MARKET ORIENTATION IN INDIAN SEAFOOD PROCESSING FIRMS

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Doctor of Philosophy

By

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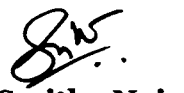
CERTIFICATE

This is to certify that the research work presented in the thesis entitled **"MARKET ORIENTATION IN INDIAN SEAFOOD PROCESSING FIRMS"** is based on the original research work carried out by **Smt. Smitha Nair** under my guidance and supervision at the School of Industrial Fisheries, Cochin University of Science and Technology, in partial fulfillment of the requirements for the degree of Doctor of Philosophy, and that no part thereof has been presented for the award of any other degree.

Prof.Dr.A.Ramachandran

DECLARATION

I hereby declare that the work presented in this thesis entitled **"MARKET ORIENTATION IN INDIAN SEAFOOD PROCESSING FIRMS"** is based on the original research carried out by me at the School of Industrial Fisheries, Cochin University of Science and Technology, Cochin under the guidance of Prof.Dr.A.Ramachandran, Registrar, Cochin University of Science and Technology, and the thesis or no part thereof has been presented for the award of any degree, diploma, associate ship or other similar titles or recognition.



Smitha Nair

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ACRONYMS AND ABBREVIATIONS

EEZ	-	Exclusive Economic Zone
EMO	-	Export Market Orientation
EU	-	European Union
FAO	-	Food and Agriculture Organization of the United Nations
FDA	-	Food and Drug Administration (United States of America)
GDP	-	Gross Domestic Product
HACCP	-	Hazard Analysis Critical Control Point
KMO	-	Kaiser-Meyer-Olkin Measure
MARKOR	-	Market Orientation (Kohli and Jaworski, 1993)
MKTOR	-	Market Orientation (Narver and Slater, 1990)
MPEDA	-	Marine Products Exports Development Authority
MRL	-	Maximum Residue Level
MFN	-	Most Favoured Nation
MOU	-	Memorandum of Understanding
MT	-	Metric Ton
NAMA	-	Non Agricultural Market Access
NTB	-	NonTariff Barriers
RA	-	Regression Analysis
SCA	-	Sustainable Competitive Advantage
SEM	-	Structural Equational Modelling
SPS	-	Sanitary and Phytosanitary Measures
SPSS	-	Statistical Package for Social Sciences
TBT	-	Technical Barriers to Trade
WTO	-	World Trade Organisation

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CHAPTER 1

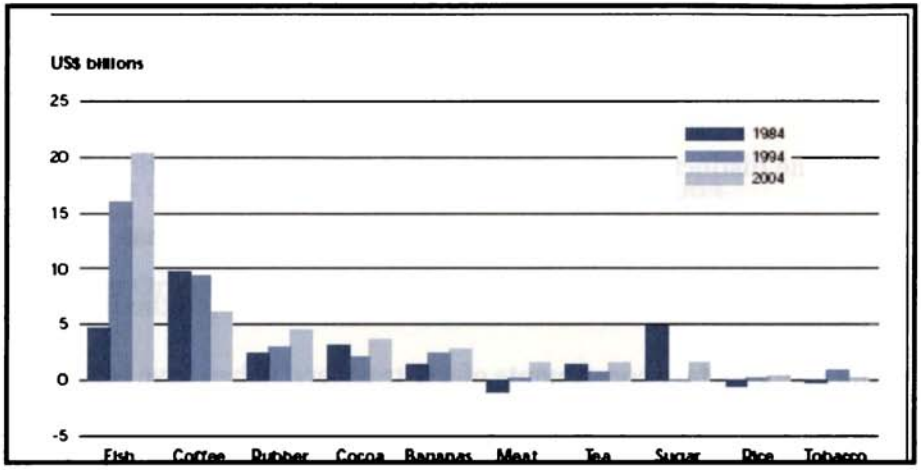
INTRODUCTION

1.1 Global Seafood Trade Scenario

Fishes hold the distinctive reputation of being the most internationally traded commodity (FAO, 2006a; Gupta, 2006). Thompson (1995) has traced the evolution of seafood, as preserved and traded commodities, to the Bronze Age. One of the major dietary constituents of sea-travelers, fishes have for long held their sway in the world trade (Braudel, 1979). Kurien (2005) asserts that fishes single-handedly helped development of international trade, before assuming its present unalienable position as the most internationally traded item.

Fishes are an easily affordable rich source of protein, essential fatty acids (especially the poly unsaturated fatty acids-PUFA), vitamins and minerals. The Food and Agricultural Organisation (FAO, 2006a) estimates that in 2004, the world fish exports escalated to a net worth of USD 71.5 billion, while imports were to the tune of USD 75.3 billion. It is estimated that the future will bring about further increase in demand for fish and fish products (FAO, 2006b). Compared to other sources of proteins, the demand for fishes has been steadily increasing over the years, as shown in the Fig.1.1.

Fig.1.1.1. Trend of net exports of selected agricultural commodities by Developing countries



Source: FAO (2007a).

FAO statisitcs (FAO, 2006c) reveals that the world fisheries production is increasing, compared to the last decade (Table 1.1). The world fish exports also showed an increase from 47.4 million MT in 1994 to 52.8 million MT in 2004, although there was a dip in the proportion of exports from 42% to 38%. The fisheries production in the developed countries shows a decline, while that of the developing coutnries shows an increase, accounting for the increase in the total world figures. On the other hand, exports of both developed and developing countries have increased.

Table 1.1.1. World Fisheries Production and Trade (Quantity)

	1994 Million MT Live Weight	2004 Million MT Live Weight
Production – World	112.9	140.5
Exports – World	47.4	52.8
Proportion of Exports	42%	38%
Production – Developing Countries	79.7	110.3
Exports – Developing Countries	28.1	30.1
Production – Developed countries	33.2	30.2
Exports – Developed Countries	19.2	22.7

Source: FAO (2006c).

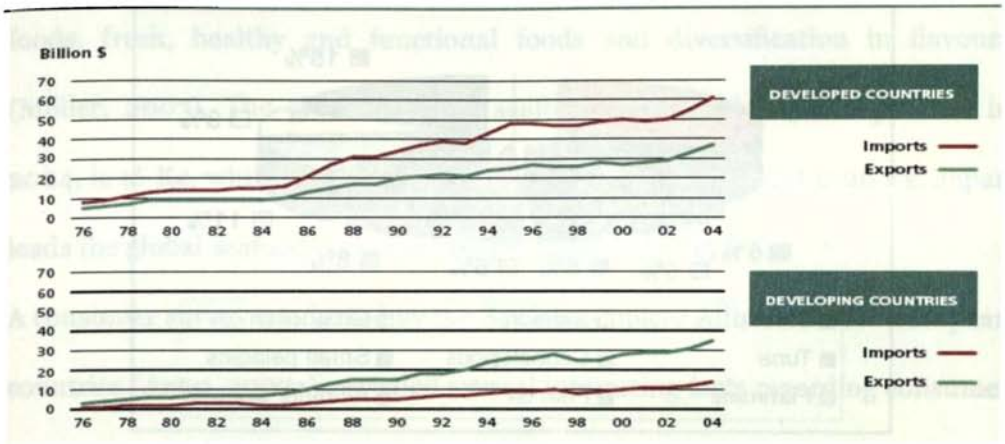
FAO estimates that in the world fish trade, exports from 20 countries have a value greater than USD 1 billion each, the top three countries being China, Norway and Thailand, which are all prominent capture and aquaculture countries. In the case of fish imports, 17 countries have an import value greater than USD 1 billion each (FAO, 2006c). The EU is by far the largest importer, with 38% of all imports, followed by Japan (20%) and USA (15%).

According to Allain (2007), unlike fish exports, which are more broadly distributed between countries, fish imports are highly concentrated.The three big developed country markets, Japan, the US and the EU, collectively garner almost 75% of all imports. Ahmed (2006) opined that about half of this trade is between developed countries themselves (North – North) while an equivalent

amount (South - North) flows from southern countries into the rich markets of the (mostly) northern developed world. Trade in the opposite direction (North-South) makes up only about 6.5% of global trade and trade between developing countries (South - South) makes up the remaining 8.5%.

In terms of quantity, 38% of world fish production is exported (Lem, 2006) and the value realised was $71.5 billion. Of this, 57% was contributed by the developing countries. In terms of value, more than 80% of total world fisheries imports is taken up by the developed countries. The EU remains by far the largest exporter with 34% of total export value, followed by China (9%), Thailand and Norway at 6%, Canada and the US at 5%, Viet Nam, Chile and Taiwan each at 3% and Indonesia at 2% (Lem, 2006). The European Union, Japan and the United States together account for as much as 75% of total world imports of fisheries products. The remaining developed countries take another 13 percent, leaving all developing countries with the relatively small 12 percent share of the value of overall imports (Melchior, 2006). Although developing countries collectively account for a relatively small percentage of total world imports values, their import volumes tend to be higher, implying that their imports mainly consist of lower value pelagics (Ahmed, 2006).

Fig-1.1.2. Trends in the World Seafood Trade in Terms of Value



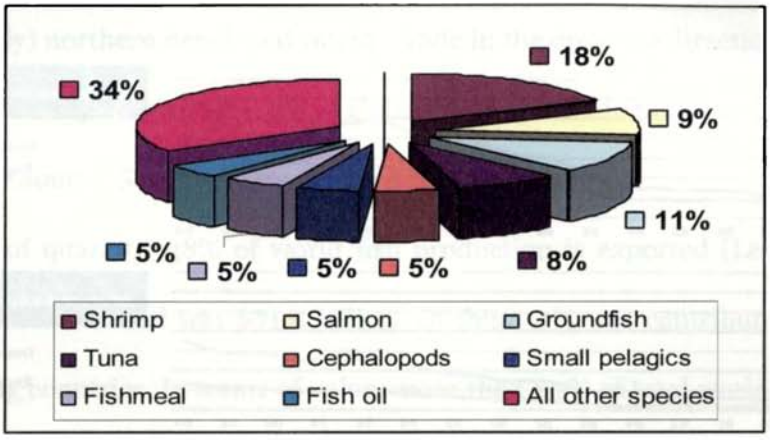
Source:FAO (2007a)

Shrimp continues to be the most important commodity traded in value terms, accounting for 18% percent of the total value of internationally traded fishery products in 2004. The other main groups of exported species were groundfish (11% – i.e. hake, cod, haddock and Alaska pollock), tuna (8%) and salmon (9%), fishmeal (3.3%) and fish oil (5%). All other species together contributed the remaining 34% of value.

In the global trade, mainly four seafood categories accounted for more than 40%, in the year 2004. They include shrimps (USD 12.2 billion), fillets (USD 7.3 billion), salmon/trout (USD 5.7 billion) and tuna (USD 5.5 billion).

The Fig. 1.1.3 shows the species wise export value.

Fig.1.1.3. Species-Wise World Export Trade Value, 2004



Source:FAO (2007a).

The global fisheries sector, in particular, the seafood trade sector, is undergoing tremendous changes as complexities arise from pressures due to diminishing supply, increasing demand, environmental changes and regulations, and geopolitical events. Demographic trends and preferences are also changing due to the growing complexities in the lifestyles of people everywhere. Today's fast paced life coupled with general lack of time for cooking, when compared to previous decades, has resulted in consumers demanding convenience in home cooking as never before. Therefore, demand for value added seafood products has been increasing over the past decade. Recent studies have reported that seafood consumers are very specific about

their choices and are always on the lookout for simple preparations, street foods, fresh, healthy and functional foods and diversification in flavours (Möller, 2007). The global average seafood consumption per capita, as in 2004, is 16 Kg, while that of the U.S. is 21.3 Kg and for E.U., it is 26 Kg. Japan leads the global seafood consumption per capita with 65.6 Kg.

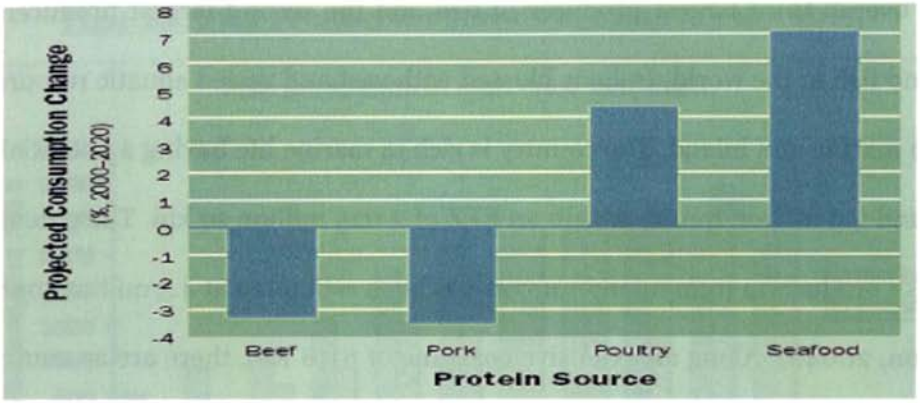
A consumer survey conducted by the Seafood Choices Alliance in the European countries (Anon, 2007a), revealed several interesting facts regarding consumer behaviour and decision making trends. Seafood consumption in Europe differs widely from country to country and from region to region. The consumption pattern is somewhat higher in southern Europe when compared to northern Europe. Among the EU member countries, per capita seafood consumption is highest in Portugal (56kg), followed by Spain (47kg), France (30kg), Italy (26kg), UK (23kg) and Germany (15kg). Market research data shows that Northern European consumers tend to prefer frozen forms of seafood whilst southern European consumers purchase considerably more fresh fish and seafood. Germany and the UK are the largest markets for breaded and battered seafood products. Of the European nations, 68% of the seafood trade in 2005, was concentrated in Spain, UK, France, Italy and Denmark. European consumers on the whole are very conscious about conservation and sustainable

environmental issues, and place greater importances on them than on price or convenience and are ready to pay a higher price for seafood caught in a sustainable manner. Nearly half of the consumers surveyed, have acted on these concerns by avoiding buying seafood that they know is not sustainable. The consumers expect retailers to assist them in making environmentally responsible choices and on obtaining relevant information, they voluntarily alter their consumption patterns in favour of more sustainable choices. The survey was instrumental in listing the important attributes that the customers look for in their seafood products. They include freshness (99%), customer demand (96%), health benefits (92), availability (91%), fresh or frozen forms (88%), price (84%), environmental impact (79%), overfishing (78%), convenience (75%), conservation issues (75%), locally sourced products (70%), whether wild or farmed (66%) etc. The progressive awareness of the European consumers, has been the precursor for the industry-wide impetus to behave in a responsible manner in order to sustainably harvest seafood.

A seafood vision study 2020, conducted by H.M.Johnson & Associates predicts that U.S. per capita seafood consumption is expected to soar around 7% by

2020, thereby making seafood the fastest growing sector in the protein market (Food and Water Watch, 2007).

Fig.1.1.4. Projected Shift in Per Capita Protein Consumption, U.S., 2000-2020.



Source: Food and Water Watch (2007).

The above study holds several important implications for seafood marketers all over the world. As the U.S. is one of the biggest importers of seafood, this also has an impact on the trade patterns and degree of value addition demanded by consumers. The study also revealed that Americans are regularly eating seafood, with shellfish and salmon being the most commonly demanded items. The consumers generally prefer to dine out to eat seafood, although the trend is shifting to accommodate a growing need for at-home value-added

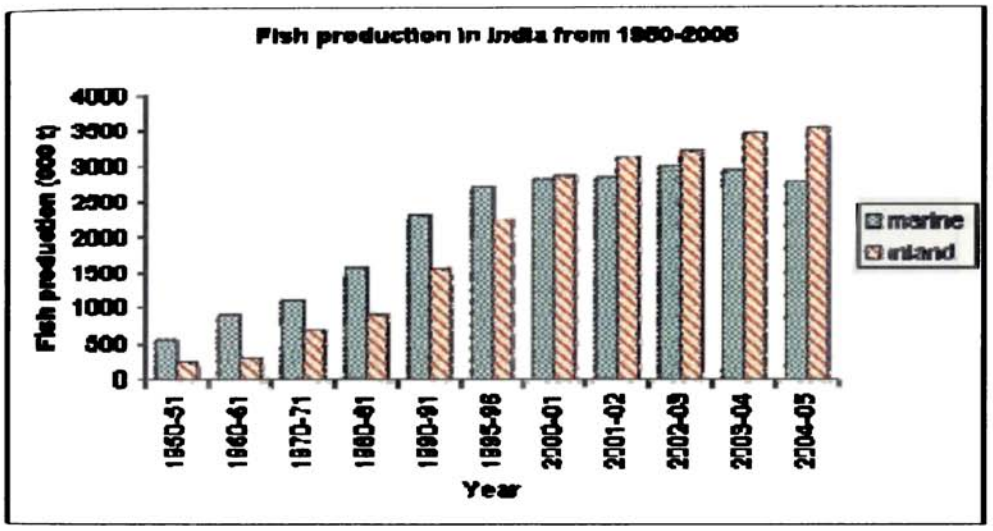
convenience foods. The frequency and quantity demanded has also been increasing over the years, according to the study.

