5.0 EDS FROM LOCAL VENDOR'S PERSPECTIVE

Besides TNB and the customers, local vendors participating in this project stand to benefit as well. Currently, the EDS's leaders are AEG, Spascom, Plessey and Konloc, all of which are from South Africa, and Slumberger from United Kingdom. In addition, there is also a local company, Selcomm Sdn. Bhd. which partnered Tenaga Nasional's subsidiary, TNRD Sdn. Bhd. to develop the system locally. We will use AEG Energy Control Pte. Ltd. of South Africa (ECO) and their local partner, Elektrokad Sdn. Bhd. (Elektrokad) as a basis for discussion in this report. The other suppliers and their local counterparts are considered as competitors.

5.1 The EDS Industry

As mentioned earlier in the report, the billing system has undergone a drastic change during the past decade. If few years ago, the competition is among the different meter manufactures, today the competition is among the different system providers. What this mean is that, the competition arena is wide open to allow for more innovative ideas to flourish.

With the deregulation of electricity industry going on in a very fast pace, we should expect a similar reengineering process going on in the billing method. South Africa and United Kingdom has initiated the Energy Dispensing System as a more advanced form of billing method. This system has proved successful in improving customer service as well as financial standing of the utility. Subsequently, there is no reason why the vendors cannot take advantage of the ever expansion in the utility industry.

5.1.1 The Business Environment

Environment influences play a very important role in shaping the marketing strategy of the company. Figure 5.1 shows some of the major influences which can effect the strategies of the company.

- *Economic Factors*

  The steady growth in electricity consumption of 12 - 15% annually until the year 2000 provides basis for opportunities in the utility industry.

