Final Submission

Name – Jay Kashyap

Roll No- 21f1002984

✚ Is the plagiarism % of the document is less than 20%?
➢ **Yes**

✚ Title: - Revenue Analysis of "J.K. Textile Traders & Manufacturer" business model and measures to maximize the overall profit.

✚ Executive Summary

J.K. Textile Traders & Manufacturer

At J.K. Textile Traders and Manufacturer, they're confident you'll be satisfied with their products. That's because they use only the highest quality materials and top-of-the-line technologies. They manufacture all kinds of Machinery parts. Like textile machinery parts, packing machinery parts, etc (Gears, Impellers, Shafts, Cutters, Industrial Cleaning Brushes, etc.). They as well repair all kinds of Machinery parts like textile machinery parts, gearboxes, packing machinery parts, packing & textile machine cutting knives, etc

LIST Of CLIENTS

- Ginni International Limited
- Ginni Filaments Ltd
- Unicharm
- Moral Overseas Limited
- Pratibha
- Vardhman

- Nahar Group of Companies: Nahar Spinning Mills Ltd
- Vista

  JK Textile Traders and Manufacturer provide close substitute to the original machine parts with the best affordable price range and top-quality raw materials.

🔸 Proof of originality of the Data (Primary Data - survey link, photograph, letter from organisation, etc)

- **Few Bill Invoices shared by organisation.**

GINNI FILAMENTS LTD. (UNIT - 1)
Factory & Register Office :110 K.M. Stone, Delhi-Mathura Road, Chhata-281401. Distt. Mathura (U.P.) INDIA
Phones: 05662-243168, Fax: 05662-243167
Email: purchase1@ginnifilaments.com, mill1@ginnifilaments.com
GSTIN NO. : 09AABCG0942K1ZL
CIN No. : L71200UP1982PLC012550
Web Site : www.ginnifilaments.com

Order No.: POU1/000784/22-23   **WORK ORDER**   Date: 04-Jun-22

M/s. J K TEXTILE TRADERS & MANUFACTURER

28/350,GUDRI
MANSOOR KHAN
AGRA-
State : UP-9   Pin : 282003
GSTIN : 09APJPS9112H1ZI

[Please mention this order No.on all challans,Invoice, correspondence etc., relating to this order]

Ref: Your Quotation/Letter No.   REP 1515   Dated :   02 May 22   Payments Through: Direct

Please supply the undermentioned items subject to the terms and conditions and send your invoice,challan etc in duplicate direct to us/a copy of invoice,challan etc. to use in advance and draw documents for payments.

Sr.	Ind.No /Date	Item No. /Var	Head Code	HSN CODE	Items Name and Description	Unit	Quantity	Rate (Rs.)	Disc (%)	Amount (Rs.)	IGST Rate	IGST Amount Rs.	CGST Rate	CGST Amount Rs.	SGST Rate	SGST Amount Rs.	Amount Of Goods Rs.
1		RMPM107987 ##	RPM	9987	BEARING SEAT BUSH (REP)	NO	2.00	1250.00	5.00	2375.00			9.00	213.75	9.00	213.75	2802.50
2		RMPM10371 ##	RPM	9987	FEED ROLLER FOR CARDING (REPAIR)	NO	1.00	21500.00	5.00	20425.00			9.00	1838.25	9.00	1838.25	24101.50

STORE RUNNING ITEMS

Total :   22800.00   2052.00   2052.00   26904.00

Other Charges :
Tax on other charges :
TOTAL ORDER VALUE :   26904.00

TOTAL VALUE (in words) : Rupees Twenty Six Thousand Nine Hundred Four Only

Delivery Period :   WITHIN 10-12 DAYS

Remarks :   AGAINST RGP NO.22 DT.15.04.2022 (PARTY AGREED 6 MONTH G)
F.O.R.   EX WORKS
Payments :   WITHIN 30 DAYS FROM DATE OF RECEIPT
Despatch :   By Road Through

Other T&C
- Order is placed subject to parameters confirmed. In case quality is found inferior, the material will be returned to you/ replaced by you at your cost. The Above order quantity should be from one single lot only. Invoice & Packing list to be accompanied by Test Report.
- Plus / Minus 5% in quantity & value is allowed.