1.2 Introduction to the Indian Seafood Industry

The overall third largest producer of fish and the second largest producer of inland fish in the world, India is blessed with vast and varied aquatic resources both marine and inland. The country is rich in marine life having a potential of around 3.9 million tonnes within an EEZ of 2.025 million sq.km. The potential of fish production from inland sources has been estimated at 4.5 million tonnes (Anon, 2004b). Along an extensive coastline of 8118 Km, there are as many as 371 seafood-processing units, all of which function as 100% export oriented units (Anon, 2007c). The fisheries sector provides employment to over 14 million people engaged fully, partially or in subsidiary activities pertaining to the sector, with an equally impressive segment of the population engaged in ancillary activities (Anon, 2007b). Aquaculture production has increased tremendously during the last decade. Consequently, the percentage share of aquaculture in total inland fish production is estimated to be about 75-80%. Freshwater carps, prawns and brackish water shrimps have contributed to the bulk as well as value of the inland aquaculture sector. The seafood processing

industry in India is a Rs.7245.30 crore industry (Anon, 2006a), generating valuable foreign exchange for the country, in addition to providing cheap protein-rich food for the people and generating large-scale employment.

Fig.1.2.1. Fish Production Trends in India , 1950 - 2005



Marine products exports from India started in 1953, the first consignment being from Kerala, the southernmost state of the country. From then on, till the early 1960s, the marine products export consisted solely of dried items like fish, shrimp, shark fins and fish maws, to the neighbouring Asian countries like Srilanka, Burma, Singapore etc. With the prospects of increased returns steadily rising, several entrepreneurs entered the industry. From 1960s, the

exporters focused on modernization of their plants and adoption of the technologies of canning and freezing, in a bid to capture newer and larger markets, which promised higher returns. The new markets, which are world players in the global fish trade, included Japan, USA, European countries, Australia, etc. After 1966, following the devaluation of the Indian currency, exports registered a significant increase, with the US taking over as the leading export market for the marine products. Since then, the industry has been flourishing steadily and the country started being acknowledged as a strong contender in the global marine products export trade. In the later part of the 1970s, the Japanese and European markets started to replace the US from the top importer status. Japan retained its top slot till 2001, after which the US regained lost ground for a brief period of two years, before losing out to the European Union, which continues to lead till present (Anon, 2004b).

The growth of the industry has been phenomenal over the past five decades, with India crossing the landmark figure of 1 billion US $ in the year 1994. Following slight slumps in 1995, 1998, 1999, 2003-04, it has exceeded the 1.5 billion US $ level in 2005-06. Exports of marine products, which after a decline in 2003-04 had picked up in subsequent years, grew by 6.3 per cent in April-October 2006. The export figures soared by 11.02% in terms of quantity,

9.01% in Rupee value and 11.21% in US$ realization. India's contribution in the global seafood trade worth around US$ 61 billion, was 2.65% only. An increase in the unit value from 3.20 US$ to 3.21 US$ per Kg was also noted. The overall export figures for 2005-06 surpassed last year's record of US$ 1478.48 Million to register an all time high of 1.6 billion US$ (Anon, 2006a). A comparative analysis of the exports for the last 5 years is given in the table 1.2.1.

Table 1.2.1. Indian Marine Products Export Trend From 2001-2006.

Year		Export	Variation	(%)	U.V.
2001-02	Q	424470	-16003	-3.63	
	V	5957.05	-486.84	-7.56	140.36
	$	1253.35	-16297	-11.51	2.95
2002-03	Q	467297	+42827	+10.09	
	V	6881.31	+924.26	+15.52	147.26
	$	1424.90	+171.55	+13.69	3.05
2003-04	Q	412017	-55280	-11.83	
	V	6091.95	-789.36	-11.47	147.86
	$	1330.76	-94.14	-6.61	3.23
2004-05	Q	461329	49312	11.97	
	V	6646.69	554.74	9.11	144.08
	$	1478.48	147.71	11.10	3.20
2005-06	Q	512164	50835	11.02	
	V	7245.30	598.61	9.01	141.46
	$	1644.21	165.74	11.21	3.21

Source: MPEDA (2006b). Q: Quantity in MT, V: Value Rs. Crore, $: US Dollar in Million

In terms of item-wise export earnings (table 1.2.2), frozen shrimp continued to be the largest export item, followed by frozen fish, cuttlefish, squid, and dried

items. The export figures for the year 2005-06 show that frozen shrimp accounts for 59.02% of the total value of export while frozen finfish accounted for 35.60% of the total volume of marine products exported from the country. All the products showed a sharp increase in quantity and value compared to the figures of the previous fiscal year. The percentage increase in the case of quantity was highest for dried fish, while frozen finfish register the sharpest increase in the case of value.

Table 1.2.2. Item Wise Export Of Marine Products From India

ITEMS	% Share to Total		APR-MAR 2005-06	APR-MAR 2004-05	VARIATION	(%)
Frozen Shrimp	28	Q	145180	138085	7095	5.14
	58.96	V	4272	4220.67	50.84	1.20
	59.02	$	970	938.41	32.01	3.41
Frozen Fin Fish	36	Q	182344	159689	22654	14.19
	13.78	V	999	759.27	239.44	31.54
	13.74	$	226	168.70	57.24	33.93
Frozen Cuttlefish	10	Q	49651	44239	5412	12.23
	7.58	V	549	474.01	75.13	15.85
	7.57	$	124	104.89	19.59	18.67
Frozen Squid	10	Q	52352	48124	4228	8.79
	7.94	V	576	477.26	98.26	20.59
	7.94	$	130	106.63	23.86	22.38
Dried items	3	Q	14167	9692	4476	46.18
	1.83	V	133	121.01	11.55	9.54
	1.83	$	30	27.09	2.94	10.86
Live items	1	Q	2568	2262	306	13.53
	0.85	V	62	50.75	10.96	21.61
	0.85	$	14	11.31	2.68	23.71
Chilled items	1	Q	5060	3988	1072	26.88
	1.13	V	82	68.14	13.42	19.70
	1.12	$	18	15.16	3.25	21.41
Others	12	Q	60841	55250	5592	10.12
	7.93	V	575	475.58	99.00	20.82
	7.93	$	130	106.29	24.16	22.73
TOTAL	100	Q	512164	461329	50835	11.02
	100	V	7245.30	6646.69	598.61	9.01
	100	$	1644.21	1478.48	165.74	11.21

Source: MPEDA, 2006. Q: Quantity in MT, V: in Rs. Crore, $: Us$ in Million

Around 84% of the quantity of the nation's marine exports was contributed by frozen shrimp (28%), finfish (36%), cuttlefish (10%) and squid (10%), while in terms of value, frozen shrimps dominated the export scenario, with a whopping 59% contribution. This reflects the industry's excessive dependence on shrimp

to prop up the export sales. G. Mohankumar, Chairman of MPEDA, (Anon, 2006b) opined that at present, value addition in the Indian seafood processing industry accounted for just five per cent of exports realisation.

Table 1.2.3. Country Wise Export Of Marine Products

COUNTRY	% Share		APR-MAR	APR-MAR	VARIATION	%
	to Total		2005-06	2004-05		
Japan	12.00	Q	59785	57832	1953	3.38
	15.96	V	1156	1202.45	-46.49	-3.87
	15.98	$	263	266.96	-4.16	-1.56
USA	11.00	Q	55817	50045	5772	11.53
	22.63	V	1639	1556.09	83.15	5.34
	22.66	$	373	345.52	27.11	7.84
EU	27.00	Q	136842	117742	19100	16.22
	29.46	V	2134	1819.28	314.97	17.31
	29.44	$	484	405.40	78.63	19.39
China	27.00	Q	137076	124826	12250	9.81
	11.72	V	849	693.25	156.20	22.53
	11.68	$	192	154.10	37.89	24.59
S.E.Asia	12.00	Q	60140	63842	-3701	-5.80
	8.09	V	586	628.83	-42.98	-6.83
	8.07	$	133	139.77	-7.07	-5.06
Middle East	4.00	Q	22270	16624	5646	33.96
	4.25	V	308	244.42	63.23	25.87
	4.24	$	70	54.70	14.94	27.30
Others	8.00	Q	40234	30418	9816	32.27
	7.91	V	573	502.37	70.53	14.04
	7.93	$	130	112.03	18.41	16.43
TOTAL	100.00	Q	512164	461329	50835	11.02
	100.00	V	7245.30	6646.69	598.61	9.01
	100.00	$	1644.21	1478.48	165.74	11.21

Source: MPEDA, 2006. Q: Quantiy in MT, V: in Rs. Crore, $: US$ in Million.

In the market-wise analysis, it was seen that European Union (29.46%) accounted for the largest share of India's export of marine products, followed by US (22.63%) and Japan (15.96%), in terms of value. While in terms of quantity, EU and China both logged in 27% each, thus contributing to more than half of the marine exports.

The emergence of China as a slow but steady, high volume exporting market is noteworthy. Japan registered a downward trend (-3.87%) value-wise, while South East Asia also showed a decline in both quantity (-5.8%) and value (-6.83%) in another significant development.

A general picture of the Indian trade reveals the following interesting facts. India's trade has been growing at a faster rate (20%) than her GDP, especially in the past two decades. GDP Growth of 9.0 per cent and 9.2 per cent in 2005-06 and 2006-07, respectively, by most accounts, surpassed expectations (Anon, 2007d). This tremendous growth can be attributed to the liberalization policies, which India adopted in 1991. With the doing away of the hitherto restrictive trade barriers and the opening of the Indian market, the liberalization process kick-started the growth of the economy so much so that, now India is one of the fastest growing economies in the world, along with China, Brazil and Mexico. By 2020, India is expected to be one among the

superpowers in the world. The general trend of the economy paints a very encouraging picture for businesses. From a growth rate of 7%, the Indian economy has shown an encouraging increase of 9% and is set to achieve the much-anticipated double-digit growth rate status. Such being the status of the national scenario, wherein businesses have shown a general increase in profits, it is high time that the Indian seafood exporting industry also jumped onto the bandwagon to better prospects and market leadership. Although the general trend of seafood exports have increased, the fact that the seafood industry is not doing as well as it should be, poses a disquieting rejoinder to the general bonhomie.

Some of the reasons for concern are cited below.

1.3 Problems Faced By Indian Seafood Exporters

1.3.1 Narrow Product Line

Firstly, most of the Indian seafood resources, presently in the trade market are believed to be over exploited, with the focus being only on a select group of species, namely the shrimps, carangids and the cephalopods dominating the export scenario. The product line offered by the industry is narrow, given its vast potential. Enhancing the line would ease the stress on the over exploited

stocks, and give them a much needed breathing space for recruitment and replenishment. The number of fishing vessels that churn the Indian waters is very high, especially bearing in mind the diminishing resources.

1.3.2 Infrastructure bottlenecks

Infrastructure bottlenecks such as power shortages, port-handling facilities, delays in transportation and poor communication facilities are some of the major infrastructure bottlenecks faced by the seafood exporters. The inability of Indian exporters in meeting supply schedules costs dearly in terms of image of India as a reliable source of supply, because of which India's export potential remains untapped. The ability of the government in removing these constraints in the coming years will also determine the supply side of Indian exports.

According to Mr Elias Sait, Secretary General, Seafood Exporters' Association of India, the Indian seafood industry is annually losing Rs 6,000 crore in spoilage due to poor logistics support (Anon, 2005). He pointed out that the industry needed logistic support on every front, namely, inventory management, warehouse management, transportation, ice and chill rooms, hygienic fishing jetties, lack of suitable cold chains for domestic sales and shortage of refrigerated containers, for exports. He cited poor infrastructure

facilities as the reason for the countrys' exports being out of line with international standards. Moreover, the high freight cost was also making the Indian industry less competitive when compared to China and other Asian countries.

Paradoxically, the level of the plant infrastructure is quite high compared to the quantum of products produced. A large proportion of the capacity of plants remains unutilized.

1.3.3 Marketing Problems

Thirdly, the perception of Indian products in the world market is generally dismal. The market surveys conducted by MPEDA in several markets, especially the US (Johnson, 2000), have revealed that several importing firms are unaware about the Indian products. Those aware remain unimpressed about the quality, workmanship, consistency, market promotion, reliability of shipments and delivery, lack of cooking facilities, poor packaging, poor brand image, lack of more information regarding products, poor business ethics etc. On the whole, importers cite inconsistent quality and workmanship, poor visibility of Indian products, and lack of proper marketing and promotion as the major reasons for not importing from India. However, there are importers

who are enthusiastic about Indian products, mainly due to their value, variety, availability, quality standards, state of art, world class processing facilities, remarkable improvement in the farm raised product, excellent potential in labour force etc.

1.3.4 Tariff Negotiations and New Trade Round

Melchior (2006) examined the tariffs in seafood trade in 140 countries and observed that, on an average, seafood tariffs are higher than the non-agricultural tariff average, although for some countries, the situation is the opposite.

Reduction in tariffs, through negotiations, under the aegis of the World Trade Organisation (WTO), remains an area of priority for the Indian Government, in order to extend assistance to the exporters in general. The considerable delay in the negotiations of the Doha Round on Agricultural Market Access (AMA), and Non-Agricultural Market Access (NAMA) has been a major setback to India, which has high hopes of securing major concessions. The resumption of the negotiations early this year, after last year's impasse, offers hope to the Indian delegation. This could in future emerge to be the turning point for the seafood industry too.

1.3.5. Other Non-Tariff Barriers

Non-Tariff Barriers occur due to the discrepancies arising from the differences in the quality standards and inspection systems between nations, although the trading process has been ratified by the international rules framed by the WTO, via the Sanitary and Phytosanitary (SPS) Measures Agreement (FAO, 2003) and the Technical Barriers to Trade (TBT) Agreement (Melchior, 2006). Mehta (2006) describes the Non-Tariff barriers as protectionist mechanisms used by developed countries, designed to reduce imports, subsequent to the drop in the tariff (custom duties), as a result of the GATT negotiations. These Non-Tariff Measures (NTM) include quantitative restrictions, tariff quota, voluntary export restraints, orderly marketing arrangements, export subsidy, export credit subsidy, government procurement, import licensing, antidumping duties, technical barriers to trade, to name a few.

India is at present facing several non trade tariffs on exports to the US, such as the anti dumping duty, multiple quality standards, Sanitary and Phytosanitary Measures (SPS), packaging and labeling regulations, uniformity requirements, documentation and related procedures, company and product registration, quality problems due to presence of pesticides, antibiotic residues, microbes, unsanitary conditions etc (Wiynaraja, *et al.,* 2001). Mehta (2006) conducted a

commodity-wise analysis of all Indian imports in the US facing NTBs, and estimated that seafood forms 3% of the total. Mehta (2006) also traced the number of detentions of seafood by the US and concluded that the rate of number of detentions per 1 million dollar worth of imports was 0.35, as against the Indian rate of 4.5, while that of the world ranged between 0.1 – 11.0. He calculated the seafood rate of detention for the period between December 2001 and June 2002, wherein the total number of detentions was 88, as against an import value of US$ 250.96 million. A large number of Indian consignments of shrimps were rejected due to unsanitary conditions, i.e. items packed under unsanitary conditions.

Mehta (2006) advocates the adoption of a multi-pronged approach as a way to respond to these challenges. He suggests using methods like discussions in multilateral trade forum, forming bilateral/regional trade arrangements and internal streamlining, to avoid recurrence of these defects. He further clarifies that most of such discrepancies occur due to the lack of understanding of the Indian seafood scenario on the part of the importers, followed by blanket rules for all nations with different situations, based on conditions and production systems prevalent in the importing country which are irrelevant for the developing countries for achieving the required product standard.

Some of the Non-Tariff barriers are examined in the following sections.

1.3.5.1. Anti-dumping Regulations

One of the most severe non-tariff barrier is the anti-dumping regulations imposed by our most important trading partner, the United States. The Economic Survey 2006-07 reveals that India's share in the world exports of marine products dipped to 2.3% in 2005, down from 3.4% in 2000. One of the major reasons for this downward slide is attributed to the antidumping duty of 10.17% imposed on India, among other nations (namely Thailand, Ecuador, Vietnam, China and Brazil), from August 2004, by the U.S. Department of Commerce, on certain frozen and canned warm-water shrimp. Therefore, these six nations have to execute customs bonds over and above the anti-dumping/countervailing duty to the Customs and Border Protection (CBP) of the US for their shrimp export operations (Anon, 2007e). The U.S. has alleged that producers/exporters have sold these products in the U.S. market at less-than-fair value, with margins ranging from 3.56% to 27.49% for India (Kulkarni, 2005).

As Indian seafood products continue to become increasingly competitive, it is predicted that the barrage of the anti-dumping measures will also increase.

Panchamukhi (2000) stressed on the role of the Government in coordination with the industry, in countervailing and minimizing the impact of these regulations on India's seafood exports.

India has recently moved the World trade Organisation disputes panel against a directive by the U.S. Customs border protection that seeks a Customs bond on shrimp exports to the U.S (Anon, 2007f). A bond is a cash guarantee given to the US Customs border protection for an amount calculated at 100% of the duty payable on total exports during the previous one year, over and above the anti-dumping duty of 10.17% imposed on Indian shrimp. According to the US customs, the bond is to make sure there is enough money in case there is an increase in the duty, which is reviewed periodically. The first of these reviews is under process and a preliminary determination under this review has already raised it to 10.54%. The bond coupled with the duty, appears to have taken a toll on shrimp exports to the U.S., which are down to $252 million (Rs.1, 058.40 crore) in 2006 from $485 million in 2005. Even the number of exporters to the US came down from 228 at the start of the duty 4 years ago to 74 as on January 31, 2007, the start of the second administrative review of the duty (Venkiteswaran, 2007).

On examining the effect of the antidumping duty on the export of shrimps to the U.S, it was noted that among the major suppliers in 2005, India stood 6th in terms of quantity in terms and 5th in terms of value. But in 2006, India suffered a 23.6% decline in terms of quantity and 19.7% in terms in value, which meant a slide to the 7th place both in terms of quantity and value (FAO, 2007b).