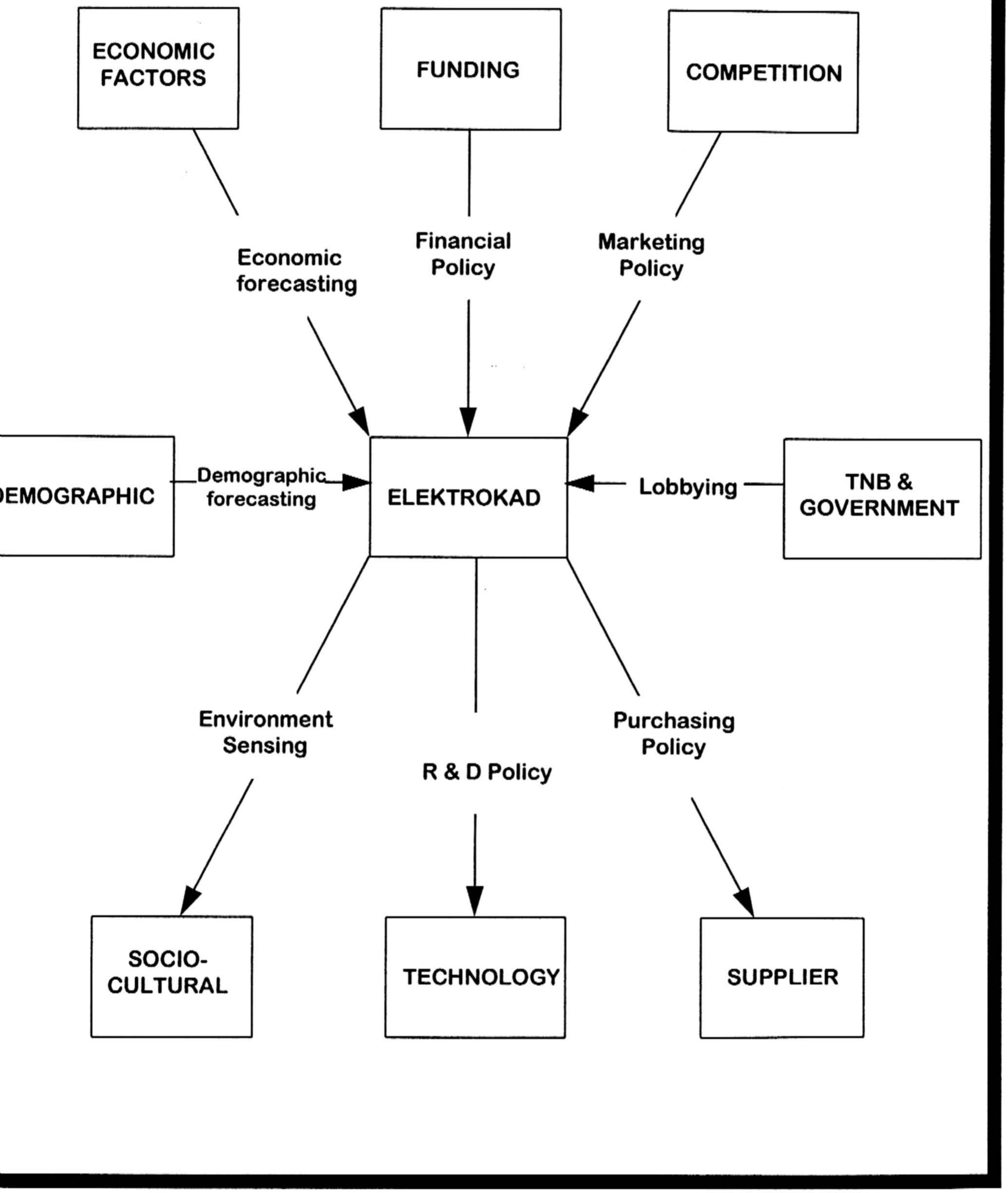
- *Funding*

  The effort by the government to establish Malaysia as the reputable financial center in the region would involve considerable regulations and deregulation in order to attract foreign fund institutions. This would, to some extent, affect the funding requirements for the company. However, since Elektrokad will be expanded gradually the working capital required (as shown by the cashflow in the later chapter of the report) will be offset by the client on a regular basis.
  The capital for the company would be more significant if Elektrokad decided to embark on the manufacturing activities.

- *Competition*

  This aspect of the environment will be discussed in detail later in the section. The concern here is whether any rule or regulation will be imposed in this new playing field. Technology and experience can be a very important element in seeking the competitive edge over the competitors.

Figure 5.1 Factors Influencing The Strategies



- *TNB and the Government*

  TNB, being the most important client, has (until this report being written) not decided on the mode of implementation of EDS. Elektrokad has been aggressively lobbying for geographical autonomy in implementing such system to ensure monopoly within the designated area. As clearly mentioned in the earlier chapters, the Dispensing System may also be used in other sectors including water and gas billing. Eventually, it is believed that the government would instituted rules and regulations to ensure orderly implementation of Energy or Credit Dispensing Systems.

- *Suppliers*

  Currently, suppliers from South Africa and United Kingdom fare prominently in this business. Elektrokad rely solely for their supplies from AEG Energy Control Pte. Ltd. from South Africa. However, initiatives are being made to assemble the products locally in the near-term, to be followed by research and development later on. Efforts are being identified to maximize local contents in order to remain competitive as improvement in the value-added services.

- *Technology*

  The use of EDS started about 10 years ago, and since then has undergone various changes. It started with the use of coins to trigger the meter and operates on an isolated basis. Eventually, the magnetic card and smart card technology has replaced the coin-based technology. The system was integrated to take advantage of the information system management. The features of the system have also improved to include multi-tariff facility,

low-level audible warning, remote metering and other latest features which will being added from time to time to the hardware and software of the system. And that by no mean exhaustive.

- *Socio-Cultural*

  The implementation of EDS will have a considerable impact to the society. People will have to get use to paying in advance for their electricity and buying electricity instead of being billed.

- *Demographics*

  The growing sophistication in the customer's needs make EDS a viable investment. EDS will always be associated with state-of-the-art technology and hi-tech equipment. Increase in the standard of living requires more appropriate technology be introduced to the customers.

