"Is The Diamond Sparkling? Marine Industry in Kozhikode – A Case Study"

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India has huge potential for development of coastal aquaculture and is a world leader after China, contributing to about 5.2% of the total production in 2003(FAO 2005). With a vision to develop seafood exports, the Marine Products Export Development Authority (MPEDA) has been trying to bring in technically and economically feasible technologies to Indian entrepreneurs.

America had started buying seafood from India in the forties. A few years later, Japan and Europe emerged as potential markets and India was a major supplier of raw material. Banks were liberal in lending and multinationals entered. This increased competition. However, the cost of raw material increased as much as 80-85% of the selling price which spelt disaster. The main reason behind this phenomenon was that the market players failed to enter the value added sector. Besides, the firms failed to explore the potential growth in the purchasing power of the domestic consumers. Instead their strategy was to make easy money through raw material supplies. By the turn of the 21st century, the buoyancy was lost and the problems facing the industry had taken away the attraction for entry of new firms.

Very few firms have survived the rough period. Many have even failed to have an exit plan. All this elicits interest in the following study of two marine export firms in calicut, Baby Marine Exports (a family business) and Uniroyal Marine Exports Ltd. (a public limited company), the former started in 1977 and the latter in 1994. It has been an uphill task for the firms in this industry to keep pace with globalization.

Indian Planning Commission recognized the need to support the development of fisheries and aquaculture with the necessary infrastructure, harvesting activities with well-equipped fishery vessels, shore-based facilities, cold chains and transport for marketing linkages up to retail outlets. The intermediary producing sectors such as seed, feed and equipment and the operational automation would all need the overall support from ancillary industries such as mechanical engineering, refrigeration, electronics, etc.

Export of marine products from India during 2005-06 set an all time record of 51214 tonnes valued at Rs.7245.30 crores and USD 1644.21million, according to the MPEDA (The Marine Products Export Development Authority). Earlier, marine exports had set a record of 467297 tonnes valued at Rs.6881.31 Crore, fetching USD 1425 million in 2002-03. During the first half of 2006-07, the total quantity exported was 21,0494 tonnes, valued at Rs. 3704.87lakhs. The major portion of the exports came from Cochin, Kerala.

The Theoretical Framework

Research has proved that single industry firms do not perform as well as the diversified firms because the latter have the ability to transfer their core competencies. A core competency is what a firm excels in and adds significant value for customers, according to Porter. Since competency-based growth adds success to firms, corporate strategy is of increasing importance. For a single-industry firm, competing in only one industry is a generic strategy. A firm in the marine industry is a business unit with a generic strategy of competing in only one industry. A firm's strategy deals with how to create and maintain competitive advantage, and management control systems designers have identified different planning and control requirements for companies with different strategies.

The overall objectives of a firm and its competitive advantage (how the company should compete in the industry to accomplish its mission), determine the strategies for a firm's growth. Developing competitive advantage is imperative for the achievement of the corporate mission.

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The three crucial questions are

- What is the structure of the industry in which the firm operates?
- How the firm could exploit the structure?
- What forms the basis of the firm's competitive advantage?

Competitive advantage arises through certain key success factors in operations, marketing, distribution, human resource and organization, research and development and finance and administration. If the firm develops higher efficiency in operating a business, as compared to its competitors, the business unit will be able to achieve sustainable competitive advantage.

For developing "a superior and sustainable" competitive advantage, Michael Porter describes two analytical approaches – industry analysis and value chain analysis. The industry conditions play an important role in the performance of individual firms. Average industry profitability may be considered a significant predictor of firm performance. This paper attempts to analyse the five competitive forces so that the structure of the industry can be analysed. Porter's five competitive forces are

- the intensity of rivalry among existing competitors
- the bargaining power of customers
- the bargaining power of suppliers
- threat from substitutes
- the threat of new entry.

The analysis of the firm, its organizational structure, and profitability is done in the first instance and then the marine industry analysis in Porter's Five Forces framework is attempted. Porter had used the diamond of national advantage format to analyse the factors which affect the four ingredients that lead to a national comparative advantage. Al beit the word "diamond" is used in the title, no analogy can be drawn to Porter's diamond of national advantage.