GINNI FILAMENTS LTD. (UNIT - 1)
Factory & Register Office :110 K.M. Stone, Delhi-Mathura Road, Chhata-281401. Distt. Mathura (U.P.) INDIA
Phones: 05662-243168, Fax: 05662-243167
Email: purchase1@ginnifilaments.com, mill1@ginnifilaments.com
GSTIN NO. : 09AABCG0942K1ZL
CIN No. : L71200UP1982PLC012550
Web Site : www.ginnifilaments.com

Order No.: POU1/000901/22-23   **WORK ORDER**   Date: 21-Jun-22

M/s. J K TEXTILE TRADERS & MANUFACTURER

28/350,GUDRI
MANSOOR KHAN
AGRA-
State : UP-9   Pin : 282003
GSTIN : 09APJPS9112H1ZI

[Please mention this order No.on all challans,Invoice, correspondence etc., relating to this order]

Ref: Your Quotation/Letter No.   JKTTM REP 1541   Dated :   16 Jun 22   Payments Through: Direct

Please supply the undermentioned items subject to the terms and conditions and send your invoice,challan etc in duplicate direct to us/a copy of invoice,challan etc. to use in advance and draw documents for payments.

Sr.	Ind.No /Date	Item No. /Var	Head Code	HSN CODE	Items Name and Description	Unit	Quantity	Rate (Rs.)	Disc (%)	Amount (Rs.)	IGST Rate	IGST Amount Rs.	CGST Rate	CGST Amount Rs.	SGST Rate	SGST Amount Rs.	Amount Of Goods Rs.
1		RMPM000534 ##	RPM	9987	FAN IMPELLER 7.5 KW BIG SIZE (REPAIRED)	NO	1.00	13800.00	5.00	13110.00			9.00	1179.90	9.00	1179.90	15469.80

STORE RUNNING ITEMS

Total :   13110.00   1179.90   1179.90   15469.80

Other Charges   0.20
Tax on other charges :
TOTAL ORDER VALUE :   15470.00

TOTAL VALUE (in words) : Rupees Fifteen Thousand Four Hundred Seventy Only

Delivery Period :   WITHIN 10-12 DAYS

Remarks :   AGAINST RGP NO.74 DT.28.05.2022 (PARTY AGREED 6 MONTH G)
F.O.R.   EX WORKS
Payments :   WITHIN 30 DAYS FROM DATE OF RECEIPT
Despatch :   By Road Through
Insurance :   Transit insurance shall be covered by Ginni Filaments Ltd.

Other T&C
- Order is placed subject to parameters confirmed. In case quality is found inferior, the material will be returned to you/ replaced by you at your cost. The Above order quantity should be from one single lot only. Invoice & Packing list to be accompanied by Test Report.
- Plus / Minus 5% in quantity & value is allowed.
- GST amount will be paid on correct filing of GST Return Online by due date by the Vendor or GST Amount will be deducted on default/incorrect filing of GST Return by due date by the Vendor.

Prepared By   Sr. Manager (Purchase)   V.P.(Comm)   For Ginni Filaments Ltd. (Unit - 1)   Authorised Signatory

CORPORATE OFFICE: D-196, SECTOR 63, NOIDA- 201307 (U.P.) INDIA , Ph- 91-120-4058400 Fax- 91-120-4250475-76

- **Here is the letter from organisation.**

J.K. TEXTILE TRADERS & MANUFACTURER

All Kinds of Spares for L.R. Machine, Impellers for Condenser,
Impellers for Luwa & Blowroom, T.F.O.& C.D. Pullies,
Fluid Coupling Shaft, Industrial cleaning brushes & Industrial Stickers.

28/350, Gudri Mansoor Khan Agra 282003 Ph.266868

Ref. No. ANJK/TTM/   Date. 27|8|22

I have shared my bill invoices to the student having roll

no 21f1002984 for his project work, who is pursuing BS

in Data Science and Applications at IIT Madras.

For J.K. TEXTILE TRADERS AND MANUFACTURER

Proprietor

- **Machinery and Products**

⬆ Metadata and Descriptive Statistics.

- The above two invoices are from GINNI FILAMENTS LTD, the format is same for all clients except the header changes according to the client's name, it mainly consists of-
- **HSN Code** – HSN stands for **Harmonized System of Nomenclature** and is used to classify goods in a systematic manner. It was developed by the World Customs Organization (WCO) and is considered the global standard when it comes to naming goods. It is for Textile and came under Section 11 for classifying goods under GST.