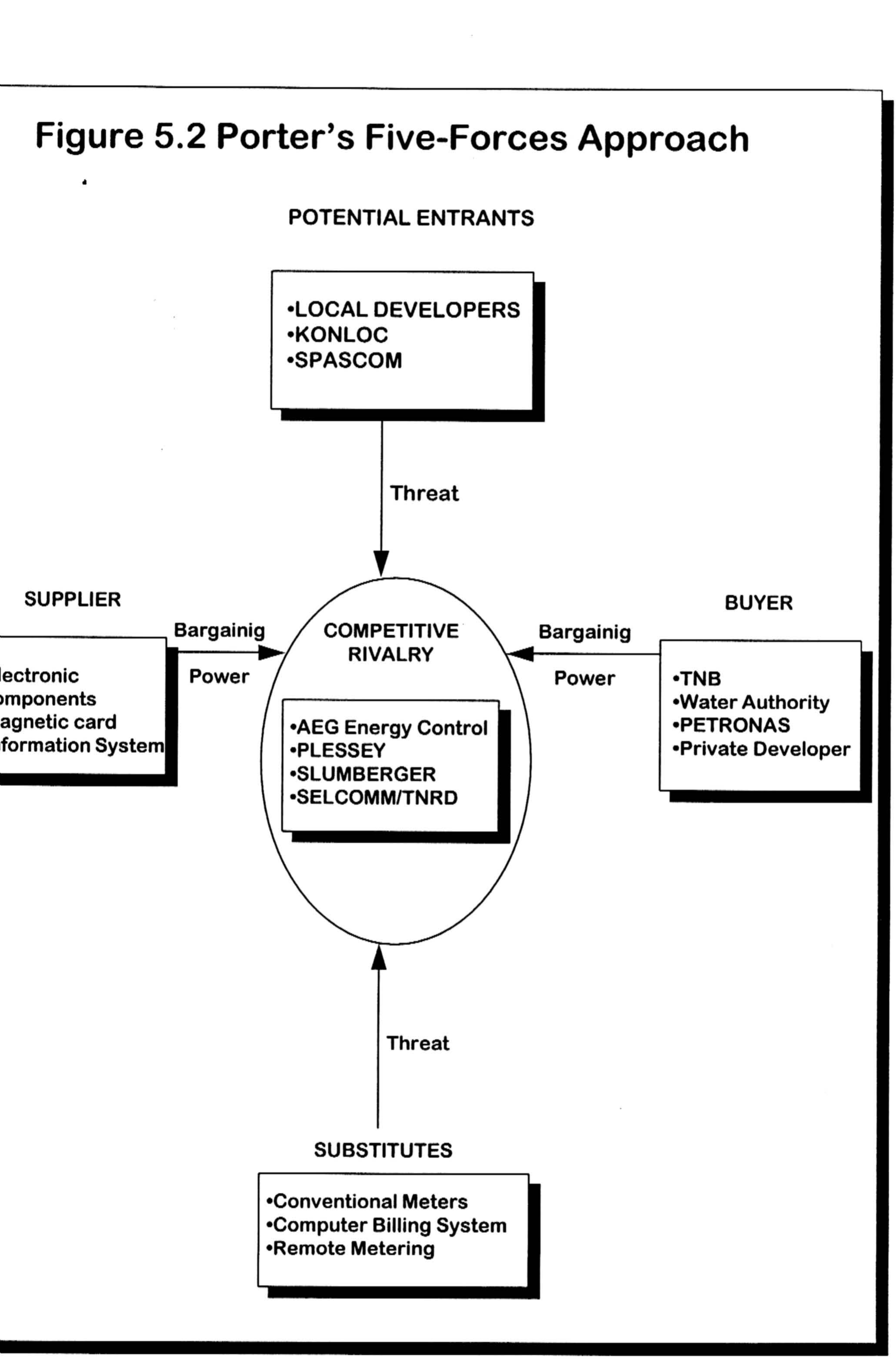
5.1.2 SWOT Analysis

Structural analysis of the industry using Porter's Five-Forces Approach (Figure 5.2) suggests a few major industry strengths and weakness as well as opportunities and threats for Elektrokad.

Opportunities

- The EDS business promise great potential in present and future utility industry. The system benefits the utility, the customers as well as the vendors. The demand will grow to include the water and gas billing system.

Figure 5.2 Porter's Five-Forces Approach



- The migration of employees out of TNB poses threat to the quality of services. Elektrokad is in the position to complement this loopholes by virtue of their attractive remuneration packages and highly focus business initiatives.
- Demand for hi-tech and state-of-the-art technology as the country is poised towards becoming the NIC by the year 2000.
- The industry is new. No distinct leader. Elektrokad, as the pioneer in this business has the competitive advantage by proven technology through the pilot project in Shah Alam and offering very competitive prices.
- The barriers to entry are rather significant due to high start-up cost and years of research and development.

Threats

- No specific rules and regulations are being established for EDS. These would allow for the flooding of inferior systems into the country. Safety standards and SIRIM requirements alone are not sufficient to regulate the implementation of EDS. Future formulation of rules and regulations may favor certain manufacturers.
- Customer's rejection of the EDS. Conventional meters may embark on aggressive campaigns to discredit the EDS using, for example, issue such as "advance payment" as the weapon.
- The state of unreadiness on the part of the utility company may be disruptive during implementation. This may, to some extent, affect the image of EDS
- Cheaper alternatives with the existing conventional meters.