1.3.5.2. Multiple Quality Standards

Major industrialized nations prescribe strict quality standard regimes to be met by the developing nations (Henson *et al.*, 2004), including India, which they find quite problematic to comply with (Henson and Mitullah 2004; Henson *et al.*, 2000; Rahman, 2001; Musonda and Mbowe, 2001; UNEP, 2001a and 2001b; Zaramba, 2002). The costs of compliance with these requirements can be high (Cato 1998; Cato, and Santos, 1998), as Indian firms discovered to their own detriment in the 1990s, when they had to implement HACCP (Caswell and Hooker, 1996; Caswell *et al.*, 1998). The problems are compounded when Indian seafood exporters export to the European Union, presently the largest market for India's seafood exports, due to multiplicity of standards it prescribes - its own, along with that of each member states. This duality in standards has added onto the seafood exporters' woes.

Viewing the whole seafood export scenario as a total food chain, the E.U. is currently in the process of revising their food safety directives to incorporating the 'farm to fork' principle (Greenhalgh and Clucas, 2003). This would mean stricter quality assurance systems, whereby the product's origin is traced from the point of the fishing boat or the fish pond till the point of export. Efforts are therefore on to bring about harmonization of the various quality system regimes.

1.3.5.3. Occurrence of Antibiotics, Pesticides and Pathogens

Exports to EU are now regularly checked for presence of antibiotics after the 2002-03 debacle, when border rejections were faced by India's major competitors, namely China, Thailand, and Vietnam. The timely intervention by the Indian government in prohibiting the use of antibiotics such as Chloramphenicol and Nitrofurans and bacterial inhibitors in aquaculture, prevented the situation from escalating. Adding to the problem's complexity, the recommended testing methods for high levels of sensitivity in marine products for chloramphenicol is done using high performance chromatograph mass spectroscopy (HPLCMS), whose equipment cost comes around Rs.1.5 crores (US$ 3.5 Million per unit. This procedure violates Article 5 of the SPS

Agreement which requires that Sanitary and Phyto-Sanitary measures should be based on risk assessment and take into account an appropriate assessment of the actual risk involved and if requested by the exporting country make known details of this assessment (Mehta, 2006). India has taken up this issue with the WTO.

The environment-related NTBs faced by the Indian seafood industry are largely related to the minimum residual level (MRL) for pesticides in the produce. Any consignments containing DDT, aldrin and heptachlor would be rejected by the EU, namely Spain and Italy (Chaturvedi and Nagpal, 2002).

Occurrences of pathogens like Salmonella, Vibrio, E.coli in marine products are liable to be rejected. The seafood industry is already certifying the absence of these microbes duly. But in the case of certain micro-organisms such as Vibrio parahaemolyticus a 'nil' limit has been laid down, notwithstanding the fact that cooking or freezing the food product will destroy the microbe, which occurs naturally in seawater and is not a contaminant. However, despite the above, some countries like the UK and the Netherlands have established <100 CFU/g as a guideline for "acceptable" levels for Vibrio parahaemolyticus in products, which are to be cooked before consumption. Risk evaluation reports have not been made available in such cases. This is in connection with the US

Bioterrorism Act, which requires in-depth record keeping procedures, which again is incurred by the exporter.

1.3.5.4 Use of Turtle-Excluding Devices (TEDs)

Another case in point of the restrictive trade practice was the banning of Indian exports by the US in 1996, if shrimps were caught without using turtle-excluding devices. Although India took up the issue with WTO and won the case, it lost considerably by way of rejections (Chaturvedi and Nagpal, 2002).

1.3.5.5. General Hygiene Requirements

Henson *et al.*, (2004) opined that Indian seafood exporters have largely been reactive in their approach towards seafood safety and hygiene issues, and tended to implement measures only when forced to do so by the importing countries, inspite of the fact that these issues have been raging ever since the 1980s changes to their hygiene controls when absolutely necessary. Both the E.U. and the U.S. have laid down elaborate requirements for ensuring hygiene and sanitation. India has faced several rejections on this count in the past. This included detention of cases related to filth/decomposition. Subsequently the FDA maintains lists of exporters who were exempt from automatic detention in this regard. These are the Attachment A plants which lists the processors of

fresh and frozen shrimp, and Attachment B plants, which represent the higher risk cooked products exporting plants.

1.3.5.6. Quality and Other Problems

With the advent of globalisation of food trade, followed by developments in food production, handling, processing and distribution, and the increasing awareness and demand of consumers for safe and high quality food have put food safety and quality assurance high in public awareness and a priority for many governments. Under this comes the muddy mouldy smell, which emerges from shrimps when they are cooked, but which cannot be detected in the raw form. Japanese importers banned products from exporters who exported such products. Culture pond hygiene and husbandry practices, involving the removal of algal blooms, which cause this smell, took care of this problem.

1.3.5.7. Heavy Metals and Other Environmental Contaminants

The EU has specified maximum levels for certain heavy metals such as lead, cadmium and mercury with the rule that products having these heavy metals above the specified levels would be rejected. The specified levels include: lead (0.5mg/kg in crustaceans and 1mg/kg in cephalopods), cadmium (0.5mg/kg in

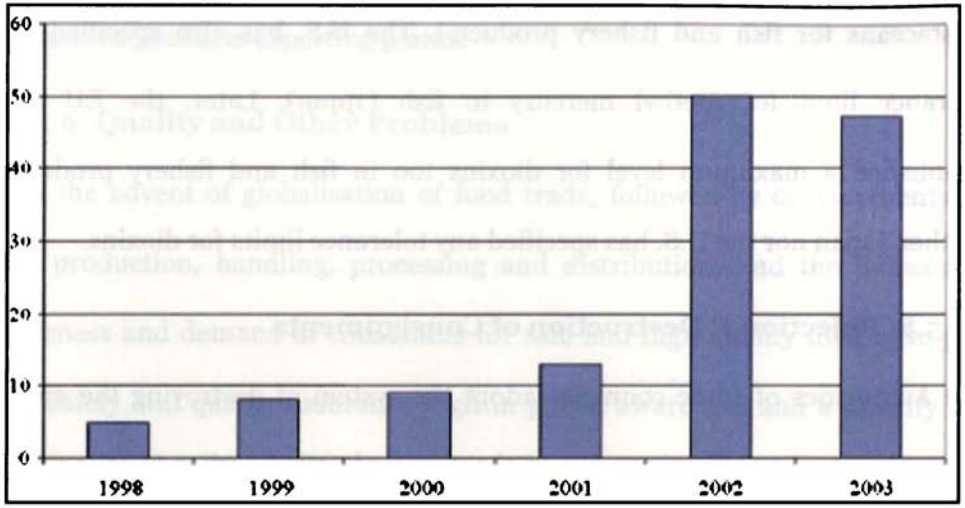
crustaceans and 1mg/kg in cephalopods), and mercury (0.5mg/kg in crustaceans for fish and fishery products). The U.S. has also specified the tolerance limit for methyl mercury in fish (1ppm). Later, the EU also established a maximum level for dioxins too in fish and fishery products. Neither Japan nor the U.S. has specified any tolerance limits for dioxins.

1.3.5.8. Rejection & Destruction of Consignments

The Authorities of some countries adopt the system of destroying the entire consignment when rejections due to the causes detailed earlier (Ababouch *et al.*, 2005). This decision is often taken without consultation with the exporter, which means that the products cannot be tested again to confirm the reason for rejection. This results in huge losses, as in some cases, contamination if present can be dealt with by reprocessing.

The following figure gives the number of rejections of the Indian fish products by the EU during the period from 1998 to 2003.

Fig.1.4.5. Number of Consignments rejected by EU, 1998-2003



Source: Henson et al., (2004)

1.3.6. Natural Calamities

Seafood exports from India were also badly hit by the December 2004 tsunami, which ruined many shrimp aquaculture farms along the country's southern coast. Because of these reasons, the export trend registered a sharp decline for two consecutive years from 2003-04 to 2004-05. Nevertheless, the country's exports are picking up and the present fiscal figures paint a very encouraging picture.

1.4 Role of the Government in Augmenting Exports

The Government of India is taking several steps in order to help improve exports, such as discussions at the WTO to secure concessions and arbitration in case of rejections, creation of free trade regimes, Most Favoured Nations status, and other regional cooperations, including treaties with other countries in order to facilitate trade, and setting up of infrastructural facilities like developing harbours, etc. Through the aegis of the Marine Products Export Development Authority, the nodal agency of the Government, overall development of the fisheries sector is targeted (Anon, 2003). The technical and financial schemes operated by the MPEDA include schemes for induction of new technology/modernization of seafood industry, augmenting export production of Culture fisheries, development of capture fisheries, development of ornamental fisheries, promotion of chill fish exports, developing new products or projects, quality improvement, assistance in marketing and promotion activities, improving infrastructural facilities for preservation and processing of fish, strengthening traditional fish processing technologies and marketing, utilization of low value fish to make value added products, and other support or technical assistance for installation of TED, training of crew/officials, assistance for HACCP implementation, monitoring heavy meals,

pesticides, antibiotic residues and other chemical/bacteriological parameters, training in production of valued added products, training in ornamental fish breeding, extension training programme and training in aquaculture.

Under the modernization scheme, MPEDA provides financial assistance for acquisition of new equipment and machinery for value addition, construction of cold stores, ice making machines, upgrading of cold stores, installation of generator sets, water purification systems etc., establishment of chill rooms, effluent treatment plants, acquisition of refrigerated trucks, upgradation of seafood units and distribution of insulated fish boxes.

Under the schemes for augmenting export production through culture fisheries, the following are included: promotion of commercial hatcheries for seed production of exportable species, financial assistance for new farm development in undeveloped areas, financial assistance for purchase of effluent treatment systems in shrimp farms, setting up chill rooms in shrimp farms, purchase of water quality testing equipments, assistance for setting up PCR labs in private hatcheries.

Under the scheme for developing capture fisheries is included financial assistance for installation of electronic fishing and navigational equipment and installation of fish hold in fishing vessels.

Under development of ornamental fisheries scheme, financial assistance is provided for setting up fish breeding units.

Financial assistance is extended for setting up chill storages at their premises or near the landing centres or airport.

Under schemes for quality improvement, financial assistance for setting up of Mini-laboratory in seafood units, procurement of quick testing kits for antibiotics, construction or renovation of independent preprocessing centres with upgraded facilities, is provided.

Under the assistance for marketing and market promotion activities, financial assistance for export of Aquarium / Ornamental fishes, air freight support scheme for export of live marine products and assistance to seafood exporters for participation in international fairs under joint participation scheme are provided.

1.5 MPEDA's Strategy to increase Indian seafood exports

According to G. Mohankumar, Chairman of MPEDA, the Central Government nodal agency for fisheries development is presently drafting an ambitious vision plan for marine products export industry in the country, to help develop strategies to foster growth of seafood exports to reach the target of US$ 4

billion, by the year 2010, and US$ 6 billion by 2015 (Anon, 2006b). The authority had identified thrust areas to take the stagnating seafood processing industry to new heights. Emphasis will be on exploitation of unexploited resources, such as tuna, value-addition, technology-upgradation, expansion of aquaculture and import of fish to ensure a free flow of raw material for the processing industry. The fact that MPEDA realizes the significance of marketing in the Indian seafood export trade is evident in the way it has initiated steps to gather market intelligence, by conducting extensive market research in potential markets, like the US, the Eastern Europe and the Middle East. Subsequent to the market study conducted in the U.S., regarding market perception of Indian products, commissioned by it, MPEDA is mulling over the possibilities of entering the U.S. retail market. A series of steps to initiate a `logo scheme' exclusively for marine products, to help Indian exporters get direct access to the U.S market, are afoot, on the lines of the ISI and Agmark logos (Kumar, 2006). Accordingly, MPEDA plans to select 40 to 50 Indian seafood exporters, who have volunteered for the same, and market their logos, for developing a brand image. The participating exporters would however, be expected to adhere to the strict packaging norms, stipulated by the MPEDA, as packaging was an important vehicle to transport the Indian products directly

to the US supermarkets. MPEDA hopes to open a chain of retail outlets, with proper warehousing facilities and logistics. Increased value-addition and development of brand equity are the focal points of the MPEDA's retail strategy. Therefore, it is concluded from the preceding sections on the global and the Indian seafood trade scenarios that, what the Indian seafood processing industry needs urgently is a market-oriented approach to trade. Being market-oriented entails being customer centric, so that customer satisfaction is assured and high value for customer investment is guaranteed. Today's market is radically different. It truly is a buyer's market. Huge quantities of seafood products from emerging markets like Indonesia, Thailand, Vietnam, Bangladesh etc, produced at much cheaper costs than Indian products, are flooding the global seafood market. The importers can now choose from a variety of products, that meet their criteria of quality, quantity, pricing and food safety requirements, to their optimum satisfaction. This further underscores the need for Indian seafood processing firms to be market-oriented.

1.6 Introduction to Market Orientation

The concept of market orientation has been increasingly finding lot of academic support. There is abundant literature on the role of market

orientation in increasing business performance. Market orientation has been defined by Kohli & Jaworski (1990) as the organization-wide generation of market intelligence, dissemination of the intelligence across departments, and organization-wide responsiveness to it. Market orientation is thus, a set of behaviour, which are customer-centric, and further entails that the various departments of a firm act in coordination to fulfill the objectives of customer satisfaction and profit making. Market orientation can be traced back to its roots in the marketing concept, which held that a customer is the reason for the existence of the business. It holds that customer satisfaction is the key to improved business performance and the development of competitive advantages.

This thesis deals with the study of market orientation of Indian seafood processing firms. The study focuses on seafood firms who use freezing method for processing. Firms using drying & other methods of preservation have not been included in the study.

This study consists of mainly three parts, first - the examination of the marketing process in Indian seafood processing firms, second- the evaluation of the environment-mediated relationship between market orientation and

business performance in the context of the seafood industry, and finally the steps for implementing a market orientation in the firms are detailed.

1.7 Purpose of the Research

The purpose of this research was to examine in detail the market orientation framework as suggested by Kohli & Jaworski (1990) and Jaworski and Kohli (1993) and to test their applicability in the Indian seafood processing firms. The study attempts to gain an understanding of the marketing practices in the seafood firms in India and to find out if they were market oriented. It is thus the intent of the study to quantify the relationship between market orientation in the Indian seafood processing firms and their business performance.

This research attempts to answer the question whether the market orientation framework, which has been successful in increasing the business performance of firms in the developed countries, can bring about a similar consequence in the Indian setting, especially in the case of the Indian seafood processing industry. Given the present situation of the Indian seafood processing industry adoption of market orientation principles will help in bringing about a professional outlook to the marketing practices, and in turn achieve what the industry sorely needs at the moment, improved sustainable business

performance and a competitive edge over other international competitors in the global seafood market.

1.8 Research Questions

Against this backdrop, the thesis focuses on the level of market orientation of in the seafood processing (freezing) firms in India and attempts to study the following three fundamental research questions:

- **Question 1**: Does market orientation affect business performance in seafood processing firms in India?
- **Question 2**: How do the antecedents proposed by Kohli & Jaworski (1990) and Jaworski and Kohli (1993), such as management emphasis on market orientation, top management risk aversion, interdepartmental conflict, interdepartmental connectedness, formalization, centralization and reward system affect the level of market orientation in seafood processing firms in India?
- **Question 3**: Do environmental moderators such as market turbulence, competitive intensity and technological turbulence strengthen or weaken the relationship between market orientation & performance in Indian seafood firms?

The awareness about the relevance of market orientation in food production is steadily growing. Grunert *et al.*, (1996) have highlighted the importance of implementing market orientation in food production namely agriculture and fisheries and the subsequent processing links in the food value chain.

Kinnnucan and Wessells (1997) studied the aquaculture industry from the marketing concept point of view, and observed that, 'industrial style' market-development approach which focuses on product differentiation and market segmentation, would be most relevant to the industry and policy makers. They emphasize on the need for the aquaculture industry to be market-oriented and list out the managerial strategies of demand function modification and segment development to achieve the same.

According to Kaplinsky (2000), the value chain is defined as the range of activities required to bring a product or service from conception, through the intermediary phases of production to delivery to final consumers.

Trondsen (2001) on examining the market orientation in seafood industry observed that firms producing low value products focus on cost factors in production, to obtain competitive advantage, while firms producing high value products require a much higher degree of market orientation.

Grunert *et al.,* (2002) suggested the extension of market orientation from the company specific level to the value chain level, as the food market is composed several value chains, and it is the combined effort of all these chain members that gives the final customer a perception about the product as a whole. Four case studies on the market orientation of value chains in fisheries and agribusiness, were presented by Grunert *et al.,* (2004). They opined that competition on international markets for value added products has been forcing the traditonally commodity-oriented fisheries sector which focus on efficency, high volume, constant quality and economies of scale, to produce more and more differentiated products. This would mean a realignment of their strategic focus from being merely production-oriented to developing market-related competencies. The degree of differentiation determines the type of marketing needed. Therefore, the more differentiated a product is, the more market-oriented a company has to be, in order to make sure that their goods reach the targeted niches, in order to avoid huge inventories of highly differentiated products meant for a special market, and finding no customers ready to buy it.

Gudmundssen *et al.* (2006) have presented a schematic representation of a typical seafood value chain, which consists of harvesting (either through

fishing or aquaculture, or a combination of both), primary processing, secondary processing, distribution and marketing and finally consumption. They have also analysed each step in the value chain in terms of cost items and profit margin and have come up with the share of revenue among the various stages through which the seafood products pass, to reach the final customer.