- **Item Name & Description** – It is mainly name of any particular part with its unique serial number or name. They are – SHAFT, GEAR, WHEEL, ROLLER, IMPELLER, PULLEY, BRUSH, etc.

- Shaft - A bar that connects parts of a machine so that power can pass between them.
- Gear - A kind of machine element in which teeth are cut around cylindrical or cone shaped surfaces with equal spacing. By meshing a pair of these elements, they are used to transmit rotations and forces from the driving shaft to the driven shaft.
- Wheel – A wheel is a circular component that is intended to rotate on an axle bearing.
- Roller - A roller is a cylinder that turns round in a machine or device.
- Impeller - An impeller is a rotating component of a centrifugal pump that accelerates fluid outward from the centre of rotation, thus transferring energy from the motor that drives the pump to the fluid being pumped.
- Pulley - A pulley is a wheel that carries a flexible rope, cord, cable, chain, or belt on its rim.

- **Rate** – It is simply the price of any particular part, weather it is Shaft, Gear, Brush or anything else, the price may vary as in accordance with serial number as it's not necessary all shafts are of same price.

- **Quantity** – Number of parts ordered or purchased.

- **Discount** – It is the reduction in rate .

- **GST** – It stands for Goods & Service Tax; in bill they are of two types SGST & CGST both are 9% each.

- **Amount** – It is the final sum after removing the discount and adding the GST amount in the sum in the bill invoice. But in excel sheet the amount mentioned is exclusive of GST as there is no involvement of GST in business analysis, it's something which directly goes to government.

▪ Item Name with Rate

Item Type - Shaft			Item Type - Wheel			Item Type - Gear	
Item Name	**Rate**		**Item Name**	**Rate**		**Item Name**	**Rate**
Coupling Shaft	7520		Chain Wheel 39-T	2125		Motor Gear	5200
Feed Roll Shaft	1050		Chain Wheel 25-T	2050		Pinion gear	1750
Flact Comb Shaft	5200		Chain Wheel 37-T	4850		Spur Gear 18T	1980
Lap Former Shaft	5450		Chain Wheel 34-T	1750		Feed Roll Gear 42-T	3290
Shaft SE-12	1950		Cover Wheel	7500		Feed Roll Gear 51-T	3950
Shaft Long	1050		Washer Wheel	900		Gear Box Luwa	4650
Shaft C-50 Card	1250		Can Wheel	8000		Internal Gear	11600
Apron Shaft	1350		Bobbin Wheel 38-T	585		Gear Box	11800

Item Type - Others			Item Type - Roller			Item Type - Bracket	
Item Name	**Rate**		**Item Name**	**Rate**		**Item Name**	**Rate**
Hand Grinder	1750		Padder Roller	3800		Bottom Sliding BKT D	1450
Stone Cutting	1850		Bottom Roller	1650		Bottom Sliding BKT SE	1450

Item Type - Pulley			Item Type - Brush			Item Type - Impeller	
Item Name	**Rate**		**Item Name**	**Rate**		**Item Name**	**Rate**
Beater Pulley	5450		Platform Brush	165		Impeller Blade	13950
Pulley-21	1000		Bottle Brush	55		Impeller A-10	6500
Pulley 18-T	2250		Bottle Brush 18	15		Impeller Fan	13800
Pulley 57-T	2520		Bottle Brush Nylon	150			
Pulley	2480		Platform Brush	165			
			Bottle Cleaning Brush	18			
			Brass Brush	68			

Sheet5 | Cleaned Data | **Item Description** | Sales & Volume

🔢 Detailed Explanation of Analysis Process/Method.

▪ Pre-processing of data: -

- As we can see above, there are bill invoices only no excel sheet hence it is raw and unstructured data. I had to start from the scratch as the organisation may be old establishing 30 years of foot hold in market, but it is not as big as an organisation who may have a person exclusively for Data Entry, they do not analyse the data, they only keep tabs of it to pay the GST, they are just having the records nothing else.

- Only Excel is used as first data is entered manually then cleaned up in the sense that only necessary factors are included.

- In bill invoices I have seen ,the discount is 5% only for all the user , I asked about it if its 5% for all then instead of giving it explicatively when don't they reduce the price , they said that the clients which are **organisation** itself only to them if it's given as without it they won't buy and get it from anywhere else as they have close substitutes who are giving discounts and 95% of the time they are client , if somebody like us or any new user will go their to buy it then they won't get the discount ,that's why discount is mentioned explicatively , but during cleaning the data I removed the discount factor

as all bill invoices have 5% discount so it won't count as deciding factor or varying factor for analysis.