The factors which contribute to the success of a strategic business unit have been defined as

- Operating at lower cost, producing high quality product, access to cheap inputs and achieving economies of scale are the success factors in operations;
- Prompt delivery, attractive packing, diversified range of products, the loyalty of the distributors form the success factors in marketing and distribution.
- Skilled employees and good industrial relations form the success factors on the side of human resources and organization,
- Scientific research expertise, product innovation, process innovation, and patent protection in research and development
- Access to capital, cost of capital, effective cost control and efficient information system in finance and administration.

The above will be kept in mind throughout the analysis.

Research methodology

The first part of the paper deals with the peculiarities of the marine industry, with special reference to the traditional fishing practiced in different regions.

For analyzing the firm's competitive advantage,

- At least half a dozen visits to the firms were undertaken
- detailed interviews extending to over two hours were arranged with the management of the two firms,
- the details regarding the firms were collected for analysis
- all secondary materials provided by the firms were analysed







the results of the interviews and secondary materials have been analysed using Porter's Five forces theory.

What differentiates marine industries

- About a million people involved in fishing operations.
- Shrimps have been in demand from the time our trade practices started.
- Traditionally different practices existed to grow and harvest shrimps in its natural habitats in different regions. Scientific systems have developed to culture shrimps in protected and manually controlled regimes. Development of brackish water shrimp farming and fresh water prawn farming has been well supported by the process of backward and forward integration with necessary ancillary industries.
- For every fisherman engaged in primary fishing about four others are getting additional employment (in harvest operations, fish marketing and a host of other allied activities.)
- Raw material for the industry is a natural resource & the availability of the same is extremely seasonal.
- There is no scope for full/optimum capacity utilization in the firm/industry since the capacity utilization is fully dependent on availability of raw material (marine products cannot be made available in large quantities by processes alone)
- Prices for Marine products are determined by supply and demand in the open market. This leads to difference in day to day prices.
- Presently the supply of marine products is facing depletion around the world, and hence the supply is not able to keep up with the demand.

| -The beginnings.....

Just after independence, Mr.Allen T. Sherman, an American, cognizant of the potential export market for marine products, initiated the setting up of a company named, International Fisheries of New York, in Calicut. In 1957, he handed over the same to a group of four, Indian Seafoods(Cochin), Malabar Pack Marines, Avaran & Sons, and Calicut food Packers. Of these, only Avaran & Sons survived the test of time. Following this, a business unit, Indomarine was started in 1969 to process the marine products for facilitating growth in exports. A new plant was added (Sea Diamond Pvt. Ltd.) in 1974, to close down in the same year.

During this time a group of fishermen were supplying live catches of fishes to exporters, when, one among them, Mr.Ninan, thought it lucrative to do direct export business rather than sell the catches to other exporters. An ex-army man, he started Baby Marine Exports as a family business unit and it grew to become the #1 exporter in Indiain the years 1983, '84, '85 and '86. Commencing business in 1977, the company's business strategy was to concentrate on block freezing of fish food products. This was in adherence to the prevailing market demand. Later, when the customer preference shifted to value added products in the industry, the owner came up with an idea to go for public issue of stock and this led to establishment of Uniroyal Export Ltd, where value addition (Individually Quick Frozen - IQF) could be experimented. The industry is very fragmented in that there are more than a dozen exporting firms in Cochin from where these two firms export their products. All these firms compete with each other for booking consignments and ensuring delivery at the correct time. But it is to be noted that the firms do not compete in the local market, since the marine products that are exported are not brought to the domestic market. The raw materials are secured by firms from different landings and this allows to meet the consignments without rivalry. This is due to -

reduced paying capacity of the domestic population





- there is a perception that the firms will fail to enjoy any cost advantage if the products are sold at reduced price in the domestic market
- Marine products contribute a major portion to national export earnings.

Looking at it from a resource based view, the Baby Marine Exports Company has a competitive advantage and it has passed on the advantage to Uniroyal Marine Exports Ltd.

- existed in the industry for more than 30 years
- has created a strong customer base
- is known exclusively for its Brand

The strategic business unit has been able to bring the product to the market faster than its competitors. Having branches in Tamil Nadu and Karnataka, the SBU has better access to resources. The SBU owns aquaculture farms in Tamil Nadu and Karnataka which allows the firm the power

- to cut prices in retaliation
- offer lower prices to potential buyers
- use lower prices to deter substitutes
- to compete on price.