1.9 Relevance of the Study

About 75% of the Indian seafood products are being sold in the block form. This means that very little value addition is done. These products are shipped to countries which then reprocess and repack these products under their brand names and sell them at a high profit to the final end customers, which are usually the institutional buyers namely super markets, restaurants etc. Thus, the Indian products are faceless in the global seafood trade for the most part. Only certain products retain their brand names and thereby identity. India is thus a massive supplier of raw material rather than a processor or marketer. Indian exporters, on their own, lack the wherewithal to enter into collaborations with the requisite supply chains in the respective countries and ensure that their products reach the final consumers.

The industry can be termed to be in a dormant state now, a right time to take stock of its present position from the time of its inception. The industry is currently facing a number of problems, which though aren't insurmountable, nevertheless have been holding back the industry from the position which it ought to be today. The problems have been detailed earlier.

This being the scenario, the Indian seafood firms need strong marketing skills to help them gain recognition in the international market, and to attain their full potential. The adoption of market orientation principles will help the seafood firms to emerge as strong players in the global seafood trade.

1.10 Conclusion

This is the introductory chapter of the thesis and aims at providing the general background of the global and Indian seafood trade. This is followed by an introduction to the market orientation principles. Then the research questions are addressed, followed by the objectives of the study. The relevance of the study is discussed in the next section. This chapter then closes out with a detailed description of the organization of the thesis.

CHAPTER 2

MARKET ORIENTATION FRAMEWORK

2.1 Introduction

This chapter aims to trace the development of the marketing concept from its inception to its operationalisation as market orientation, through a review of the literature. The academic focus on the marketing concept began in the 1950s and evolved in the 1990s to the market orientation framework. The seminal studies conducted by Kohli and Jaworski (1990) and Narver and Slater (1990), on the market orientation, its construct, antecedents and consequences, and moderators are examined in this chapter.

The concept of market orientation has been a subject of academic debate over the years. Although the discussions have been more animated during the last two decades, nevertheless, the topic is not a new one. Adam Smith had, way back in the 18th century, asserted that the customer was the sole reason for existence of a business firm (Wilkinson, 2001). Through this enlightening and path-breaking assertion, he had laid down the basis for all activities of a firm and had emphasized the need to focus on consumers. But it took a lot of time before the import of Adam Smith's statement was recognized.

It was only in the early 1950s that the focus of attention was fairly crystallized on the marketing function. Since then, academicians have been stressing on the need for a marketing concept. The advent of the marketing concept can be traced back to the aftermath of the industrial revolution, in the developed countries, subsequent to the building up of an ever-increasing need to pay

more attention to the customers' preferences. Following the World Wars, firms were preoccupied with being increasingly production-oriented to meet the growing demand for products, while maintaining high production efficiency, low costs and mass distribution.

Once the products began to be freely available, then the heavy demand began to slacken, leading to the emergence of a new philosophy of the selling concept, wherein the focus was on "hard selling", which along with the earlier production-orientation is still in vogue in many businesses around the world. Then there was a shift from the selling concept to the product concept, where attention was paid to improving the product by way of better features, higher quality, and lower prices and so on, the rationale being that customers would purchase the products which had better quality, improved features and was lest costly than other competing products. Through all these philosophies, the accent was on the firm producing the products, rather than on the customers buying the products. The firms produced on a large scale, products which they considered to be in great demand by customers. The customers' ideas regarding the type of goods and services they wanted were not taken into view. This discrepancy led to customer dissatisfaction, which then necessitated a paradigm shift in the firms' philosophy. It was then that the marketing philosophy made its debut.

2.2 Literature Review

2.2.1 The Marketing Concept

Peter Drucker (1954) was one of the early proponents of the marketing concept, who emphasized its role when he stated that, marketing is more the customer's opinion about the business and less a firm's specialized function.

He was of the firm opinion that "... any business enterprise has two - and only these two - basic functions: marketing and innovation".

Other studies on the marketing concept, in the 1950s have described it variously as a customer-oriented and profit oriented business philosophy (McKitterick, 1957), and as a corporate-wide mental makeup which included the integration and coordination of all marketing functions, in turn directed to profit making (Felton, 1959). The underlying similarities in these studies are their emphasis on customer orientation, profit orientation and integration of marketing functions. These studies laid down the foundation for all later academic discourses till date. Another noteworthy contribution to the growing literature was made by Keith (1960), when he examined the implementation of the marketing concept in an applied setting. He also noted that the concept of marketing has evolved from the other types of business orientations, namely the production, sales and distribution orientations, which he described as antecedents to the marketing concept.

Levitt (1960), another proponent of the marketing concept, has also emphasized that a business' sole aim should be to create a satisfied customer. Kotler and Zaltman, (1971) opined that the marketing concept invites most of the effort to be spent on discovering the wants of a target audience and then creating the goods and services to satisfy them. It was McNamara (1972), who pointed out the importance of marketing in communicating the needs of the market to all major corporate departments, and accorded that the marketing concept is a philosophy of business management based on the company wide acceptance of the need for customer orientation and profit orientation.

Konopa and Calabro (1972) describe it as the external consumer orientation, in contrast to the inward directed production orientation, with the complete integration of the organizational and operational effort. According to Kotler

(1980), the marketing concept is the key to achieving organizational goals and consists of determining the needs and wants of target markets. McCarthy and Perreault (1984) view the marketing concept as the deploying of all efforts by an organization for ensuring that customer satisfaction goes hand in hand with profit making.

While customer focus, profits, and integration of organizational efforts are frequently discussed when the marketing concept is described, the term has become synonymous with having a customer orientation (Houston, 1986). Boone and Kurtz (1989) also view market orientation as the company wide consumer orientation but they brought attention to the achievement of long run success, as well. The emphasis on customer orientation is unmistakable in all of the above propositions. Aaker (1989) added a new dimension to the framework, when he stressed that every firm needs to develop a sustainable competitive advantage (SCA) and thereby create sustainable superior value for its customers, if they wish to record above normal market performance. Future studies took cognizance of this fact and modeled their theories accordingly.

Though the concept was propounded as early as in the 1950's, it really took off in a big way in the early 1990s. The 1990s was heralded by a flurry of academic research on market orientation, its meaning, the antecedents, consequences, moderating influences, its operationalisation, characteristics and behaviour of market oriented firms, and other factors which had a direct bearing on a firm's being market oriented. Market orientation has since then, been variously defined as a specific set of firm behaviour, as a firm culture and as a system. Out of these, the first two theories are the most commonly cited prevailing approaches.

2.2.2. Market Orientation Framework and Business Performance

It was postulated by a number of academicians that a firm which is market oriented will have improved business performance (Kohli & Jaworski, 1990, Narver & Slater, 1990, Ruekert 1992). The works of Deshpande & Webster (1989), Kohli & Jaworski (1990), Narver & Slater (1990), Deng & Dart (1994), Diamantopoulos & Cadogan (1996), Atuahene-Gima (1996), Farrell & Oczkowski (1997), Becker & Homburg (1999), etc were some of the major studies, which sparked off the academic interest in the marketing orientation concept. The market orientation framework has, since then, been interpreted by a number of authors.

The market orientation framework is an extension of the marketing concept, wherein the firm places the customer at the forefront of all decisions it takes. The objective of the market orientation is to bring about customer satisfaction, by way of assessing his needs and wants and bringing it to fruition.

Market orientation has been defined by Kohli & Jaworski (1990) as the organization-wide generation of market intelligence, dissemination of the intelligence across departments, and organization-wide responsiveness to it. Narver & Slater (1990) propounded that market oriented firms will, ceteris paribus, improve their market performance.

Kohli & Jaworski (1990) opined that the construct of market orientation is central to the discipline of marketing, of which the marketing concept is a cornerstone, and which represents the foundation of high quality marketing practice (Kohli, Jaworski & Kumar, 1993).

Deshpande and Webster (1989) described market orientation as a business culture, and Narver and Slater (1990) extended the cultural perspective by defining market orientation as the business culture that most effectively and efficiently creates the necessary behaviours for the creation of superior value

for buyers and, thus, continuous superior performance for the business. The focus on the creation of necessary behaviours, for superior customer value, which in turn led to the firm superior business performance was a view shared by a number of academicians and practitioners of which the notable ones included Peters and Waterman (1982), Peters and Austin (1985), Kotler & Andreason (1987), Shapiro (1988), Webster (1988), Aaker (1989), and Kohli and Jaworski (1990).

An important theme in contemporary marketing theory is the potential for a market orientation to positively influence business performance (Narver and Slater, 1990; Jaworski and Kohli, 1993; Deshpandé, Farley and Webster, 1993). Lafferty & Hult (2001) and Zebal (2005) summarised the findings of most of the market orientation studies to date and state that they have been classified into five different perspectives of market orientation: decision making, market intelligence, culturally based behaviour, strategic focus and customer orientation. They attribute these theories to Shapiro (1988), Kohli and Jaworski (1990), Narver and Slater (1990), Ruekert (1992) and Deshpande *et al.*, (1993), respectively.

2.2.2.1 Decision Making Perspective

Shapiro (1988) conceptualised the market orientation framework as a set of three decision-making steps, beginning with sharing of information obtained from marketing intermediaries and other sources between all the functions within the firm, followed by making tactical and strategic decisions based on the input obtained from all functions, and finally executing these decisions.

A review of the market orientation studies till date, have shown that, most authors widely quote two studies generally. They are the Kohli and Jaworski

(1990) study and the Narver and Slater (1990) study. The later studies mainly model either of the above two studies, or attempt to synthesize the two, with some additions or alterations. Hence a detailed description of the two studies is appropriate and necessary to obtain a holistic view of the market orientation framework. They are as detailed below.

2.2.2.2 Market Intelligence Perspective - Kohli & Jaworski's View

It was Kohli & Jaworski (1990) who first postulated the theory of market orientation, by laying down a set of behavioural practices, which a firm has to practice in order to become market oriented, and thereby improve business performance. They put forward the market orientation construct, propositions and implications, supported by empirical evidence. They developed what is known as the MARKOR scale, a questionnaire, laying down the set of behavioural practices, market oriented firms pursue to become high market performers. The MARKOR scale initially consisted of 32 items, and was later reduced to 20 items. They opined that there are three main tenets of market orientation, namely the generation of market intelligence, the company wide dissemination of the generated intelligence, and the responsiveness of firms towards the disseminated information. They believed that a number of factors or antecedents, were central to the implementation of market orientation, and that they influenced the tenets of the market orientation construct, by the implementation of which, there arose consequences, namely improved business performance.

The antecedents are grouped under three major heads namely, the top management emphasis, the interdepartmental dynamics and the organizational dynamics in the firm. They argue that, for the effective implementation of a market orientation or any other system for that matter, the top management holds the key to spearheading the process, eliciting and

inciting a desired response to achieve the set goals. It holds that if the employees of a firm must be customer oriented, they should receive clear directions from the top management to be so and its importance should be made explicit. Hence, the top management must be enthusiastic about it, and should emphasize the need for being responsive to customer needs.

The top management's risk aversion towards change is the second antecedent of market orientation. For the development of any innovative strategy involving the production of new products, or modification of existing products, which are not doing too well, it is important that the top management be bold enough to take risks and introduce the strategies, irrespective of their chances of failure, because, this will positively influence the staff to think along new lines, and come up with novel ideas, which is so very important in face of stiff competition in today's rat race for survival.

Interdepartmental dynamics is the next set of antecedents, which include two factors namely, the degree of interdepartmental connectedness and conflict. The former factor strives to assess the relationship between the various departments in a firm, and therefore the degree of interaction between the employees, while the latter attempts to measure the degree of disharmony among the various departments, thereby leading to ambiguity of organizational goals.

The third set of antecedents represents the role of organizational systems in fostering market oriented behaviour. It includes the factors like formalisation, centralisation, departmentalisation and reward system. The first factor accounts for the organizational culture, rigidity, rules, norms, etc. The second factor accounts for the centralization factors of the decision-making process in the firm. It seeks to measure how far decision-making authority is delegated to the subordinates. By including the lower rungs of the organizational hierarchy

in the decision-making process, the top management will be able to generate enthusiasm, new ideas, greater productivity and accountability.

The consequences included improved customer satisfaction, improved business performance, as in profits, market share, return on investment etc, and improved employee consequences, as in sense of pride and belongingness and job satisfaction.

2.2.2.3 Culturally Based Behavioural Perspective - Narver & Slater's View

Narver & Slater (1990) conducted an extensive literature review and inferred that market orientation consisted of three behavioural components, namely, customer orientation, competitor orientation and interfunctional coordination. They also held that there were two decision criteria which affected market orientation namely long term focus and profitability. This is consistent with the findings of Kohli & Jaworski (1990), namely in the case of the behavioural components, while in the case of the decision criteria, namely focus and profitability, they echo the views of Felton (1959), Wind & Robertson (1983), Houston, (1986), Ruekert & Walker (1987), Webster (1988), Kohli & Jaworski (1990). They thus proposed a one-dimensional construct of market orientation, which is now known as the **MKTOR scale**, which consists of a multi-item scale, and has demonstrated reliability.

By customer orientation, they refer to the understanding of a firm's target markets to be able to create superior value for them continuously. The firm has to be able to anticipate the customers' future needs also (Day & Wensley, 1988). Narver & Slater further go on to determine how a seller can create value for a buyer; by either increasing benefits to the buyer in relation to the buyer's costs and by decreasing the buyer's costs in relation to the buyer's benefits.

Competitor orientation refers to a firm's understanding of the key and potential competitor strengths and weaknesses, their long-term capabilities and strategies (Porter, 1980; Aaker, 1988; Day & Wensley, 1988;).

Interfunctional coordination is the coordinated utilization of the company's resources in creating superior value for the target customers (Narver & Slater, 1990). Creating value for the customers is not a job for the marketing department alone; instead, it is the coordinated and concerted effort of all departments in the seller firm (Webster, 1988), including the human & other capital resources. Wind & Robertson (1983) Ruekert & Walker (1987) and opined that, rewarding individuals in every functional area for contributing to creating superior value for customers, will be effective in ensuring complete participation in the programme.

There are obvious similarities between these two definitions. First, both focus on the central role of the customer in the manifestation of market orientation. Second, both entail an external orientation. Third, both recognize the importance of being responsive to customers at an organization level. Finally, there is recognition that interests of other stakeholders and/or other forces shape the needs and expectations of customers.

The studies conducted by Jaworski *et al.*, (2000) threw up several terms like market driven and market driving, in association with the market orientation framework. These refer to firms having the ability to learn, understand and respond to the market and the ability of firms to change the market (Kumar *et al.*, 2000) respectively, the latter being in a position to offer greater values to the customers by virtue of its ability, than the former.

2.2.2.4 Strategic focus perspective

The strategic focus perspective advocated by Ruekert (1992) views market orientation as the process whereby a strategic business unit collects information regarding the customers, uses this information to formulate strategies necessary to obtain customer satisfaction and implements them to achieve the end goal of customer satisfaction.

2.2.2.5 Customer orientation perspective

Deshpande *et al.,* (1993) propounded the customer orientation perspective, wherein they viewed market orientation as a set of crossfunctional processes, which has at its central core customer orientation as an inherent fundamental aspect of corporate culture. They did not include competitor orientation in their concept.

Becker & Homburg (1999) opined that, from a conceptual point of view, there are three different perspectives of market orientation, which include Kohli & Jaworski's (1990) behavioural perspective, Narver & Slater's (1990) cultural perspective and Becker & Homburg's (1999) system-based perspective. In the system based perspective, market orientation is looked upon as the system based management, designed to promote the firm's customer and competitor orientations. They divide the management system into 5 subsystems namely: Organization, information, planning, controlling, and human resources system.

2.2.2.6 Synthesis Perspective

Lafferty and Hult (2001) proposed a synthesis perspective by combining together all the similarities of the other four perspectives. The four components of the synthesis perspective therefore are, customer emphasis, shared knowledge (information), interfunctional coordination of marketing activities

and relationships, and responsiveness to market activities by taking the appropriate action.

Table 2.1 - Summary of the market orientation literature

Perspective and year	Representative references
Decision-Making Process	Shapiro (1988)
(1988)	Glazer (1991)
	Glazer and Weiss (1993)
Market Intelligence (1990)	Kohli and Jaworski (1990)
	Hooley *et al.*, (1990)
	Hart and Diamantopoulos (1993)
	Jaworski and Kohli (1993)
	Kohli *et al.*, (1993)
	Cadogan,and Diamantopoulos (1995)
	Jaworski and Kohli (1996)
	Maltz and Kohli (1996)
	Selnes *et al.*, (1996)
	Avlonitis and Gounaris (1997)
	Cadogan *et al.*, (1998)
Culturally Based Behaviors	Narver and Slater (1990)
(1990)	Slater and Narver (1994a)
	Siguaw *et al.*, (1994)
	Cadogan, and Diamantopoulos (1995)
	Narver and Slater (1998)
	Narver *et al.*, (1998)
	Han *et al.*, (1998)
Strategic Marketing Focus (1992)	Ruekert (1992)
	Webster (1992)
	Day (1994a)
	Day and Nedungadi (1994)
	Gatignon and Xuereb (1997)
	Morgan and Strong (1998)
Customer Orientation	Deshpande *et al.*, (1993)
(1993)	Siguaw *et al.*, (1994)
	Deshpande and Farley (1998a)
	Deshpande and Farley (1998b)

Source: Lafferty & Hult (2001).

Nora Lado & Albert Maydeu-Olivares (2000) have attempted to summarize these four different theoretical concepts of market orientation by listing their respective components, as shown in the Table.2.2.

Farrell (2002) developed an alternative measure for measuring market orientation by combining elements from the MARKOR and MKTOR scales and demonstrated empirically the simplicity of constructing 'new' measures based on synthesizing existing measures of the same construct. However, he cautions against the random use of measures without reference to appropriate theory and conceptualisation.