- **After cleaning the data, the changes done by me are -**
o The removal of discount factor as it is same for all bill invoices and didn't vary so it wont help us to conclude anything in data analysis.
o The removal of GST as this amount of tax is meant for government only and won't conclude anything in data analysis.
o The final amount is a product of Rate & Quantity only.

■ **Excel Sheet of cleaned data**

	A	B	C	D	E	F	G
1	Date	HSN Code	Item Name	Item Type	Rate	Quantity	Amount
2	01-06-2022	9987	Coupling Shaft	Shaft	7520	1	7520
3	01-06-2022	9987	Feed Roll Shaft	Shaft	1050	1	1050
4	02-06-2022	9987	Flact Comb Shaft	Shaft	5200	1	5200
5	03-06-2022	9987	Lap Former Shaft	Shaft	5450	1	5450
6	03-06-2022	9603	Platform Brush	Brush	165	25	4125
7	04-06-2022	9987	Bearing Seat Brush	Brush	1250	2	2500
8	04-06-2022	9987	Feed Roller	Roller	21500	1	21500
9	04-06-2022	9603	Bottle Brush	Brush	55	50	2750
10	05-06-2022	9987	Bottom Sliding BKT D40	Bracket	1450	5	7250
11	05-06-2022	9987	Bottom Sliding BKT SB2	Bracket	1450	3	4350
12	06-06-2022	9987	Motor Gear	Gear	5200	2	10400
13	06-06-2022	9987	Padder Roller	Roller	3800	2	7600
14	06-06-2022	9987	Pinion gear	Gear	1750	2	3500
15	07-06-2022	40101990	Chain Wheel 39-T	Wheel	2125	2	4250
16	07-06-2022	40101990	Chain Wheel 25-T	Wheel	2050	2	4100
17	07-06-2022	40101990	Chain Wheel 37-T	Wheel	4850	1	4850
18	08-06-2022	9987	Beater Pulley	Pulley	5450	2	10900
19	09-06-2022	9987	Unilap Plate	Plate	6850	1	6850
20	10-06-2022	40101990	Chain Wheel 34-T	Wheel	1750	2	3500
21	11-06-2022	40101990	Spur Gear 18T	Gear	1980	2	3960
22	12-06-2022	8448	Pulley-21	Pulley	1000	10	10000
23	12-06-2022	8448	Cover Wheel	Wheel	7500	3	22500
24	13-06-2022	40101990	Feed Roll Gear 42-T	Gear	3290	1	3290
25	13-06-2022	40101990	Feed Roll Gear 51-T	Gear	3950	1	3950
26	14-06-2022	40101990	Shaft SE-12	Shaft	1950	1	1950
27	15-06-2022	8448	Washer Wheel	Wheel	900	5	4500
28	16-06-2022	8448	Can Wheel	Wheel	8000	2	16000
29	17-06-2022	9987	Gear Box Luwa	Gear	4650	2	9300
30	18-06-2022	96039000	Bottle Brush 18	Brush	15	100	1500
31	18-06-2022	9987	Internal Gear	Gear	11600	1	11600
32	18-06-2022	9987	Impeller Blade	Impeller	13950	1	13950
33	19-06-2022	34029099	Bottle Brush Nylon	Brush	150	20	3000
34	19-06-2022	9987	Gear Box Luwa	Gear	4650	3	13950

Sheet5 | **Cleaned Data** | Item Description | Sales & Volume | (+)

■ **Analysis of data: -**

- After pre-processing of the data, the following tasks are performed to carryout analysis of the data.
- To analyse the **sales** & **volume** obtained for a given data, PivotTable is created for the pre-processed "**Cleaned Data**"
- Pivot Table plays vital role and help me as it eases the process and gives a clear-cut picture of sales and volumes.
- Pareto analysis is done to see if some product can alone change the whole market course as in general there are 10 categories of product in which 1 category is named as other, it constitutes that product which are sold very less in quantity as well as their revenue contribution is negligible if they are categorize alone that's why a cumulative category formed called **OTHERS**.
- All of us know pareto analysis states that only 20% of product generates 80% of revenue/sales but it is failed in this case in terms of Revenue but if we see volume aspect for pareto analysis then only single product contributes to 71% ,that category of product is Brush , its because their price is very low as compared to other category products also they are sold in huge in number, Although in volume they contribute 71% but when it comes to generating revenue they only contributes to 4.61% of the total revenue.
- Therefore, **Brush** category of product can be seen as outlier in our data analysis.