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This proves that Cost Leadership has been the firm's generic strategy. Cost Leadership has been achieved by its long standing in the industry, improving process efficiencies, gaining access to a large resource base, making maximum outsourcing and vertical integration. By increasing access to scarce resources alone, the firms have increased the barriers to potential competitors.

Monthly Sales data of Uniroyal Exports Ltd. for three years is attached (See Appendix) _ The data doesn't show much variation except that the sale has been increasing slightly through the three years. The chart shows increase in sale in the months of April and October in 2004, 2005, and 2006. All types of fish are seasonal and breed in the rainy season. The firm has to depend on inventories to meet the consignments on time.

Analysis

In Baby Marine Exports, the sales has dropped through 2004-07, but an increase in Net profit during the same time period is evident.

This might be due to one or more of the following reasons

- Cost savings through economies of scale
- Higher margins through price increases
- Strategies towards higher value niche product markets.

The raw material consumed has been decreasing through 2004-05 to 2006-07, while selling expenses of the firm has shown an increase. The gross profits and net profits for 2006-07, show a growth rate of 6% and 200% respectively. The sales growth rate on the other hand drops from 216% in 2005 to -10% in 2006. The leverage percentage for Baby Marine increases from 44.5% in 2004 to 61.6% in 2006.

Uniroyal Marine Exports Ltd, sales growth rate is 13% in 2006 compared to 20% in 2005. Gross profit and net profit growth rates are 94% and -53% respectively in 2006.

<u>Positioning and source advantage of the Baby Marine Exports & Uniroyal Marine Exports Ltd. Calicut</u>



The firms are positioned in the coastal area. The source of raw material – Marine locally caught from

- Beypore, Puthiyappa, ponnani, Tanur, Quilandy, Cochin, Mangalore, Malpe and Colachel. The raw material is derived directly from the sea. Since the firms have been in the business for more than two decades, most of the landings in the area are accessed by them
- The Baby Marine Exports owns two other firms in Tamil Nadu and Karnataka, both of them in the coastal areas.
- The fishes caught fresh from sea are transported from the landing centers to the firms in insulated trucks in plastic crates with adequate ice (1:1 ratio) and proper tagging to ensure that they reach the factory in prime condition. The shelf life of the product is only 18-24 months from the date of freezing. Suppliers' guarantee is made mandatory for all receipts in the factory (raw material, packaging materials, ingredients etc.)
- The proximity of the firms ensures reduction in transportation costs.
- Highly specialized employees form the backbone of the two firms. The presence of online quality controller assures timely checks of samples as per global requirements.

Both the firms have the business unit form of organization. A business unit is responsible for all the functions involved in producing and marketing a specified product line. The Managing Director of both the firms is the same person. Managers and department heads are answerable to the same person. Both the firms have accepted the Hazard Analysis Critical Control Points (HACCP) based quality system to ensure consistency in product quality and safety. The production processes comply with EEC standards.

While Uniroyal Marine Exports Ltd. uses the IQF technology from Frigoscandia, Sweden to manufacture IQF products, Baby Marine Exports has specialized in the shipment of Frozen Marine Products.

The former, has established its "Royal Gold" brand in the U.S.A., Japan, Italy, France, Belgium, Malaysia, Korea etc._The "Indian Star" is Baby Marine Exports' brand which has acquired access to markets in Japan, USA, Spain, U.K., France, Greece, Germany, Portugal, China, Taiwan, Thailand, Singapore, Australia, Belgium, Vietnam, etc.

Both the firms have standard operation procedures which are neatly detailed in their HACCP Manual.

Industry Structure Analysis: Porter's Five Forces Model

The industry is viewed as an open organic system which is continually interchanging with the external environment, thus laying the foundation for successful globalization. The industry conditions play an important role in the performance of individual firms. According to Porter, the structure of the industry should be analyzed in terms of the collective strength of five competitive forces, as in the diagrammatic representation below. The analysis is applied to marine industry with a few variations and the same is used to study the competitive advantage of the two firms in Calicut.