Zebal (2003) also proposed another synthesis model, which consists of the views from all the five perspectives that have been agreed upon by all of them. He deemed that the marketing concept and the implementation issues are the "initial issues" of market orientation and the required conditions inclusive of the antecedents, factors, barriers and predictors and the outcomes are the "vital issues".

Table 2.2 - Summary of the theoretical concepts of market orientation.

Authors	Components of market orientation
Kohli and Jaworski (1990)	Generation of market intelligence Dissemination of market intelligence Entire organization's capacity to respond.
Narver and Slater (1990)	Customer oriented Competitor oriented Inter-functional coordination
Deng and Dart (1994)	Customer oriented Competitor oriented Inter-functional coordination Profit oriented
Lambin (1996) And Lado, Maydeu-Olivares and Rivera (1998)	Information gathering and analysis on- Final customers Distributors Competitors Environment Inter-functional coordination Strategic actions on: Final customers Distributors Competitors Environment

Source: Adopted from Nora Lado & Albert Maydeu-Olivares (2000) and extended.

Cadogan & Diamantopoulos (1995) observed that the behavioural and cultural perspectives have conceptual and operational overlaps in nearly all dimensions. The basic underlying themes in all the different perspectives still remain customer focus, intelligence collection and dissemination and competitor orientation. Even though the different perspectives put forward different views of the market orientation framework, in reality they are all not so much different from each other. There is a fair amount of overlap as well (Helfert *et al.*,2001).

Day (1994b) observed that firms can become more market–oriented by developing certain distinctive competencies and capabilities. This perception underlines the relationship between market orientation and the resource based view (RBV) of the firm, which are respectively the outside-in (Butz and Goodstein, 1996; Deshpande *et al.*, 1993; Deshpande and Webster Jr., 1989; Drucker, 1973; Shapiro, 1977; Shapiro, 1988; Slater and Narver, 1995) and the inside-out views of a firm (Leonard and Sasser, 1982; Garvin, 1983; Comaris and Kleiner, 1995). Resource-based theory focuses on how firms can best achieve sustainable competitive advantages, and holds that it depends on their ability to develop distinctive resources and capabilities (Conner, 1991) to create and apply value-enhancing strategies (Barney, 1991; Amit and Schoemaker, 1993; Peteraf, 1993).

The difference in opinions of the proponents of these two views has been acknowledged as contributing to the difficulty in the operationalisation of a market orientation (Burns and Woodruff, 1992; Day, 1999c). However, recent literature has revealed empirical evidence to the effect that the market orientation–business performance relationship is strengthened when complemented by the firm's internal resources. Menguc and Auh (2006) have evolved a conceptual model which explains how market orientation can be transformed into dynamic capability when complemented by constructs like innovativeness.

Several studies have focused on the positive relationship between market orientation and innovation (Atuahene-Gima, 1995, 1996; Gatignon and Xuereb, 1997; Han *et al.*, 1998; Hurley and Hult, 1998). Hurley and Hult (1998) have explicitly provided a theoretical framework linking market orientation, business performance and innovation.

Table 2.3. Summary of empirical research on the relationship between market orientation (MO) and business performance (BP)

AUTHOR(S)	COUNTRY	RELATION BETWEEN MO-BP
Kohli & Jaworski, 1990	USA	Positive
Narver & Slater, 1990	USA	Positive
Ruekert, 1992	USA	Positive
Jaworski & Kohli, 1993	USA	Positive
Kohli *et al.*, 1993	USA	Positive
Diamantopoulos & Hart, 1993	UK	Mixed results
Deshpande *et al.*, 1993	Japan	Positive Customer Orientation- BP
Slater & Narver, 1994a	USA	Positive
Deng & Dart, 1994	Canada	Positive
Van Bruggen & Smidts, 1995	The Netherlands	Positive
Greenley, 1995	UK	Positive
Atuahene-Gima, 1995, 1996	Australia	MO is an important factor in new products success.
Lambin, 1996	Belgium	Positive
Fritz, 1996	Germany	Positive
Pitt *et al.*, 1996	UK, Malta	Positive
Selnes *et al.*, 1996	USA, Scandinavia	Positive
Pelham & Wilson, 1996	USA	Positive
Balakrishnan (1996)	139 firms in single industry study: machine tools.	Positive
Bhuian, 1997	Saudi Arabia	Non-significant
Gatignon & Xuereb, 1997	USA	Different strategic orientations have different impact on innovation performance, according to market characteristics.
Avlonitis & Gounaris, 1997	Greece	Positive
Greenley & Foxall, 1997, 1998	UK	Multiple stakeholder orientation-BP Moderated by external

		environment
Gray *et al.*, 1998	New Zealand	Positive
Kumar *et al.*, 1998	USA	Positive
Appiah-adu, 1998	Ghana	Positive
Deshpande & Farley, 1998	USA, EU	Positive
Han *et al.*, 1998	USA	Positive relation MO-Innovation- BP
Caruana *et al.*, 1999	UK	Non-significant
Sargeant & Mohamad, 1999	UK	Non-significant relation MO-BP
Baker & Sinkula, 1999	USA	Positive
Pelham, 2000	USA	Positive
Pulendran *et al.*, 2000	Australia	Positive
Subramaniam & Gopalakrishna, 2001	India	Positive
Cadogan *et al.*, 2002	Finland	Positive relation Export MO-BP
Matsuno *et al.*, 2002		Positive
Nargundkar & Shergill,2003	India	Positive
Kirca *et al.*, 2005	Meta-analytic studies involving several countries	Positive

Source: Adopted from Lado & Maydeu-Olivares (2000) and extended

Several studies have tried to evolve a synthesis approach of the MARKOR and MKTOR approaches. Such a synthesis was attempted by Deng and Dart (1994) who propounded that market orietnation was the implementation of the marketing concept. Lambin (1996) and Lado *et al.*, (1998) extend the market orientation chain to include the distribution channels, in addition to the customers, as they are the first direct customers of the firm (Day, 1992), and are the source through which the products or services reach the final customer (Whiteley, 1991).

A growing body of empirical research using various measures have analyzed the consequences of a market orientation on a wide variety of organizational

issues, including new product success (Slater and Narver, 1994a; Atuahene-Gima, 1995), innovation (Edgett *et al.*, 1992; Brown and Eisenhardt, 1995; Atuahene-Gima, 1996; Han *et al.*, 1998; Lukas and Ferrell, 2000; Vazquez *et al.*, 2001), customer service (Narver and Slater, 1993), employee commitment (Jaworski and Kohli, 1993), learning orientation (Slater and Narver, 1995; Hurley and Hult, 1998; Morgan *et al.*, 1998; Farrell, 2000), channel relationships (Siguaw *et al.*,1998), ROA (Slater and Narver, 1994a), profitability (Narver and Slater, 1990; Ruekert, 1992), human resource management and internal customer orientation (Harris and Ogbonna, 2001; Slater and Narver, 1998; Conduit and Mavondo, 2001), growth (Slater and Narver, 1994b), strategy (Ruekert, 1992; Hunt and Morgan, 1995; Slater and Narver, 1996; Morgan and Strong, 1998; Vazquez *et al.*, 2001), sales force behaviour (Siguaw *et al.*, 1994; Langerak, 2001), market share (Deshpande, 1999) and organisation culture (Deshpande *et al.*, 1993; Homberg and Pflesser 2000; Singh, 2004).

The link between market orientation and export performance of firms was firmly established by Hooley & Newcomb (1983), Greenley & Foxall (1998), Cadogan *et al.*, (1998), Thirkell and Dau (1998), Kwon & Hu (2000), Cadogan *et al.*, (2001) and Rose & Shoham (2002). Cadogan *et al.*, (2002) studied the export market orientation of firms and developed a cross-cultural validated export market orientation scale, using a combination of both the Narver and Slater (1990) and the Jaworski and Kohli (1993) scales including additional issues related to export market orientation. They studied 198 UK and 106 Dutch exporting firms and concluded that exporting firms need to be market-oriented and should therefore strive to improve export coordination. A major assumption was that exporting firms were successful in the domestic markets. They also introduced three antecedents to export market orientation or EMO

activities, namely export experience, export dependence and export coordination.

Cravens *et al.,* (1998) while presenting examples of firms that adopted market orientation successfully, assert that market orientation facilitates customer satisfaction and helps develop competitive advantages, as it fosters an environment wherein the firm listens to, understands and responds to the market and the competition. The ability to do so helps to keep firms in touch with the customers, which can then be profitably utilized to bring in better customer oriented products and services.

Kara *et al.,* (2005) are of the view that market orientation equips an organisation with a clarity of vision wherein the firm has a better understanding of its customers, competitors and environments, which helps it to achieve superior organisation performance.

Several studies have also put forward the view that market orientation is actually not limited to a firm alone, instead it involves a network of firms, and should be examined in the context of inter-firm relationships (Siguaw *et al.,* 1998; Baker *et al.,* 1999; Elg, 2001; Helfert *et al.,* 2002, Renko *et al.,* 2005). Helfert *et al.,* (2001) explore the notion of market orientation with particular focus on inter-organisational relationships (business-to-business markets). They argue that relationships are important and that the overall market orientation of firms needs to be translated to a relationship level in order to be effective.

The majority of the market orientation studies have been conducted in the Western countries. Some of the literature pertaining to the non-Western countries include - Ghana (Appiah-Adu and Singh, 1998), Hong Kong (Au and

Tse, 1995; Ngai and Ellis, 1998; Tse 1998), India (Subramanian and Gopalakrishna, 2001; Nargundkar and Shergill, 2003), Japan (Deshpande *et al.*, 1993), Saudi Arabia (Bhuian, 1997, 1998), Taiwan (Horng and Cheng-Hsui, 1998), Thailand (Powpaka, 1998; Grewal and Tansuhaj, 2001), Turkey (Pinar *et al.*, 2003) and Ukraine (Akimova, 2000).

In the Indian setting, the studies by Subramanian and Gopalakrishna (2001) and Nargundkar and Shergill (2003) throw light on the market orientation-business performance relationship, and declared it to be positive. The number of respondents in the above two studies were 162 and 170 and included a variety of firms, from FMCG firms to service firms. The first study was modelled on the Narver and Slater scale, while the second study employed a mix of the two scales – the Kohli, Jaworski and Kumar (1993) study and the Narver and Slater (1990) scale. Nargundkar and Shergill (2003) additionally studied the marketing innovation construct as a performance driver in addition to market orientation.

Aggarwal and Singh (2004), studied the market orientation in 24 Indian firms based on its antecedents and determinants. They found that the firms exhibited some key features of market orientation, while not holding true to others. Another interesting result of the study was that, the firms demonstrated a fine commitment to intelligence gathering and dissemination, but ignored responding to the intelligence.

Brown and Peterson (1993) espoused the valuable role of meta-analytic studies in studying the market orientation framework, its impact on business performance and the moderator factors affecting it. Following this, Kirca *et al.*, (2005) conducted meta-analytic review of market orientation and its antecedents and consequences. The meta-analysis confirmed the positive impact of market orientation (MO) on business performance (BP) and

establishes that although its implementation may require utilization of resources, the profits obtained are over and above the costs involved in its implementation. They also analysed the MO-BP relationship in the context of cultural dimensions using Hofstede's (2001) dimensions of national culture (i.e. power distance, uncertainty avoidance, individualism, masculinity, and long-term orientation) and found that the MO-BP relationship is more positive in countries that have low values for uncertainty avoidance and power distance respectively.

A quantitative assessment to find out the impact of market orientation on business performance was done by Shoham *et al.,* (2005), using a meta-analysis. They studied the direct, indirect and total impact of market orientation on performance and found them to be significant. They clarified that, on the basis of their meta-analysis, the variance was affected by the geographic location of the study and the performance measures used, although it remained unaffected by the scale used. They found that the managers in less developed countries could expect higher payoffs.

Yoon and Lee (2005) examined the relationship between market oriented culture and marketing strategy making process, and empirically found that market oriented culture has both direct and indirect effect on the firm performance, the indirect effect being through the marketing strategy making process.

Another meta-analysis conducted by Paul (2006) using 56 studies (58 samples) from 28 countries reveals the generic nature of market orientation as a determinant of firm performance. The quantitative analysis showed stronger effects in large, mature markets. The meta-analysis supported the MARKOR scale developed by Kohli *et al.,* (1993).

Using a sample of 153 small-sized service retailers in the U.S., Kara *et al.*, (2005) examined the effect of market orientation on business performance, and established the universal applicability of the MARKOR scale in different settings.

Heiens (2000) is of the opinion that the market orientation concept encompasses a range of strategic approaches that a firm may adopt in order to align itself to its environment. He views market orientation as a two-dimensional phenomenon, which is a balance of two major factors, customer orientation and competitor orientation, following Narver and Slater's (1990) view. Accordingly, the firm may adopt several different strategic postures or market orientation profiles, based on their emphasis on these two factors. He classified firms as strategically integrated, customer pre-occupied, marketing warriors, and strategically inept.

The market orientation-business performance relationship has thus been tested in a number of different settings and countries and has consistently yielded positive results, most of the time, except for a few occasions when non - significant or even negative effects have been reported (Bhuian 1997; Agarwal, *et al.*, 2003; Sandvik and Sandvik 2003).

CHAPTER 3

CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESES

3.1 Introduction

This chapter details the conceptual framework and proposes the model drawn from literature review. This is followed by the major hypotheses and the sub-hypotheses addressed.

3.2 Conceptual Framework

The proposition that market orientation improves business performance has been borne out by previous studies (Kohli and Jaworski, 1990; Narver and Slater, 1990; Deshpande & Webster, 1989; Becker & Homburg, 1999; Deng and Dart, 1994; Greenley, 1995; Deng & Dart, 1994; Atuahene-Gima, 1996; Pelham and Wilson, 1996; Farrell & Oczkowski, 1997 etc). Subsequently, it has also been empirically proved that several environmental factors moderate the market orientation- business performance relationship (Kohli and Jaworski, 1990; Narver and Slater, 1990; Appiah-Adu, 1997; Diamantopoulos and Hart, 1993; Grewal and Tansujah, 2001). They include market turbulence, technological turbulence and competitive intensity (Kohli and Jaworski, 1990; Jaworski and Kohli, 1993). The market orientation construct, as described by Kohli and Jaworski (1990) consists of three components namely, intelligence

generation, intelligence dissemination and responsiveness. Several antecedents like top management emphasis, management risk aversion, interdepartmental connectedness, interdepartmental conflict, formalisation, centralisation and reward system orientation are believed to affect the market orientation construct (Kohli and Jaworski, 1990).

This study is modelled along the lines of Kohli and Jaworski's (1990) and Jaworski and Kohli's (1993) view of market orientation. Kohli and Jaworski's view is one of the most widely accepted measures of market orientation (Farrell and Oczkowski, 1997). Originally a 32 item scale, they later reduced the number of items to 20, during development. Compared to Narver and Slater (1990), they show greater emphasis on customers, than competitors.

Some of the studies which have used the MARKOR scale developed by Kohli and Jaworski (1990) include Hooley *et al.*, (1990), Hart and Diamantopoulos (1993), Cadogan and Diamantopoulos (1995), Maltz and Kohli (1996), Selnes *et al.*, (1996), Avlonitis and Gounaris (1997), Cadogan *et al.*, (1998), Pulendran *et al.*, (2000), Paul (2006) etc.

3.2.1 Model Specification

Following the Jaworski and Kohli's (1993) view of market orientation, this thesis proposes that the market orientation model consists of four major components,

1. The Antecedents,
2. The Market orientation construct,
3. The Environmental Moderators, which affect the MO-BP relationship, and
4. The Consequences.

The comprehensive framework is as shown in the figure. 3.1.

3.2.1.1 The Market Orientation Construct

At the core of the framework is the market orientation construct, which consists of three sub-components, namely, intelligence generation, intelligence dissemination and intelligence responsiveness (Kohli and Jaworski, 1990).

3.2.1.1.1 Intelligence Generation

Market orientation thus involves setting up a intelligence system, whereby the firm regularly and systematically collects marketing information regarding changing consumer preferences, knowledge about competitors, government regulations, technology, and other environmental forces. Houston (1986)

stresses on the need to gather information regarding the consumers future needs as well, in addition to their present needs. According to Webster (1988) intelligence generation is not the exclusive function of the marketing department. He concludes that it is a collective effort and the whole organisation is responsible for the collection of information.

3.2.1.1.2 Intelligence Dissemination

Once the intelligence is gathered, the need to disseminate it to all departments in the firm is paramount. The changing trends in consumer preferences, for example, need to be translated into product innovation by the R&D division, which then necessitates a change in the production system, changes in the marketing system, allocation of resources by the finance wing, purchase of raw material, reallocation of distribution channels and so on. Information dissemination is also necessary for all the departments in a firm to remain abreast of all new developments in the principal markets the firm serves. This helps in quicker transitions and faster responses to the market changes.

3.2.1.1.3 Responsiveness

Responsiveness is the translation of the firm's reaction to the market information collected and internally circulated throughout the firm. The

process of information generation and dissemination remains incomplete without responding to the in formation received (Kohli and Jaworski, 1990). In today's changing market conditions, firms need to be on their toes to respond immediately to the market signs received by it, as their survival may depend on how fast they are able to respond to the customers' demands.

3.2.1.2 Antecedents to Market Orientation

The antecedents or the causal factors, which influence the degree of market orientation in a firm, are grouped under three major sub-components. They include top management characteristics, interdepartmental characteristics and organisational characteristics.

3.2.1.2.1 Top Management Characteristics

The top management characteristics are represented by the top management emphasis for implementing market orientation and the top management risk aversion, which explores the management's propensity for taking risks.