⊞ Results and Findings (Graphs and other Pictorial Representation Preferred and with words)

■ **Sales / Revenue Data with Pie Graph**

Sales		
Item Type	**Total Amount**	**Percentage**
Gear	127450	29.02%
Impeller	79750	18.16%
Wheel	74325	16.92%
Pulley	55240	12.58%
Roller	34050	7.75%
Shaft	26070	5.94%
Brush	20230	4.61%
Bracket	11600	2.64%
Plate	6850	1.56%
Others	3600	0.82%
Grand Total	**439165**	**100.00%**
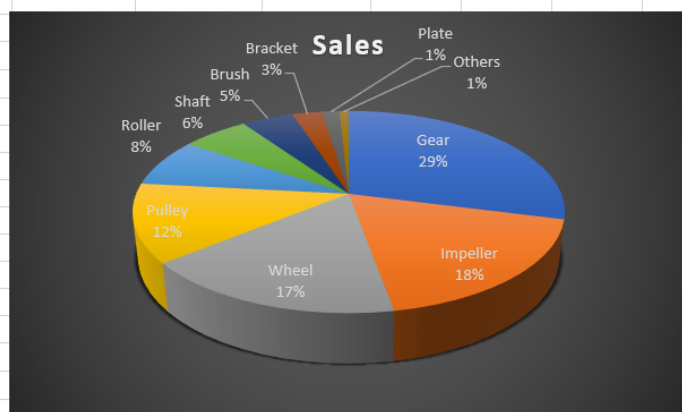
Revenue does not show pareto analysis, **Gear** generates the most revenue, there are mainly four products who generate 76% revenue. They are-
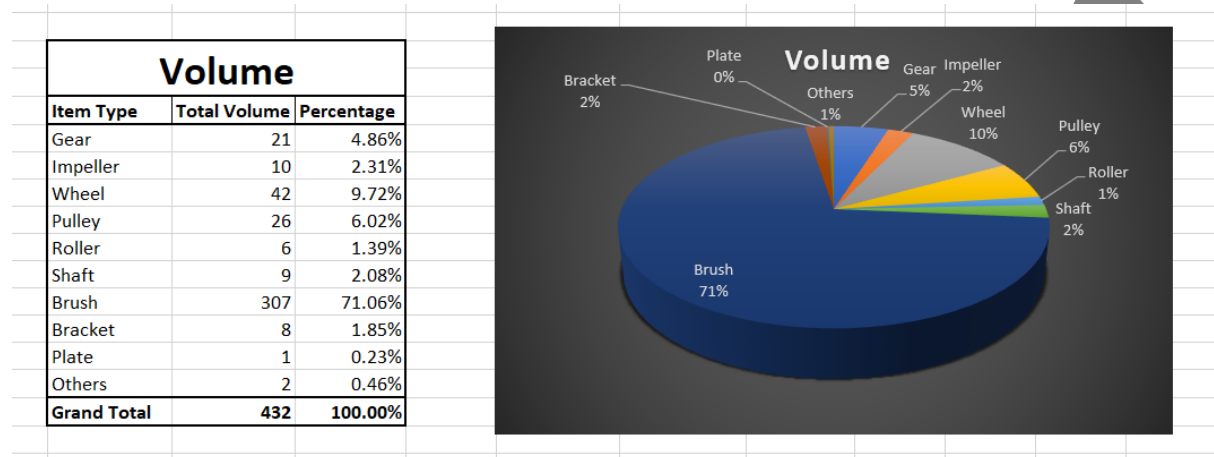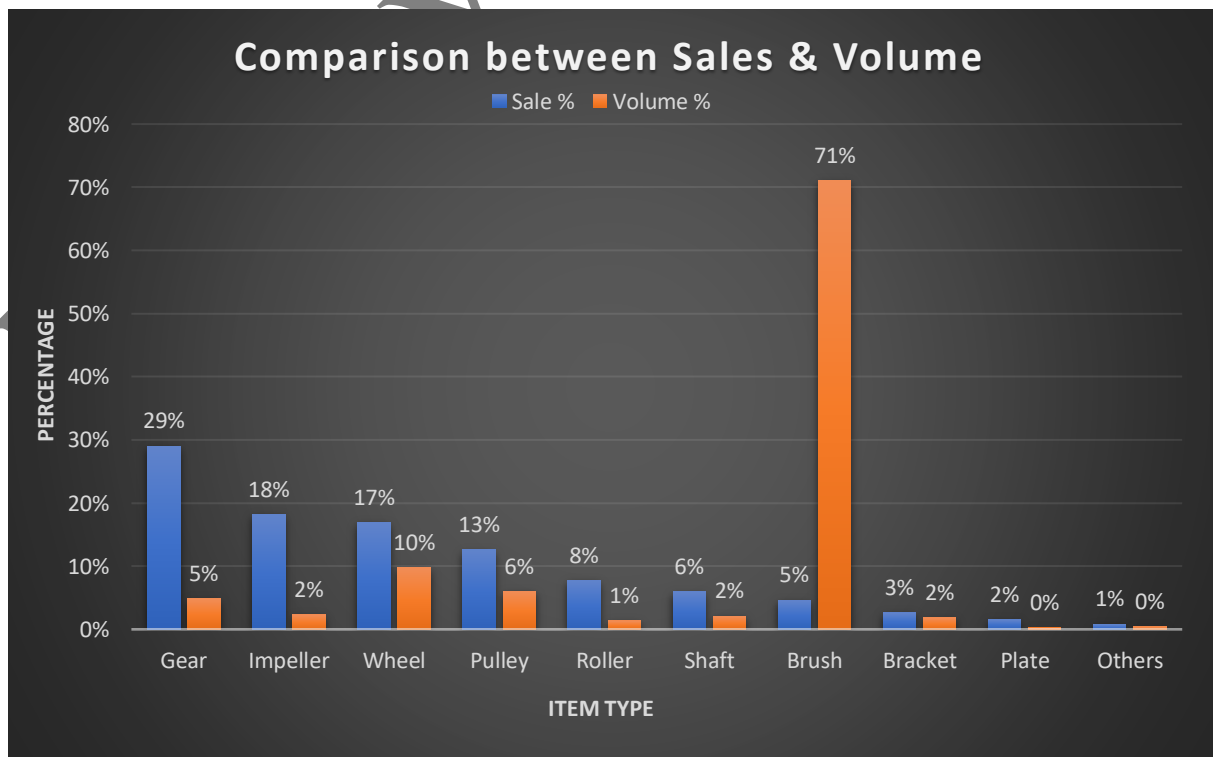
Gear