(1)SUPPLIER POWER (LOW)

The suppliers of raw material (marine fishes) are the fishermen in the landings. A decade earlier, the suppliers used to get good price for their catch. All seafood items are seasonal. Rainy season



is the breeding season and during this time supply increases. Country boats operate only in the seasons. From June 1st to July 15th every year the government introduces a trolling ban. Mechanized boats operate for 10 to 15 days at a stretch. Fishermen are unable to meet the cost of new technology fishing. Many government institutions have come up to give support to the fishermen community. Matsyafed is an example. CIFT, MPEDA and CMFRI provide the necessary research and development assistance to the fishermen community as well as the firms.

With the years marine industry has concentrated on export markets alone. The firms purchase the marine products exclusively for exports. At present the price is fixed in the international market (facilitated by growth of Information technology – negotiations for price is done through phone, fax etc.) and the purchase price offered by the firms to the fishermen depends to a great extent on the price that the importers are ready to offer them. The fishermen have lost their bargaining power now.

Those who are lucky enough to get the fish varieties in high demand will be able to secure a better price. Scarcity of fishes is a glaring reality and fishing in distant sea has become a necessity for fisher folk. Further, there is a general sluggishness due to over fishing. Being a perishable commodity the farmers are not able to meet the high cost of transporting the products to better markets. And hence have no better option than to sell it to the nearest and highest bidder. Forward integration is not possible and there are absolutely no switching costs for the buyers of raw materials.

Live fish trade links fishing communities with markets. A study conducted by the HYPERLINK, "http://en.wikipedia.org/wiki/University of Washington" University of Washington, shows that live fish caught for food export earns approximately USD \$6000 a ton. This will enhance suppliers power.

(2)Power of Customers (High)

Being a food item marine products are almost completely substitutable and the customers have the option to purchase meat or other edible products if the price of fish increases. Buyers possess a credible backward integration threat. Choice of seafood has been increasing due to technological improvements. The firm strategists have to keep in mind the possibility of fluctuation in demand. Further, the preferences of the customers keep changing. The consumer demand for live fish is remarkable from the last half of 2007, especially through HYPERLINK http://en.wikipedia.org/wiki/Hong Kong, which alone accounts for nearly USD 400M a year. With high markup and resale value, it is estimated that the total value of this trade is over USD 1 billion.

Shrimps constitute a major share in seafood export earnings of the country. Shrimp is a short duration crop that receives high investment returns and enjoys an expanding market. The bargaining leverage and the buyer volume of marine products is very high. Buyers have access to information regarding scientific improvements in the various countries exporting marine products. The market is further characterized by changing preferences due to increasing health awareness. Prices are very sensitive.

Customers like Retailers, Wholesalers, Distributors etc. have high bargaining power because of the short life of the products. Building up strong customer partnerships, sound market research, excellent quality of the product, reliability of supply, a constant drive for improvement, price competitiveness and attractive packaging are the key to success in the industry. Frozen





shrimp items are still the major item of export. While the share of frozen shrimps was just 3.72% in 2004, it has grown to 32% in 2005 and further to 58.09%.

(3) Threat of New Entrants(Low)

- Processes are protected by Government bodies like CIFT, MPEDA, CMFRI etc.
- Brand loyalty to ROYAL GOLD (A product of Uniroyal Marine Exports Ltd) and Indian Star, Sea Pearl and Super Star(Global brands from Baby Marine Exports.)
- Start up costs is high and hence very few dare to enter the Marine Export sector. In calicut itself there are no other marine export firms.
- Products provided are unique due to the Processes adopted. For example, Frozen Shrimps, Seerfish Whole, Pomfret Whole, Reef Cod Whole, Mackerel Whole, Seerfish Whole Gutted, Reef cod Whole Gutted, Squid Whole Cleaned, Cuttle Fish Whole cleaned and Octopus Whole gutted
- Processes cannot be learnt easily since it involves a lot of steps which need a long standing to attain proficiency.
- Threat exist in the form of denial from developing countries on questions of hygiene, quality and food safety standard. Antidumping duty imposed in the US and insistence on payment of 10 percent customs bond on their annual turnover has led to finding a big market for Indian seafood particularly shrimps in the Europearn Union.
- Besides Eco-labelling and Certification of fishery products by Marine Stewardship Council have proved to be a few of the trade impediments.

While threat of new entrants is low within the country, it is very high in the global market.