3.2.1.2.1.1 Top Management Commitment

For implementing market orientation in a firm, it is absolutely vital that the management be committed to the change, in the form of full support and guidance, as well as commitment of resources to the effort. Without the

wholehearted involvement of the top management, the firm will not be able to implement market orientation successfully (Kohli and Jaworski, 1990).

3.2.1.2.1.2 Top Management Risk Aversion

This factor represents the attitude of the top management to take risks in the form of innovative changes etc to changing market conditions. The more risk aversive a manager is, the lower will be the market orientation, and the firm may not be able to cope up with the changing market dynamics.

3.2.1.2.2 Interdepartmental Characteristics

These are the formal and informal interactions and relationships among an organisation's departments Kohli & Jaworski (1990). The interdepartmental characteristics include the sub-components interdepartmental connectedness and interdepartmental conflict.

3.2.1.2.2.1 Interdepartmental Connectedness

Kohli & Jaworski (1990) contend that connectedness between departments helps in faster dissemination of intelligence and results in quicker response to intelligence (Cronbach *et al.*, 1981). Managers should promote connectedness to ensure the streamlined movement of market information and for faster decision-making.

3.2.1.2.2.2 Interdepartmental Conflict

Conflict between departments lowers efficiency, speed of information flow, creates bad feeling and disharmony, affects working relations and thereby the working process. Managers should seek to minimize this by promoting interdepartmental meetings, informal communication lines etc.

3.2.1.2.3 Organisational Characteristics

Under this factor come three sub-components, namely formalisation, centralisation and reward system orientation.

3.2.1.2.3.1 Formalisation

Hall *et al.*, (1967) define formalisation as the degree to which rules define roles, authority relations, communications, norms and sanctions, and procedures. Formalisation has been found to adversely affect information utilization and therefore slows down the response to market intelligence. This usually occurs in big organizations with formal settings, wherein the information has to pass through the numerous lines of authority.

3.2.1.2.3.2 Centralisation

Centralisation is defined as the delegation of decision-making authority throughout an organisation and the extent of participation by organisational

members in decision making (Aiken and Hage, 1968). Centralisation is also considered to hinder information utilization.(Deshpande and Zaltman, 1982; Hage and Aiken, 1970).

3.2.1.2.3.3 Reward System Orientation

Reward systems are believed to motivate employees to perform well. Managers can use rewards to reinforce desired behaviour(Anderson & Chambers, 1985). The evaluation criteria for rewards should be focused on long-term behaviour, otherwise it may influence employees to set their sights on short-term goals (Webster, 1988).

3.2.1.3 Environmental Moderators

Several environmental factors are believed to moderate the relationship between market orientation (MO) and business performance (BP). Jaworski and Kohli (1993) conceptualized three environmental moderators that might mediate the market orientation-business performance relationship. They include market turbulence, technological turbulence and competitive intensity. Other moderators, which have been studied less commonly, include supplier power, buyer power, market growth, demand uncertainty and extent of entry barriers (Kirca *et al.*, 2005). This study focuses on the three moderators, as

proposed by Jaworski and Kohli (1993) namely, market turbulence, technological turbulence and competitive intensity. While market turbulence and competitive intensity are expected to enhance the MO-BP relationship, technological turbulence is believed to diminish the same.

3.2.1.4 Business Performance

The fourth component of the market orientation model is the consequences or the business performance. It has been established by extant literature that business performance of a firm is improved by adopting market-oriented principles. The business performance component has been classified into three sub-components, namely economic performance, customer consequences and employee consequences. The latter two consequences are otherwise classified as non-economic performance in contrast to the economic performance.

The economic business performance includes five subjective financial indicators such as ROI, sales growth relative to competitors, overall performance, overall performance relative to competitors and overall performance related to what was expected.

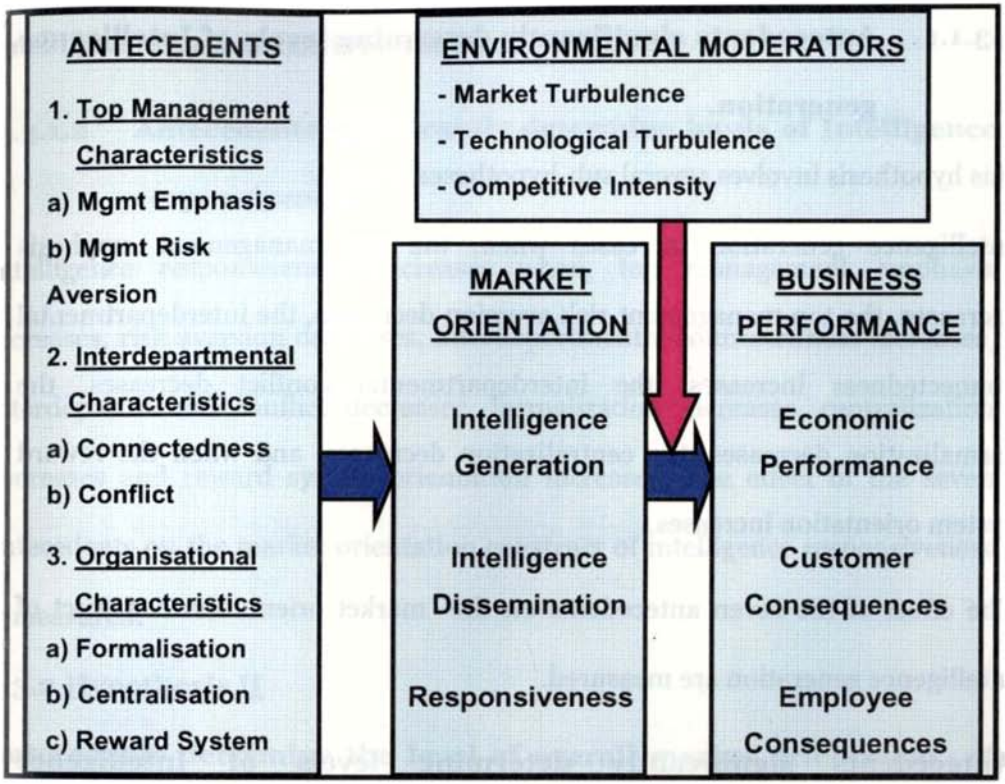
The non-economic performance on the other hand was a function of sixteen subjective measures, which included scales on the customer satisfaction, repeat

purchase frequency, employee consequences, equity measures, environmental factors affecting the job, success in introduction of new products, relative trend of product pricing, material usage efficiency, labour efficiency, capital utilization efficiency, environment protection awareness and market expansion.

This is in line with the measures used by most market orientation studies.

The market orientation conceptual framework is as represented in the Fig.3.1.

Fig.3.1 Market Orientation Framework



3.3 Research Hypotheses

Four main hypotheses are tested in this thesis. They yield answers to the research questions addressed in Chapter 1. The hypotheses are as detailed below:

3.3.1 Hypothesis I

3.3.1.1 Antecedents significantly determine levels of Intelligence generation.

This hypothesis involves several sub-hypotheses, namely:

Intelligence generation increases when, the top management emphasis increases, the top management risk aversion decreases, the interdepartmental connectedness increases, the interdepartmental conflict decreases, the formalization decreases, the centralization decreases, and when the reward system orientation increases.

The effect of the seven antecedents on the market orientation construct of intelligence generation are measured.

Antecedents significantly determine levels of Intelligence dissemination

Intelligence dissemination increases when top management emphasis increases, top management risk aversion decreases, interdepartmental connectedness increases, interdepartmental conflict decreases, formalization decreases, centralization decreases and reward system orientation increases.

The effect of the seven antecedents on the market orientation construct of intelligence dissemination is measured.

3.3.1.2 Antecedents significantly determine levels of Intelligence responsiveness

Intelligence responsiveness increases when, top management emphasis increases, risk aversion decreases, interdepartmental connectedness increases, interdepartmental conflict decreases, formalization increases, centralization decreases and reward system orientation increases. The effect of the seven antecedents on the market orientation construct of intelligence responsiveness is measured.

3.3.2 Hypothesis II

Antecedents determine the level of overall market orientation of firms.

Market Orientation increases when, top management emphasis increases, risk aversion decreases, interdepartmental connectedness increases, interdepartmental conflict decreases, formalization increases, centralization decreases and reward system orientation increases. The effect of the seven antecedents on the overall market orientation construct is measured.

3.3.3 Hypothesis III

Market orientation significantly determines level of Business performance.

This main hypothesis has several sub-hypotheses, which measure the effect of market orientation on the overall business performance, economic performance, non-economic performance, customer consequences, employee consequences, customer retention consequences, new product introduction and market expansion.

3.3.3.1 Market orientation significantly determines level of Overall Business performance.

3.3.3.2 Market orientation significantly determines level of Economic Performance and Non-Economic Performance.

3.3.3.3 Market orientation significantly determines level of Customer Consequences.

3.3.3.4 Market orientation significantly determines level of Employee Consequences.

3.3.3.5 Market orientation significantly determines level of Customer Retention Consequences.

3.3.3.6 Market Orientation Significantly determines level of Introduction of new or modified products.

3.3.3.7 Market orientation significantly determines level of Market expansion.

3.3.4 Hypothesis IV

The market orientation-business performance relationship is moderated by market turbulence, technological turbulence and competitive intensity.

This is the final hypothesis and examines the effect of the three moderators on the MO-BP relationship.

3.4 Conclusion

This chapter presents the conceptual framework for the market orientation in Indian seafood processing firms. The four main components of the framework are explained by means of the illustrated model. Following this, the research hypotheses are outlined, along with the sub hypotheses.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 Introduction

This chapter seeks to contribute to the study by establishing an understanding of the research design and methodology used to collect and analyse the data. It details the research process design and methodology employed to collect relevant data, the methods of data collection, the survey instrument and scales used, the data analysis tools and the assumptions of regression analyses.

This study involves the use of social science research in order to find logical answers to the research questions. According to Babbie (1986) there are several uses of such a research type, namely exploration, description and explanation. In this study, firms' behavioural and structural aspects are explored vis-à-vis their degree of implementation of market orientation. Then follows the description of the results of the hypotheses formulated, and the explanation of the results.

According to Saracevic and Wood (1981), the most common research methods include surveys, focus groups, observations, record analysis and experimentation.

4.2 Research Design

For the successful and efficient conduct of any research, the most important step, following the formulation of the topic of research and the objectives to be addressed, is the creation of a research design. According to Aaker, Kumar & Day (1998), a research design is the detailed blueprint used to guide a research study towards its objectives. Burns & Bush (2002) define a research design as "...a set of advance decisions that makes up the master plan specifying the methods and procedures for collecting and analyzing the needed information".

The research design in this study employs the use of a cross sectional design. In the social sciences, cross-sectional observations are the most commonly used form of research design for assessing the determinants of behaviour (Coleman 1981; Davies 1994; Blossfeld and Rohwer 1995). The cross sectional design provides a snapshot view of a given situation in a given point of time (Malhotra *et al.*, 1996; Kumar, 1996). This research design is chosen over the longitudinal type of research approach because they are fairly quick, easy and cheap to perform. Cross sectional studies are used as they help in inferring the net effect of all changes occurring at a given point of time (Firebaugh, 1997) and also to infer prevalence and causation (Mann, 2003).

Moreover, the market orientation literature reveals that most of the studies employ a cross-sectional design (Kohli and Jaworski, 1990; Narver and Slater, 1990; Greenley, 1995; Pelham, 1997; Appiah-Adu, 1998; Bhuian 1998; Han *et al.*, 1998; Kumar *et al.*, 1998; Pulendran *et al.*, 2000; Subramanian and Gopalakrishna, 2001 etc).

Cook & Reichardt (1979) and Hussey & Hussey (1997) support the view that research models are vital for the systematic conduct of a research process. Sekaran (1992) developed a simple yet comprehensive research design model which systematically adopts a step by step deductive approach to conducting a research study. Sarantakos (1993) opines that research design evolves from the research models, which is based on the assumption that the research process consists of a systematic framework of closely inter-related steps, whose success depends on completion of the preceding steps. Yin (1994) puts forward five components that make up a practical research design. They include the research questions, research propositions, units of analysis, the logic that links data and propositions and the criteria for interpreting the results.

4.3 Research Approach

One of the major decisions related to the research process following the selection of the research design, is the choice of research approach. Consistent

to market orientation literature (Kohli and Jaworski, 1990; Narver and Slater, 1990; Greenley, 1995; Kumar *et al.*, 1998; Pulendran *et al.*, 2000 etc), a causal research approach is used, which involves hypothesis testing of relationships and their quantification (Aaker *et al.*, 1998). Causal research is most appropriate when investigating the functional relationship between the causal factors and the effect predicted on the performance variable (Hair *et al.*, 2003).

4.4 Data Collection Methods

The data collection methods included collection of both primary and secondary data. Primary data was collected by survey method from the various seafood exporting firms in India, while secondary data was collected from the various government fisheries institutes and research bodies like the Marine Products Export Development Authority (MPEDA), the Export Inspection Agency (EIA), the Central Marine Fisheries Research Institute (CMFRI), and the Central Institute of Fisheries Technology (CIFT), libraries like the Central Library of the Cochin University of Science and Technology (CUSAT), the Marine Sciences Library, CUSAT, and the School of Management Studies Library, CUSAT, trade associations like the Seafood Exporters Association, India (SEAI) and the internet.

The research method employed the use of quantitative data analysis, which involved the testing of hypotheses, identifying causality and replicability (Walker, 1985; Hart, 1987), using survey method. The survey method was carried out using questionnaire as survey instrument. The advantage of a quantitative method is that it is possible to measure the reactions of a great many people to a limited set of questions, thus facilitating comparison and statistical aggregation of the data.

In their studies, Kohli and Jaworski (1990), Narver and Slater (1990), Greenley (1995), Appiah-Adu (1998), Bhuian (1998), Han *et al.*, (1998) and Kumar *et al.*, (1998) used the mail survey, while Diamantopoulos and Hart (1993) used the personal interview method. This study employed both mail survey and personal interview method for gathering data.

4.5 Sampling Frame

The sampling frame consists of the list of processing (freezing) plants included in the Indian Marine Products Exporters' Directory (Anon, 2004c), published by the Marine Products Export Development Authority. The comprehensive list of exporters includes a total of 356 exporters (Anon, 2004c). The small size

of the population called for the conduct of a census, therefore structured questionnaire was sent to all of these 356 plants.

To reduce non response, several steps were taken as outlined below (Aaker and Day, 1980; Mangione, 1995):

1. All the firms were notified over telephone about the mail survey and their assistance was solicited, a week before the mailing of the questionnaire. The meta-analysis conducted by Chiu and Brennan (1990) reveals that use of preliminary notification substantially increases mail survey response rates.
2. A covering letter addressed to the Chief Executive Officer was enclosed requesting him to fill in the questionnaire and return it as soon as possible. The topic and purpose of the study were detailed and the confidentiality of the data which would be collected from the firm, was assured. The address and the telephone number of the researcher was also given, for facilitating answering of queries.
3. A letter from the guide was also enclosed, introducing the researcher and her work. The significance of the study was explained, and the help of the CEO for data gathering was solicited. The confidential nature of the survey results was emphasized.

4. The questionnaire was designed in a easy to understand respondent-friendly manner.
5. A self addressed stamped envelope was also sent along with the questionnaire.
6. The participants were offered a summary of the survey results, provided they participated.
7. After a period of two weeks, the firms, which had not returned the filled questionnaire, were again contacted over telephone and were reminded to send the answered questionnaire as soon as possible (Dillman, 1978).
8. After a month, the non-responding firms were contacted by e-mails, to remind them about the questionnaire. Scott (1961), Linsky (1975), Dillman (1991) and Brennan (2004) vouch for the efficacy of allowing more time and sending two reminders to improve the response rate in surveys. Using e-mails were also cost effective than sending out reminders by post. In case they were not willing to participate in the survey, the reasons for their non-cooperation was noted down.

Out of the 356 firms, 120 firms responded and returned the filled questionnaires. Out of these, 12 questionnaires were incomplete and had to be

discarded, thus yielding a sample size of 108. This represented a total response rate of 30.34%.

Existing literature shows that, for similar studies, the response rate falls within a range of 11% to 84%. Besides, in research designs in which cross-section samples are used (e.g., Hansen, 1980; Dubinsky and Ingram, 1982; Kohli and Jaworski, 1990), response rates ranging from 12% to 20% are generally considered acceptable.

To test for non-response bias, the firms which had not participated in the survey were contacted and it was learnt that the reasons for their non-response were due to lack of time and due to the length of the questionnaire (11 pages). The table 4.6 gives a detailed list of the existing market orientation literature, the methodology adopted, their sample size, response rate and the analytical technique used.

Table 4.5 .1 Research Methodology of Existing Market Orientation Literature

Study	Methodology Adopted	Sample Size	Response Rate	Analytical Technique
Narver & Slater, 1990	Mail Survey	140	84%	RA
Jaworski & Kohli, 1993	Mail Survey	1st = 222 2nd =230	70-79.6%	RA
Diamantopoulos & Hart, 1993	Personal Interview	87	45.7%	RA
Greenley, 1995	Mail Survey	240	28%	RA
Pelham, 1997	Mail Survey	160	13.3%	SEM
Appiah-Adu, 1998	Mail Survey	74	37%	RA
Bhuian 1998	Mail Survey	115	77%	RA / SEM
Han *et al.*, 1998	Mail Survey	134	59.5%	RA
Kumar *et al.*, 1998	Mail Survey	159	28.5%	RA
Hurley & Hult, 1998	Mail Survey	9648	48%	RA
Conduit & Mavondo, 1998	Mail Survey	233	58%	SEM
Pulendran *et al.*, 2000	Mail Survey	157	31%	RA
Kwon & Hu, 2000	Mail Survey	341	56.7%	RA
Shoham & Rose, 2001	Mail Survey	101	40.4%	RA
Kahn, 2001	Mail Survey	156	17%	RA
Lonial & Raju, 2001	Mail Survey	293	24%	SEM
Subramanian and Gopalakrishna (2001)	Mail Survey	162	32.4%	RA
Matsuno *et al.*, 2002	Mail Survey	364	38.76%	SEM
Carbonell & Rodriguez, 2006	Mail Survey	178	11%	SEM

Source: Adopted from Ngansathil, 2001 and extended.