Impeller

Wheel

Pulley

▪ Volume Data with Pie Graph

Volume		
Item Type	**Total Volume**	**Percentage**
Gear	21	4.86%
Impeller	10	2.31%
Wheel	42	9.72%
Pulley	26	6.02%
Roller	6	1.39%
Shaft	9	2.08%
Brush	307	71.06%
Bracket	8	1.85%
Plate	1	0.23%
Others	2	0.46%
Grand Total	**432**	**100.00%**

- In above two graph we can conclude **WHEEL** is maintaining economy as it is the safest product with respect to sales and volume.
- **Brush** has 71% contribution in Volume.

- From above graph we can see **Gear** & **Impeller** are high contributors of revenue with low gross margin contribution of volume.
- **Wheel** & **Pulley** are the safest component maintaining stability in both revenue as well as volume.
- **Brush** can be seen as outlier in terms of volume contribution.

✚ Interpretation of Results and Recommendation

- As mentioned earlier "**J K Textile Traders & Manufacturer"** has a foothold of 30 years in industry so they should try to have supplier demand.
- Inventory should be managed according to Volume so that they can minimize **Stock-outs** and **Stock-Pile** and make the best and optimal revenue.
- This organisation should use **Overall Equipment Effectiveness** to reduce scrap as due to overheating of machine scrap production increases which leads to loss of raw material and that raw material cannot be reused again, so just increasing the performance rate and decreasing the scrap production will leads to optimal and maximized revenue.
- **Penetrative Pricing** – To reduce Substitutes as well as New Entry Threats.
- **Effective Logistics** – Usage of good logistics which maintains their transport system so that the goods are not damaged in the process of transportation.