- Uncertainty on the EDS's model to be adopted locally. Uncoordinated planning and implementation of EDS may erode the effectiveness of the system.

Strengths

- The principle of Elektrokad that is AEG Energy Control Pte. Ltd. of South Africa is the market leader from commercial and technology point of view. Strong technical support and R&D will ensure successful implementation of EDS.
- The only company which successfully implement the pilot project in Malaysia giving them the edge over the rest.
- Willingness of the manufacturer to assemble and subsequently to manufacture the system locally.
- Pool of expertise with vast experience in the utility business.

Weakness

- No field experience among the personnel of Elektrokad

5.1.3 Competitive Analysis

6 vendors stood out as significant as a result of our research and analysis. The findings are summarized in the Competitor Summary Sheet presented in Table 5.1. Although this type of analysis is not very accurate and has significant limitation, it does somewhat provide a rough picture on the degree of competition and the strength of each competitor. Elektrokad fares prominently in this analysis and stands a good chance of capturing sizable market share.

Table 5.1 Summary of Competitve Analysis Among the Vendors

VENDOR	ELEKTROKAD (AEG)	TNRD (SELCOMM)	PLESSEY	SLUMBERGER	KONLOC	SPASCOM
CORE CAPABILITY						
Product	3	1	2	3	3	2
Prices	2	3	2	1	2	2
R & D	3	1	2	3	2	3
Track Record	3	1	3	3	3	2
Financial Capability	3	3	3	3	3	3
Local Support	3	3	2	3	2	2
Employee Strength	3	3	2	3	1	2
SUBTOTAL	21	15	16	19	16	16
Success of Pilot Project	3	2	3	0	0	0
Response to Change	3	1	2	3	2	2
SUBTOTAL	6	3	5	3	2	2
TOTAL	27	18	21	22	18	18

Note : Ratings 3 = good 2 = average 1 = poor

5.2 Financial Analysis

The financial analysis carried out are based on 2 scenarios explained earlier in Chapter 2.

5.2.1 Assumptions Behind Sales and Revenue Projections

A. Sales of the System

(Scenario 1 and 2)

- Sales of EDS (sold as a system) are as follows :

		Year 1	Year 2	Year 3	Year 4	Year 5
Scenario 1 and Scenario 2	Qty (no.)	5000	10,000	15,000	20,000	20,000
	Sales (RM mill)	1.25	2.50	3.75	5.00	5.00

The details of the sales are as follows :

	Description	Unit	Price (RM)
a)	Energy Dispensing System package • 1 Dispensing Unit complete with personal computer set and modem (to be provided one in every 3000 meters ordered) • 1 Checker Unit (to be provided one with every Dispensing Unit) • 1 System Master Station complete with personal computer set and modem (to be provided one in every district) • necessary training • proprietorship software	per meter	RM 250.00
b)	Additional dispensing unit to include computer set, modem and checker unit	each	RM 5200.00
c)	Additional System Master Station to include computer set and modem	each	RM 9000.00
	• Advertisement on the magnetic cards With 1 card per customer per month (Formula:Annual salesx0.02x12)	per card	RM 0.02

(For Scenario 2 only)

	Description	**Unit**	**Price (RM)**
	• Marketing fee to include promotional activities, advertisement and publicity (Formula: Annual Sales x4%x250.00) 2		4% on sales of meter
	• Dealers commission to include storage, install, commission and 1 year warranty costs (Formula: Annual Sales x15%x250.00) 2		15% on sales of meter
	• Collection Center commission to include collection and delivery of revenue collected Total electricity credit purchased by customer (Formula: Exisitng EDS's customers + Annual Sales x 12 x 13% x 45.0) 2	per month per meter	3% on revenue collected RM 45
	• Management Fee for customer service center (Formula: Annual sales x2%x250x12) 2	per month	2% on sales of meter
	• Advertisement on the magnetic cards with 1 card per customer per month (Formula: Annual sales x 0.02 x 12)	per card	RM 0.02

B. Cost Of System

(Scenario 1 and 2)

	Description	Unit	Price (RM)
	• Cost of EDS (Sold as a system)	per meter	RM 180.00
	• Cost of Magnetic Card with 1 card per customer per month (Formula: Annual sales x 0.02 x 12)	per card	RM 0.02

(For Scenario 2 Only)