RA = Regression Analysis, SEM= Structured Equational Modelling.

A total of 108 firms responded to the survey, and returned the usable filled-in questionnaire. Extant literature as detailed above shows that the sample size is adequate. The table below shows the distribution of the processing plants in India, which participated in the survey.

Table 4.5.2. Distribution of the surveyed Indian seafood processing plants.

State in which the firm is located	Number of plants surveyed	Percentage of plants surveyed
Kerala	69	63.89%
Tamil Nadu	10	9.26%
Andhra Pradesh	17	15.74%
Karnataka	1	0.93%
Maharashtra	4	3.7%
Gujarat	7	6.48%
Total	108	100.0%

4.6 Survey Instrument

The questionnaire was designed to be an SPSS-friendly one and the questions were coded so that the responses obtained could be quantified to obtain tangible results (Oppenheim, 1992). The questions dealt with the marketing practices in the firms and the chief executives of the firms were requested to fill in the questionnaires themselves or hand it over to persons who were knowledgeable about the export marketing operations, in charge of the daily marketing operations in the firms and were the ones who formulated the marketing policies and strategies. The questionnaire was divided into 5

sections and included questions on the respondent's experience and knowledge, the firms' basic information regarding the business, revenue, manpower, products, sister concerns, reasons for venturing into this business, competitive advantages, strategies to attract customers, market orientation scale as prescribed by Jaworski & Kohli (1993) and, respondent details, performance indicators and finally marketing techniques and future plans.

4.7 Operationalisation of variables

The items included in the survey are presented in Appendix A. Wherever possible, constructs were measured using previously developed instruments and multiple indicator items to strengthen validity. Items were measured with a five-point Likert scale ranging from 1=strongly disagree to 5 = strongly agree. The mean of scores over all questions provided the composite score for each variable.

4.8 Data Analysis

The SPSS (version 13.0) was used to conduct multivariate analyses of the data obtained. The data analytic tools include the descriptive analysis, correlation and regression analyses. The stepwise regression analysis was used for the major data analysis.

4.8.1 Multiple Regression analysis

Multiple regression analysis measures the relationship between several independent variables and a dependent variable. Regression quantifies the variance by which the independent variables affect the dependent variable. The simple regression is measured by the equation: $y = a + bx$, where y is the dependent variable, x is the independent variable and a is a constant.

The multiple regression relationship is represented by the equation:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + ... + b_nx_n$$

The relationship is assumed to be always linear. Often there will be many possible explanatory variables in the data set and, by using a stepwise regression process, the explanatory variables can be considered one at a time. The one that explains most variation in the dependent variable will be added to the model at each step. The process will stop when the addition of an extra variable will make no significant improvement in the amount of variation explained. The amount of variation in the dependent variable that is accounted for by variation in the predictor variables is measured by the value of the coefficient of determination, often called adjusted R^2. The closer this is to 1 the better, because if R^2 adjusted is 1 then the regression model is accounting for all the variation in the outcome variable.

4.8.2 Assumptions in Multiple Regression Analysis

Osborne & Waters (2002) have commented on the paucity of literature, which employ the use of multiple regressions, but fail to comment on their testing of assumptions related to the statistical analysis of their data. They list out the various assumptions of multiple regressions, which they claim that studies should check for and should correct, if found violated. The assumptions include: assumptions of linearity, reliability of measurement, homoscedasticity, and normality.

4.8.3 Assumption of Linearity:

Standard multiple regression can only accurately estimate the relationship between dependent and independent variables if the relationships are linear in nature. If the relationship between independent variables and the dependent variable is not linear, the results of the regression analysis will under-estimate the true relationship.

Authors such as Pedhazur (1997), Cohen and Cohen (1983), and Berry and Feldman (1985) have suggested that the use of theory or previous research to inform current analyses.

4.8.4 Assumptions of Reliability

Reliability refers to the consistency of the research instrument to measure constructs and yield the same results repeatedly. A detailed explanation of this assumption is given in the following chapter.

4.8.5 Assumption of Homoscedasticity

Homoscedasticity means that the variance of errors is the same across all levels of the independent variables. When the variance of errors differs at different values of the independent variables, heteroscedasticity is indicated. According to Berry and Feldman (1985) and Tabachnick and Fidell (1996) slight heteroscedasticity has little effect on significance tests; however, when heteroscedasticity is marked it can lead to serious distortion of findings and seriously weaken the analysis thus increasing the possibility of a Type I error. This assumption can be checked by visual examination of a plot of the standardized residuals (the errors) by the regression standardized predicted value.

4.8.6 Assumptions of Normality

It is assumed in multiple regressions that the residuals follow the normal distribution. To test this assumption it is necessary to measure skewness and

kurtosis of data. Data that is highly skewed or has high kurtosis indicates the presence of outliers. The principles of normal distribution state that presence of outliers affects the veracity of the data.

The skewness is defined as the measure of the symmetry of a distribution. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. The skewness for a normal distribution is zero, and any symmetric data should have skewness near zero. The kurtosis is the measure of a distribution's spread about its mean. The kurtosis for a standard normal distribution is three.

4.9. Conclusion

This chapter details the research methodology employed by the study in order to collect the relevant data needed to test the hypotheses. The study employed a cross-sectional research design and a causal research approach. Primary and secondary data were collected using a pre-tested questionnaire. The multiple regression was the tool used for data analysis. For conducting this analysis, SPSS version 13.0 was employed.

CHAPTER 5

PROFILE OF SAMPLED FIRMS

5.1 Introduction

This chapter examines the profile of the seafood firms surveyed. A general picture of the surveyed firms is provided here, which forms the basis on which further statistical analyses are carried out in the following chapters. Data on the firms, their products, markets, performance, employees, top management and the problems faced by them are presented.

5.2 Profile of sampled firms.

This chapter lays emphasis on the export activity of the firms. It looks into the size, age, and nature of the firms, their reasons for starting export, their customers, and their competitive advantages in exporting. Special emphasis is placed on the top management, as to their age, position, qualifications, experience, their confidence in their own exporting knowledge, and their views on the business environment of the seafood industry. The top 5 products and the top 5 markets are also identified. The financial position of the firms and the problems faced by them are the other topics dealt with. Thus a complete profiling of the seafood firms is done.

Tools like frequencies cross tabs and graphs are employed to present the general background of the firms participating in the study. The study was conducted using the statistical package for social sciences (SPSS 13.0).

The results are as follows:

5.2.1 Age of Exporting Unit

Of the seafood firms surveyed, around 31% of them were around 30 years and above old. All the firms were exclusively export-oriented units. Most of the firms were thus set up in the 1970s. Newly established firms accounted for around 5%.

Table.5.2.1: Age of the Exporting Unit

Age in Years	Frequency	Valid Percent	Cumulative Percent
<5 years	5	4.6	4.6
5-10 years	23	21.3	25.9
10-20 years	32	29.6	55.6
20-30 years	15	13.9	69.4
30 years & above	33	30.6	100.0
Total	108	100.0	

Source: Primary data

5.2.2 Total number of employees

The firms were classified as small medium and large sized, based on the number of employees present in the firms. The firms having less than 100 employees were designated as small sized firms, those having around 500 employees as medium sized, while firms with more than 500 employees, were considered as large sized. The sample consisted of 24% small, 72% medium and 4% large sized firms. Thus the medium sized firms constituted the majority of the surveyed firms. It was also noted that 3 firms had more than 1000 employees.

Table 5.2.2: Total Number of Employees

No: of employees	Frequency	Valid Percent	Cumulative Percent
<100 people	26	24.1	24.1
100-250 people	39	36.1	60.2
250 -500 people	39	36.1	96.3
500-1000 people	1	0.9	97.2
>1000 people	3	2.8	100.0
Total	108	100.0	

Source: Primary data

5.2.3 Previous Activity before entering present business

The top managements of the sampled firms were quizzed regarding the nature of their previous activity, before entering the seafood exporting business. It was noted that 18 % of the exporters were entrepreneurs who had made their maiden venture in the seafood processing business. Majority (37%) of the exporters had tried their hands at other businesses, like electronics, real estate, automobiles etc, before venturing into the exporting business. 30% of the exporters were raw material suppliers who had turned into processing. Other related previous businesses included cold store owners (5%), foreign seafood buyer representatives (7%), and 2% were in the trawler leasing business. Thus a total of 44% of the exporters surveyed had been related to the seafood processing business in one way or the other.

Table 5.2.3. Previous Activity Before Entering Present Business

Previous Business Activities	Frequency	Percent	Cumulative Percent
Civil contracts	2	1.9	1.9
trawler leasing	2	1.9	3.7
Foreign buyer representative	8	7.4	11.1
Ice making	3	2.8	13.9
Cold Store Owner	5	4.6	18.5
Supplier of Raw Material	29	26.9	45.4
Others	40	37.0	82.4
None	19	17.6	100.0
Total	108	100.0	

Source: Primary data

5.2.4 Annual Sales

Another important aspect of enquiry was the approximate annual sales of the seafood firms. It was noted that 35% of the plants had annual sales between 1-20 crores, 33% registered sales above 60 crores, while 20% witnessed sales between 20-40 crores. Only 6% of the plants had posted sales figures lower than 1 crore. The Table 5.2.4 gives the above results.

Table 5.2.4. Approximate Annual Sales

Annual Sales	Frequency	Percent	Cumulative Percent
< 1 crore	6	5.6	5.6
1-20 crores	38	35.2	40.7
20-40 crores	22	20.4	61.1
40-60 crores	6	5.6	66.7
> 60 crores	36	33.3	100.0
Total	108	100.0	

Source: Primary data

5.2.5 Firm's view of the Marketing Function

The survey focused on the firm's view of marketing. This was central to the core of the thesis' objectives, as the adoption of market orientation principles requires a building up of a firm's belief and philosophy regarding marketing as a holistic approach to bridge the gap between the customers' aspirations regarding the firms' offerings and the firms' view of the customers wants and needs.

Hence the respondents were asked to list out their firms' guiding philosophy and to ascertain whether they followed a production orientation, a sales orientation, a product orientation, a customer orientation, a competitor orientation or a market orientation.

Statistics reveal that the mean was proportionately highest in the case of the view that marketing is building customer relationships, followed by identification and satisfaction of customer needs and competitor intelligence generation. Thus, no definite pattern was identifiable with regard to the type of orientation followed by the seafood firms. It was found to be a mixture of the marketing orientation and the traditional sales orientation. It was noted that the view that market orientation was mainly confined to the marketing/sales dept, also registered a notable mean value of 3.74. the lowest mean values were registered for the statements that marketing was literally nonexistent and that marketing was confusing. The table 5.2.5 illustrates the results of the firms' views on marketing.

Table 5.2.5. Firms' Views Of The Marketing Function.

Firms' view of the Marketing Function	Statistics	
Marketing is about	Mean	Std. Deviation
Building customer relationships	4.26	.753
Identifying customer needs & satisfying them	4.19	.738
Gathering knowledge about competitors	4.04	.760
Promoting our products	3.89	.900
Creating customer contacts & closing deals	3.84	1.161
Building an image/positioning for our products	3.78	.960
What marketing/sales depts. do	3.74	.869
Adapting to changing market conditions	3.71	.865
Managing the production process	3.67	.897
Handling the production process' quality & quantity decisions	3.66	.978
The sales-support function	3.63	1.265
Analyzing market conditions	3.59	1.103
Philosophy/culture leading our company	2.76	1.175
It is literally non existent in our firm	2.13	1.111
It is a confusing concept	1.83	.881

Source: Primary data

5.2.6 Nature of Exports

The exporters export either directly to their customers, or through trading companies or buyer agencies. The table below shows that 23% of the firms had started off their exports through direct contact with their customers, and they still continue to do so, while in 5% of the firms, the proportion of exports now has gone down from 100% direct to 50-75%, the rest being through buying agents or through trading agencies. An increase in the extent of direct exports from 25-50% initially to 50-75% presently, was seen in 13% of the surveyed plants, while 19% registered an increase from less than 25% direct exports initially to 25-50% presently. 16% of the plants maintained status quo with

regard to the proportion of the exports at the beginning and till date. The general trend showed that presently only 24% of the firms dealt directly with their customers, while 76% still depended on trade intermediaries like buying agents. This reflects a 9% increase in the dependence on intermediaries from the time of the commencement of exports.

Table 5.2.6.Direct Exports And Export Through Intermediaries: A Proportional Analysis.

% of Direct exports, at the beginning		% of Direct Exports, now					
		100%	75-100%	50-75%	25-50%	< 25%	Total
100%	Count	25	1	5	-	5	36
	% of Total	23.1%	0.9%	4.6%	-	4.6%	33.3%
75-100%	Count	-	-	1	-	-	1
	% of Total	-	-	.9%	-	-	0.9%
50 -75%	Count	-	2	2	3	-	7
	% of Total	-	1.9%	1.9%	2.8%	-	6.5%
25-50%	Count	-	-	14	6	1	21
	% of Total	-	-	13.0%	5.6%	0.9%	19.4%
<25%	Count	1	1	4	20	17	43
	% of Total	0.9%	0.9%	3.7%	18.5%	15.7%	39.8%
Total	Count	26	4	26	29	23	108
	% of Total	24%	3.7%	24.1%	26.9%	21.3%	100%

Source: Primary data

5.2.7. Top Five Export Markets

The top five markets include the EU with 52%, followed by the US (21%), Japan (19%), the Gulf Countries (6%) and China (3%). This is consistent with the national trend, wherein the EU is the most important market followed by the US & Japan in terms of value. The sample is thus a true representative of the Indian seafood industry.

Table 5.2.7. Top Five Primary Export Markets

Top Five Markets	Frequency	Percent	Cumulative Percent
China	3	2.8	2.8
EU	56	51.9	54.6
Gulf countries	6	5.6	60.2
Japan	20	18.5	78.7
US	23	21.3	100.0
Total	108	100.0	

Source: Primary data

5.2.8. Top Five Export Products

Shrimps dominate the export basket of the Indian seafood firms and the survey reveals that they constitute 60% of the total seafood products sold. In addition to the frozen shrimps, other varieties of shrimps including the cooked and freeze dried products are also important products. Block frozen Cuttlefish exports comes second, with a total 25%, followed by frozen squids and fishes (6% each).

The above ranking of the products are substantiated by the national averages which show that frozen shrimp continued to be the largest item in terms of value contributing 63.50% of the total value of export and frozen fish continued to be the largest item in term of volume with 34.62% of the total volume of marine products exported from the country. The share of cuttlefish remains at 10% in terms of quantity and 7% in terms of value, while that of frozen squid constitutes 10% in terms of quantity and 7% in terms of value.

Table 5.2.8. Top Five Export Products

Top Five Products	Frequency	Percent	Cumulative Percent
Cooked shrimps	1	0.9	0.9
Cuttlefish	27	25.0	25.9
Fish	6	5.6	31.5
Freeze dried shrimp	2	1.9	33.3
Octopus	1	.9	34.3
Shrimps	65	60.2	94.4
Squid	6	5.6	100.0
Total	108	100.0	

Source: Primary data

5.2.9. Relationship between Annual Sales and Export Markets

A cross tabulation was done to understand the relationship between annual sales and the export markets. This was done to identify if there was any pattern in the export of different types of firms to specific countries, and to analyze whether there were any patterns in the selection of markets by the different income earning firms. Some of the significant results arising from this analysis include the following:

- Firms with annual sales between 1-40 crores tended to concentrate predominantly on the EU markets.
- Firms with annual sales more than 60 crores tended to avoid concentrating on a single market, and preferred to export equally to different market groups.
- All firms, irrespective of their annual sales figures, had exported their products to the Japanese markets at least once in a year.
- All the firms had also exported to the EU markets, and these exports were by far the largest among all markets.

Table 5.2.9. Annual Sales & Top Five Export Markets

		Top Five Export Markets					
Annual Sales		China	EU	Gulf nations	Japan	US	Total
< 1 crores	Count	1	1	-	2	2	6
	% of Total	0.9%	0.9%	-	1.9%	1.9%	5.6%
1-20 crores	Count	2	26	4	5	1	38
	% of Total	1.9%	24.1%	3.7%	4.6%	0.9%	35.2%
20-40 crores	Count	-	13	2	4	3	22
	% of Total	-	12%	1.9%	3.7%	2.8%	20.4%
40-60 crores	Count	-	4	-	2	-	6
	% of Total	-	3.7%	-	1.9%	-	5.6%
> 60 crores	Count	-	12	-	7	17	36
	% of Total	-	11.1%	-	6.5%	15.7%	33.3%
Total	Count	3	56	6	20	23	108
	% of Total	2.8%	51.9%	5.6%	18.5%	21.3%	100%

Source: Primary data

5.2.10. Relationship between Annual Sales and Export Products

Cross tabulation between the top 5 products and the annual sales of the firms was done in order to determine the pattern of products produced by each class of firms having different sales volumes. Some of the notable observations include:

- All the firms, irrespective of their sales volume, exported frozen shrimps and cuttlefish.
- Firms with sales between 1-20 crores had a lengthier product line with shrimps, cuttlefish, squids, octopus and fish.
- Those firms which invested in value addition like cooked products and freeze dried products, dealt with only shrimps and cuttlefishes.

