutional financing for its development from unorganized sector to an organized one.
- Lack of design, development and non-adoption of latest manufacturing practices resulted in high waste and low productivity.

6. Recommendations

Based on discussion made in above sections following recommendations are suggested to improve the export performance

- Viable and long term energy resources management strategies be developed to make this sector competitive.
- Environment be created which will encourage foreign investment through strategic alliances with major players by exploiting competitive advantage of raw material and low labour wage.
- Downstream business should be reinforce through investment in technology, improving workers skills, benefiting from low labour cost and transforming Small and Medium units into well-organized high quality, high volume, low cost, innovative and Large Units.
- Spinning industry to diversify its product mix and increase the share of high value-added yarns to fulfill the requirements of garments and made-ups industries.
- Workers training should be institutionalized to meet the market requirements.
- Government should provide financial assistance for new technology installation and up gradation of existing technology.
- Lean manufacturing practices be adopted to eliminate waste to improve productivity and at the same time attain agility and innovation to respond to market diversified and vibrant demands.

7. Conclusions

Present research showed that data exploration techniques could help government in general and industry players in particulars to re-arrange their strategies to meet the challenges of the international market and convert these challenges into

opportunities. It also provides information to investors to identify the sector which have expansion potential and where they could earn reasonably a good return on investment. We acknowledge one limitation to this study. The present study focus is restricted to the Textile and Clothing sector of Pakistan and hence limits its generalizability to the other industrial sectors. More evocative deductions could have been derived from the study by the assessment of diverse industries such as Food and Beverages, other Manufacturing and Service Sector etc, but due to time constraint it was not possible to analyse all other sectors as well. However, such techniques can be used to analyse data available for other sectors and develop investment and expansion strategies for those sectors.

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