	Description	Unit	Price (RM)
	• Marketing Cost (Formula:Annual Sales x0.03x250.00)		3% on sales of meter
	• Dealers Commission (Formula: $\frac{\text{Annual sales}}{2}$ 0.12x250.00)		12% on sales of meter
	• Collection Center Cost		2% on revenue collected
	Revenue Collection (Formula: $\frac{\text{Annual Sales}}{2}$ x0.01x250.00)	per month per meter	RM 45.00
C.	Cost of the System to reduce 5% per year starting from 2nd year due to increase in local contents. Taking into account the escalation in raw material costs, the ral reduction is taken at 2% per year.		
D.	Operating cost is estimated at RM 50,000/month for KL office and RM 30,000/month for other branch offices inclusive of salary and remuneration, general administration expenses, telephone charges, stationaries, etc.		
E.	Cost of fixed assests companies of vehicles, furniture and fittings and office automation is estimated at RM 150,000 for KL office and RM 100,000 for other branch		

F.	Contingencies		1% on sales of meter
G.	Corporate Taxation		30% profit before tax

5.2.2 Cashflow Analysis

Table 5.2 and 5.3 shows the cashflow analysis of Elektrokad for Scenario 1 and 2 respectively. It is observed that under Scenario 1, the break-even will only be achieved after 5 years unless more effort are devise in increasing the sales of meters. Under Scenario 2, the analysis shows a better prospect for Elektrokad. The break-even can be achieved as early as the 3rd year and the company can continue to earn a handsome profit from there onwards.

5.2.3 Proforma Financial Statements.

Table 5.4 and 5.5 shows the Proforma Profit and Loss Account of Elektrokad for Scenario 1 and 2 respectively. It is observed that Scenario 2 yields better return than Scenario 1.

le 5.2 Projected Cashflow Analysis For Elektrokad Sdn. Bhd. From 1996-2000 (Scenario 1)

	(RM '000)				
SH INFLOW	**1996**	**1997**	**1998**	**1999**	**2000**
rating Inflows :					
Sales of Meter	1,250.0	2,500.0	3,750.0	5,000.0	5,000.0
Advertisement from the magnetic cards	1.2	3.6	7.2	12.0	16.8
Total Operating Inflows	1,251.2	2,503.6	3,757.2	5,012.0	5,016.8
tal Inflows :					
Paid-up Capital	500.0				
Borrowings	0.0				
Total Inflow	**1,751.2**	**2,503.6**	**3,757.2**	**5,012.0**	**5,016.8**
SH OUTFLOW					
rating Outflows :					
Cost of Meter	900.0	1,764.0	2,593.0	3,388.3	3,254.1
Cost of Magnetic cards	1.2	3.6	7.2	12.0	16.8
Operating cost	780.0	960.0	960.0	960.0	960.0
Contigencies	12.5	25.0	37.5	50.0	50.0
Total Operating Outflows	1,693.7	2,752.6	3,597.7	4,410.3	4,280.9
ital Outflows :					
Purchase of fixed assets	250.0	-	-	-	-
Total Outflow	**1,943.7**	**2,752.6**	**3,597.7**	**4,410.3**	**4,280.9**
Cash Surplus/Deficit	(192.50)	(249.00)	159.50	601.70	735.90
Cumulative Surplus/Deficit	**(192.50)**	**(441.50)**	**(282.00)**	**319.70**	**1,055.60**

ble 5.3 Projected Cashflow Analysis For Elektrokad Sdn. Bhd. From 1996-2000 (Scenario 2)