- Vietnam whose major export markets for marine products are, Japan(31%), USA (23%), China and Hongkong (5%), EU (16%), Asean countries (4%) and others (15%). The industry has created employment opportunities for more than 3.5 million people.
- Australian marine industry operates in one of the world's cleanest environments. The commercial fishing industry ranks 5th in the world and are the largest producers of Abalone and Rock Lobsters. The value of 'wild caught' seafood dominates the Australian fishing industry making up around A\$1.49 nillion ot 68% of total seafood production in 2003-04.

(4)Threat of Substitutes(High)

Marine products are totally substitutable. For this same reason, demand is very elastic. The threat of substitutes increases when deep sea fishing offers variety of substitutes. Further, the firms in this industry have to keep abreast of new research findings on medicinal values etc. (For example, a small study of 98 women in Perth, Australia, involved them taking 4 g fish oil supplements daily from 20 weeks until birth; children fed with fish oil were found to be scoring higher on understanding, comprehension and vocabulary- British Medical Journal)

Any exporter of marine products has to have a first hand experience of markets like Billingsgate Market in UK,*(R.A.M.Varma-Nov.2006) and Tokyo's Tsukiji Fish Market, Japan The firms which anticipate any structural change in the market usually obtain advantages through economy of scale, choice distribution channels and ability to differentiate products.

In the marine products industry, threat of substitutes arises from

- IFO specifications
- Increased health awareness of consumers.



(5) The intensity of rivalry among existing competitors (High)

Marine industry in India is characterized by lack of domestic competition. While research has proved that domestic competition will increase the competitive advantage of firms in the industry, marine products were not considered to be affordable by domestic population. The development of a potential domestic market for marine products has been identified and BME is making a strategic move to enter the domestic market.

The rivalry among existing competitors in the international market is very high. The firms are trying to diversify production processes.

The existence of a large number of firms is a feature of marine industry. Since the firms under study has been in existence for more than 30 years, they have been able to withstand the rivalry of competing firms.

The intensity of rivalry in marine industry is characterized by

- a large number of firms competing for the same customers and resources
- high storage costs and perishability of marine products intensifies competition for customers.
- Due to low switching costs, rivalry among the numerous firms to capture customers increases
- Brand identification tends to decrease rivalry. Both the firms have built a brand identity of their own.
- Marine industry is characterized by asset specificity. This forces the firms to remain in the industry (exit barriers are high), even when the venture is non profitable.
- A divergence in the culture and underlying philosophies of rivals make the industry
- Supply and demand in this particular industry is so volatile that it will affect rivalry among firms.

Observations based on the Five Forces Analysis

- While supplier power and threat of new entrants is low, power of customers, threat of --- Formatted: Bullets and Numbering substitutes and intensity of rivalry is high in Marine industry.
- The market structure of marine products is imperfectly competitive.
- Full capacity utilization is impossible due to non-availability of raw material.
- Highly dependent on consumer preferences which can change at any time
- There is a limit to product diversification because the product is highly perishable.
- ___It is a very dynamic industry and the profitability is unpredictable
- ___Sustaining competitive advantage depends on the business unit strategies
- There would be just 30 to 40 business units with the facilities of value addition. The remaining 300 to 350 units are processing raw material for different markets. Mergers might, to an extent, cure the weaknesses of a single business unit and allow for larger inflow of capital, professional procurement discipline, reduced administrative expenses and to increase market share.

Developments

Cochin is still leading the export of marine products as is shown by the data for April-Nov. 2005-2006.



Under the UNCTAD project on "strategies and preparedness for trade and globalization in India" MPEDA in association with the Marine Stewardship Council (MSC) UK organized a National workshop on certification of Indian fisheries at Cochin to assess the standard of fisheries. It aimed at ensuring that

- no over-fishing is done
- the structure, productivity, function and diversity of the ecosystem is maintained
- Fishery is subject to an effective management system that respects local, national, and international laws and standards.

With a view to augment India's seafood exports to USA particularly value-added products and to establish a strong brand image for Indian marine products in the US market, all registered (with MPEDA) manufacturer exporters of marine products who process and export value-added products listed to USA market, were extended assistance under Market Access Initiative Scheme to open hiring of warehouses, display of products in International Departmental_Store, organize publicity campaigns, participate in Trade Fairs/Buyer-Seller Meets etc.

Challenges

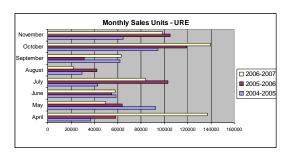
- Ensure sustainability and profitability
- Carps, both exotic and indigenous, account for nearly 80% of india's production. a high volume, low value production system.
- Diversification in aquaculture has not taken place.
- India has culture technology of about 15 species whereas China has developed farming practices for 39 species.
- Lack of good quarantine system
- Central State fisheries authorities, fish worker organizations and scientific community working in unison would lead to build a sustainable competitive advantage.

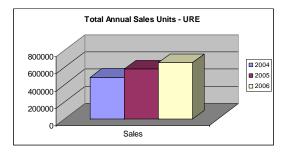
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APPENDIX Uni Royal Marine Exports Ltd.

	Actual Sales Units		
Month	2004-05	2005-06	2006-07
April	36996	58155	136880
May	92655	64100	49744
June	58540	55000	58000
July	43155	103035	84000
August	29350	42344	22000
September	61900	31348	63000
October	94460	119111	139729
November	64655	104930	98500
Total Annual Sales	481711	578023	651853
Growth rate		20%	13%





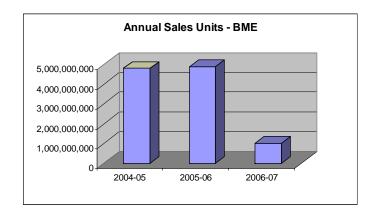
YEAR	2004	2005	2006
	Rs. Cr.	Rs. Cr.	Rs. Cr.
Gross Profits	1.87	0.31	0.6
Growth rate		117%	94%
Average growth rate			105%
Net Profits	1.04	0.38	0.18
Growth rate		137%	-53%
Average growth rate			42%

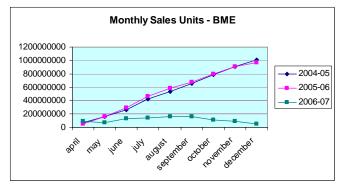
YEAR	2004	2005	2006
EQUITY	Rs. Cr.	Rs. Cr.	Rs. Cr.
Capital	6.49	6.49	6.49
Reserves	-2.97	-2.59	-2.41
Total Equity	0	0	0
LIABILITIES			
Loans	6.2	5.57	5.34
Current Liabilities	2.39	4	3.71
Total Liabilities	9.72	9.47	9.42
ASSETS			
Fixed Assets	4.64	2.41	2.54
Current Assets	5.08	7.06	6.88
Total Assets	9.72	9.47	9.42
Debt/Equity Ratio	NA	NA	NA
Leverage Percentage	100.0%	100.0%	100.0%



Baby Marine Exports

	Actual Sales Units		
Month	2004-05	2005-06	2006-07
april	71311285	53429334	95151519
may	157681632	162517900	70895457
june	259798184	295479382	128189599
july	420166115	460037900	146078634
august	531685002	581255039	164808137
september	656065320	679716908	165702321
october	785515280	793634714	109251348
november	907616910	903654365	89654472
december	1013229450	970594547	51437939
Total	4,803,069,178	4,900,320,089	1,021,169,426
Growth - Cochin			4.3
Growth Rate		2%	-79%







YEAR	2004	2005	2006
EQUITY	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
Capital	500	500	500
Reserves & Surplus	958	871	744
Total Equity	1458	1371	1244
LIABILITIES			
Loan Funds	166	119	482
Current Liabilities	1004	1145	1517
Total Liabilities	1170	1264	1999
ASSETS			
Land	96	96	96
Fixed Assets	89	82	79
Current Assets	2443	2457	3068
Total Assets	2628	2635	3243
Debt/Equity Ratio	0.80	0.92	1.61
Leverage Percentage	44.5%	48.0%	61.6%

YEAR	2004	2005	2006
	Rs. Lakhs	Rs. Lakhs	Rs. Lakhs
Rawmaterial Consumed	5616	5794	4948
Manufacturing Expenses	450	449	453
Selling&Admin.Expenses	517	824	870
Gross Profits	104	172	183
Growth rate		265%	6%
Average growth rate			136%
Sales	6127	7108	6393
Growth rate		216%	-10%
Average growth rate			103%
Other Income	137	357	3
Stock Variation	423	-226	58
Interest	113	144	139
Depreciation	20	17	11
Net Profits	-29	11	33
Growth rate		62%	200%
Average growth rate			131%