	(RM '000)				
SH INFLOW	**1996**	**1997**	**1998**	**1999**	**2000**
erating Inflows :					
ale of meter	1,250.0	2,500.0	3,750.0	5,000.0	5,000.0
dvertisement from the magnetic cards	1.2	3.6	7.2	12.0	16.8
larketing fee	25.0	50.0	75.0	100.0	100.0
ealers Commission	93.8	187.5	281.3	375.0	375.0
ollection centre commission	40.5	162.0	364.5	648.0	972.0
lanagement fee for customer service centre	150.0	300.0	450.0	600.0	600.0
otal Operating Inflows	1,560.5	3,203.1	4,928.0	6,735.0	7,063.8
ital Inflows :					
aid-up capital	500.0				
orrowings	0.0				
Total Inflow	**2,060.5**	**3,203.1**	**4,928.0**	**6,735.0**	**7,063.8**
SH OUTFLOW					
erating Outflows :					
ost of Meter	900.0	1,764.0	2,593.0	3,388.3	3,254.1
ost of Magnetic Cards	1.2	3.6	7.2	12.0	16.8
larketing Cost	18.8	37.5	56.3	75.0	75.0
ealers Commission	75.0	150.0	225.0	300.0	300.0
ollection centre cost	27.0	108.0	243.0	432.0	648.0
ustomer service cost	75.0	150.0	225.0	300.0	300.0
perating cost	780.0	960.0	960.0	960.0	960.0
ontigencies	12.5	25.0	37.5	50.0	50.0
otal Operating Outflows	1,889.5	3,198.1	4,347.0	5,517.3	5,603.9
ital Outflows :					
urchase of fixed assets	250.0				
Total Outflow	**2,139.5**	**3,198.1**	**4,347.0**	**5,517.3**	**5,603.9**
Cash Surplus/Deficit	(79.00)	5.0	581.0	1,217.7	1,459.9
Cumulative Surplus/Deficit	**(79.00)**	**(74.00)**	**507.00**	**1,724.70**	**3,184.60**

ble 5.4 Proforma Profit and Loss Account For Elektrokad Sdn. Bhd. From 1996-2000 (Scenario 1)

	(RM '000)				
	1996	**1997**	**1998**	**1999**	**2000**
rnover					
Sales of meter	1,250.0	2,500.0	3,750.0	5,000.0	5,000.0
Advertisement Income	1.2	3.6	7.2	12.0	16.8
Total Turnover	**1,251.2**	**2,503.6**	**3,757.2**	**5,012.0**	**5,016.8**
st of Sales					
Cost of Meter	900.0	1,764.0	2,593.0	3,388.3	3,254.1
Cost of Magnetic Card	1.2	3.6	7.2	12.0	16.8
Total Cost of Sales	**901.2**	**1,767.6**	**2,600.2**	**3,400.3**	**3,270.9**
Gross Profit	**350.0**	**736.0**	**1,157.0**	**1,611.7**	**1,745.9**
irect Cost					
Operating Cost	780.0	960.0	960.0	960.0	960.0
Depreciation	0.7	0.7	0.7	0.7	0.7
Total Indirect Cost	**780.7**	**960.7**	**960.7**	**960.7**	**960.7**
t Profit Before Tax	(430.70)	(224.70)	196.30	651.00	785.20
x @ 30%	-	-	58.9	195.3	235.6
t Profit After Tax	(430.70)	(224.70)	137.41	455.70	549.64

ble 5.5 Proforma Profit and Loss Account For Elektrokad Sdn. Bhd. From 1996-2000
(Scenario 2)

	(RM '000)				
	1996	**1997**	**1998**	**1999**	**2000**
nover					
Sales of Meter	1,250.0	2,500.0	3,750.0	5,000.0	5,000.0
Advertisement Income	1.2	3.6	7.2	12.0	16.8
Marketing Fee	25.0	50.0	75.0	100.0	100.0
Dealers Commission	93.8	187.5	281.3	375.0	375.0
Collection centre commission	40.5	162.0	364.5	648.0	972.0
Management fee	150.0	300.0	450.0	600.0	600.0
tal Turnover	**1,560.5**	**3,203.1**	**4,928.0**	**6,735.0**	**7,063.8**
st of Sales					
Cost of Meter	900.0	1,764.0	2,593.0	3,388.3	3,254.1
Cost of Magnetic Card	1.2	3.6	7.2	12.0	16.8
tal cost of sales	**901.2**	**1,767.6**	**2,600.2**	**3,400.3**	**3,270.9**
rss Profit	**659.3**	**1,435.5**	**2,327.8**	**3,334.7**	**3,792.9**
irect Cost					
Operating Cost	855.0	1,110.0	1,185.0	1,260.0	1,260.0
Marketing	18.8	37.5	56.3	75.0	75.0
Dealers Commission	75.0	150.0	225.0	300.0	300.0
Collection Centre Commission	27.0	108.0	243.0	432.0	648.0
Depreciation	0.7	0.7	0.7	0.7	0.7
al Indirect Costs	**976.5**	**1,406.2**	**1,710.0**	**2,067.7**	**2,283.7**
Profit Before Tax	(317.20)	29.3	617.8	1,267.0	1,509.2
@ 30%	-	8.8	185.3	380.1	452.8
Profit After Tax	(317.20)	20.5	432.5	886.9	1,056.4