Table 5.2.10 Top 5 Export Products & Approximate Annual Sales

Top 5 Products		Approximate Annual Sales					Total
		< 1 crore	1-20 crore	20-40 crore	40 -60 crore	> 60 crore	
Cooked Shrimp	Count	-	-	1	-	-	1
	% of Total	-	-	0.9%	-	-	0.9%
Cuttlefish	Count	2	18	1	1	5	27
	% of Total	1.9%	16.7%	0.9%	0.9%	4.6%	25%
Fish	Count	-	6	-	-	-	6
	% of Total	-	5.6%	-	-	-	5.6%
Freeze dried Shrimp	Count	-	-	-	2	-	2
	% of Total	-	-	-	1.9%	-	1.9%
Octopus	Count	-	1	-	-	-	1
	% of Total	-	0.9%	-	-	-	0.9%
Shrimps	Count	3	8	20	3	31	65
	% of Total	2.8%	7.4%	18.5%	2.8%	28.7%	60.2%
Squid	Count	1	5	-	-	-	6
	% of Total	0.9%	4.6%	-	-	-	5.6%
Total	Count	6	38	22	6	36	108
	% of Total	5.6%	35.2%	20.4%	5.6%	33.3%	100%

Source: Primary data

5.2.11. First Significant Export Market and Years in operation of firms at time of first significant sales

Cross tabulation showed that the Japanese market (46%) followed by the US market (25%) were the first significant markets of the Indian seafood exporters. The EU markets came third with 20%. The majority of the firms (63%) were found to have started exporting significantly from their first year itself, 21% took up to 5 years, while around 12% took more than 15 years to register significant export sales. 26% of the firms exporting to Japan recorded

significant sales from the first year of initiation of exports. The results are as given in the table 5.2.11.

Table 5.2.11. First Significant Export Market & Years in Operation of Firms at Time of First Significant Sales

1st Significant Market		Years in operation of firm at time of 1st significant export sales					Total
		From 1st year itself	Upto 5 years	5-10 years	10-15 years	> 15 years	
China	Count	5	1	-	-	-	6
	% of Total	4.6%	0.9%	-	-	-	5.6%
EU	Count	19	2	-	1	-	22
	% of Total	17.6%	1.9%	-	0.9%	-	20.4%
Gulf countries	Count	2	1	-	-	-	3
	% of Total	1.9%	0.9%	-	-	-	2.8%
Japan	Count	28	13	-	2	7	50
	% of Total	25.9%	12.0%	-	1.9%	6.5%	46.3%
US	Count	14	6	1	-	6	27
	% of Total	13%	5.6%	0.9%		5.6%	25%
Total	Count	68	23	1	3	13	108
	% of Total	63%	21.3%	0.9%	2.8%	12%	100%

Source: Primary data

5.2.12. Level of Competitive Intensity

The respondents were asked to rate the level of competitive intensity in the industry. The response levels ranged from not at all competitive to very competitive. The survey revealed that an overwhelming 90% of the respondents were very certain that the Indian seafood industry was competitive. Out of this 62% affirmed that the industry was very competitive. It was noted that all the respondents were more or less confident about their

knowledge of the firms' operations. 73% of the firms stated that they are confident enough to report on the firms activities. The level of the respondents' confidence is very important to the study as it is a subjective one depending on the respondents' judgment for answering all the questions. Hence care was taken to ensure that the respondents were of the top management and in most cases it was the CEO or the MD who responded to the questionnaire. Only 2% of the firms, exporting freeze dried products reported that the industry was not competitive.

Table 5.2.12. Rating of Competitive Intensity & Respondent Confidence

Rating of the level of competitive intensity		Respondent confidence about firm's market operations			Total
		Somewhat confident	Confident	Very Confident	
Not at all competitive	Count	-	-	1	1
	% of Total	-	-	.9%	0.9%
Not competitive	Count	-	-	1	1
	% of Total	-	-	.9%	0.9%
Somewhat competitive	Count	2	7	-	9
	% of Total	1.9%	6.5%	-	8.3%
Competitive	Count	3	13	14	30
	% of Total	2.8%	12.0%	13.0%	27.8%
Very competitive	Count	24	21	22	67
	% of Total	22.2%	19.4%	20.4%	62%
Total	Count	29	41	38	108
	% of Total	26.9%	38%	35.2%	100%

Source: Primary data

5.2.13. Level of Business Dynamism

The respondents were asked to rate the dynamism of the business environment in which the firms operate. If the technology or competition or consumer preferences or regulations are often changing and are unpredictable, then the

business environment is very dynamic, but if these factors do not change much and are fairly predictable, then the environment is very stable. It was noted that 71% of the respondents rated the business environment as dynamic, with 44% of them rating it as very dynamic. 26% opined that the business environment was somewhat dynamic, while only 2% considered the business environment as stable and 1%, as very stable. The cross tab showed that 19% of the sample were very confident that the environment was very dynamic.

Table 5.2.13. Rating of Business dynamism & Respondent confidence

		Respondent confidence about firm's market operations			
Rating of the level of business dynamism		Somewhat confident	Confident	Very Confident	Total
Very stable	Count	1	-	-	1
	% of Total	0.9%	-	-	0.9%
Stable	Count	-	-	2	2
	% of Total	-	-	1.9%	1.9%
Somewhat dynamic	Count	10	9	9	28
	% of Total	9.3%	8.3%	8.3%	25.9%
Dynamic	Count	7	15	7	29
	% of Total	6.5%	13.9%	6.5%	26.9%
Very dynamic	Count	11	17	20	48
	% of Total	10.2%	15.7%	18.5%	44.4%
Total	Count	29	41	38	108
	% of Total	26.9%	38%	35.2%	100%

Source: Primary data

5.2.14. Separate Export Department

The respondents were quizzed on whether their firm had a separate export department in order to deal with export operations.69% said yes, while 32% said no.

Table 5.2.14. Separate Export Department

Separate Export Department	Frequency	Percent	Cumulative Percent
Yes	74	68.5	68.5
No	34	31.5	100.0
Total	108	100.0	

Source: Primary data

5.2.15 Export Manager

59% of the firms had an export manager in charge of export activities, while 41% did not.

Table 5.2.15.1 Firms having a Separate Export Manager

Have an Export Manager	Frequency	Percent	Cumulative Percentage
Yes	64	59.3	59.3
No	44	40.7	100.0
Total	108	100.0	

Source: Primary data

In the case of the firms which did not have an export manager, it was seen that, the CEO/MD/General Manager/Plant Manager/Owner etc. performed the functions of the export manager.

Table 5.2.15.2. Position of Person-in-Charge of Export Activities

Position of person in charge	Frequency	Percent	Cumulative Percent
	64	59.3	59.3
Chief Executive Officer	14	13.0	72.2
Director	1	.9	73.1
General Manager	5	4.6	77.8
Leasee	4	3.7	81.5
Manager	2	1.9	83.3
Managing Partner	2	1.9	85.2
Marketing Manager	1	.9	86.1
Managing Director	8	7.4	93.5
Operations Manager	1	.9	94.4
Owner	5	4.6	99.1
Plant Manager	1	.9	100.0
Total	108	100.0	

Source: Primary data

5.2.16 Motivating Factors for Initiating Export Operations

The exporters listed different motivating factors for initiating export operations. On a scale of 1 – 5, the mean scores ranged from 2.25 to 4.51. Of them the most important factor was, predictably, profit incentive, with a mean score of 4.51 (S.D = 0.704). Following this, the other top motivating factors included location advantage (4.24), technical knowledge (4.09), future growth reasons (3.94) and high growth rate of business (3.88). The least motivating factor was competitive pressure from domestic market.

Table 5.2.16. Motivating factors for initiating export operations

Motivating factors for initiating export	N	Mean	Std. Deviation
Profit Incentive	108	4.51	.704
Tax Benefit	108	3.28	.807
Managerial Urge	108	3.76	1.267
High growth rate	108	3.88	.944
Receive unsolicited order	108	2.95	1.307
Company's future growth	108	3.94	.930
Competitive pressure from domestic market	108	2.25	1.033
Inherited business	108	2.75	1.319
Less competition	108	2.65	1.130
Less investment required	108	2.28	1.022
Have technical know-how	108	4.09	.881
Locational advantage	108	4.24	.609

Source: Primary data

5.2.17 Getting Customers

The survey enquired into the methods by which firms solicited their customers. The different methods used were through buying agents, through trade fairs and exhibitions, through industry contacts, through affiliated companies, through advertisements and through government assistance. On a scale of 1 – 5, the mean scores ranged from 2.19 to 4.05. It was seen that industry contacts were the most efficient method of getting customers (Mean score=4.05, SD = 0.778), followed by buying agents and representatives of foreign buyers (Mean score=3.95, SD = 1.383), and through participation in regularly held trade fairs and exhibitions (Mean score=3.94, SD = 1.003). The mean scores were found to be least for advertisements and government assistance (Mean Score = 2.19, SD = 1.164). The table 5.2.17.1 gives the detailed results.

Table 5.2.17.1. How Firms Got Their Early Customers

How did you get your early customers?	Statistics		
	N	Mean	Std. Deviation
We get customers through industry contacts	108	4.05	.778
We get customers through buying agents	108	3.95	1.383
We get customers because we participate in trade fairs & exhibitions	108	3.94	1.003
We get customers because we send staff to foreign markets	108	3.60	1.282
Receive unsolicited order as means of getting early customers	108	3.26	1.307
We get customers through the internet	108	3.19	1.377
We get customers through affiliated companies	108	2.89	1.210
We get customers because we advertised	108	2.72	1.118
Get customers through government assistance	108	2.19	1.164

Source: Primary data

The Marine Products Development Authority, Cochin, organizes the Indian seafood industry participation in the trade fairs held throughout the world. MPEDA gives 50% subsidy on space rental in the trade fairs, as well as 30% of the to and fro airfare by normal economy class by the shortest route for one representative of each firm. Besides this, the MPEDA also provides 50% of rental charges, for freezer hiring charges for products to be displayed at the stalls, subject to a maximum of US$ 600.

The Indian seafood industry generally jointly participates with the MPEDA, in most of the seafood fairs held all over the world. Of these the Boston Seafood Show and the European Seafood Exposition, Brussels, continue to be the most attended fairs by the Indian seafood exporters. The major trade fairs which are generally participated by MPEDA include the following:

Table 5.2.17.2 List of Seafood Fairs Attended by MPEDA

SEAFOOD FAIRS PARTICIPATED BY MPEDA	VENUE
Canadian Food & Beverage Show	Toronto
International Boston Seafood Show	Boston
European Seafood Exposition	Brussels
Interfood	St.Petersburg,Russia
Interzoo – Ornamental Fish Show	Nürnberg, Germany
Japan International Seafood & Technology Expo	Tokyo
Fine Food	Australia
Singapore Seafood Exhibition	Singapore
Conxemar–International frozen Products Exhibition	Vigo, Spain
International Food Fair	Sharjah, UAE
SIAL Fair	Paris, France
China Fisheries and Seafood Expo	China
International West Coast Seafood Show	Los Angeles, US

Source – Anon (2002), MPEDA.

5.2.18. Top Management Factors

Data on the top management were also collected in the survey. It was noted that the majority of the top management (66%) was aged between 40-60 years, while 25% was in the 30-40 year age group. The 40-50 year age group was seen to have the most number of owners/managing directors/chief executive officers.

Table5.2.18.1 Age of the Top Management

Age of the Top Management	Frequency	Percent	Cumulative %
Less than 30 years	7	6.5	6.5
30 - 40 years	27	25.0	31.5
40 - 50 years	36	33.3	64.8
50 - 60 years	35	32.4	97.2
Above 60 years	3	2.8	100.0
Total	108	100.0	

Source: Primary data

The next factor was that of experience. 33% of the firms had their top management with 10-20 years of job experience, followed by the 1-5 year experienced group (24%), the greater than 20 years experienced group (21%), the 6-10 year experienced group (20%) and finally the less than 1 year experienced group (1%). So the respondent experience factor showed almost same % of respondents for all the groups except the less than 1 year experienced group.

Table 5.2.18.2 Respondent Experience.

Respondent Experience	Frequency	Percent	Cumulative Percent
Less than 1 year	1	.9	.9
Between 1-5 years	26	24.1	25.0
Between 6-10 years	22	20.4	45.4
Between 10-20 years	36	33.3	78.7
Greater than 20 years	23	21.3	100.0
Total	108	100.0	

Source: Primary data

The top management educational qualification is the next factor. It was seen that the majority of the top management (45%) were graduates, while 28% were post graduates. 12% of them held a professional degree in Management,

while 7% were professionals belonging to other categories. Only 7% of the top management had a lower level of education than a graduation.

Table 5.2.18.3 Top Management Qualification

Top Management Qualification	Frequency	Percent	Cumulative %
Schooling	7	6.5	6.5
Pre – University	2	1.9	8.3
Graduate	49	45.4	53.7
Post graduate / Higher	30	27.8	81.5
Professional degree in Management	13	12.0	93.5
Other Professional	7	6.5	100.0
Total	108	100.0	

Source: Primary data

The survey then concentrated on the marketing decision making power of the respondent. On a scale of 1 – 5, the mean scores were 4.28 and 4.27. Thus it was seen that the top management surveyed were responsible to a very large extent in achieving market orientation and in making and implementing marketing strategy.

Table 5.2.18.4. Top Management marketing responsibility.

Marketing Responsibility of the Respondent	N	Mean	Std. Deviation
What extent are you responsible for achieving market orientation	108	4.28	.695
What extent are you responsible for making & implementing marketing strategy	108	4.27	.705

Source: Primary data

5.2.19 Competitive Advantages in Exporting

On a scale of 1 – 5, the mean scores ranged from 3.55 to 4.62. Relationship with customers with a mean score of 4.62, was the highest competitive advantage, followed closely by Product Quality (Mean score=4.61) and Delivery

of the products (Mean score = 4.23). The competitive advantages of production capacity and marketing capacity tied together with mean score 4.06. The least mean score was held by the factor Product uniqueness/product differentiation, indicating that, exporters did not concentrate on achieving product uniqueness or product differentiation. This is a true picture of the seafood industry as a whole, wherein exporters continued to produce mainly block frozen products, and stuck to minimum value addition, unless required to do so, by the customers.

Table 5.2.19. Competitive Advantages in Exporting

Competitive Advantages	N	Mean	Std. Deviation
Cost Factor	108	3.71	1.094
Product Quality	108	4.61	0.490
Product Uniqueness/ Differentiation	108	3.57	1.129
Technology	108	3.55	0.813
Production Capacity	108	4.06	0.915
Marketing Capacity	108	4.06	0.708
After sales services	108	3.59	1.168
Delivery	108	4.23	0.678
Relationship with customers	108	4.62	0.506

Source: Primary data

5.2.20 Return on Investment

The ROI over five years, from 2001-05 was assessed in order to understand the financial position of the firm. The firms recorded an ROI % mostly between 0-10%, with the highest being in the years 2002 - 2003 and 2005 - 2006. The choices given ranged from negative ROI to above 30%.

Table 5.2.20.Return on Investment for the years 2001 - 2006

ROI from 2001-2006	N	Mean	Std. Deviation
ROI of the firm for 2001-02	108	2.42	
ROI of the firm for the year 2002-03	108	2.46	.932
ROI of the firm for the year 2003-04	108	2.45	.921
ROI of the firm for the year 2004-05	108	2.41	.967
ROI of the firm for the year 2005-06	108	2.46	.911

Source: Primary data

5.2.21 Problems faced by the Indian Seafood Exporters.

General Problems

The exporters opined that raw material scarcity was the biggest general problem (Mean Score = 4.68, SD = 0.681), followed by other major problems like own country and buyer country regulation problems (Mean Score = 3.54, SD = 1.321), financial problems (Mean Score = 3.31, SD = 1.384), marketing problems (Mean Score = 2.69, SD = 1.357), quality problems (Mean Score = 2.65, SD = 1.423) and production problems (Mean Score = 2.14, SD = 1.211).

Table 5.2.21.1. General Problems faced by Indian Seafood Exporters

Ranking of Various Problems	N	Mean	Std. Deviation
Raw material scarcity problems	108	4.68	.681
Own country/buyer country regulations	108	3.54	1.321
Financial problems	108	3.31	1.384
Marketing problems	108	2.69	1.357
Quality problems	108	2.65	1.423
Production problems	108	2.14	1.211
Technical problems	108	2.11	1.194
Other problems	87	1.83	1.542
Personnel problems	108	1.67	1.005
General administration problems	108	1.47	.826

Source: Primary data

Marketing Problems

The survey then focused on the major marketing problems. Frequent changes in the price trends (Mean Score = 3.85, SD = 1.084), competition from international (Mean Score = 3.52, SD = 1.501) and domestic firms (Mean Score = 3.33, SD = 1.421), pricing problems (Mean Score = 3.12, SD = 1.309), quality problems (Mean Score = 2.71, SD = 1.381) and frequent changes in consumer trends (Mean Score = 2.64, SD = 1.315) are the major marketing problems encountered by the seafood industry. Lack of market presence (Mean Score = 2.30, SD = 1.518) and inadaptability of the production system to meet market changes (Mean Score = 2.22, SD = 1.270) are the other important problems.

Table 5.2.21.2. Ranking of Marketing Problems

Ranking of Marketing Problems	N		Mean	S.D
	Valid	Missing		
Frequent changes in price trends	108	0	3.85	1.084
Competition from international firms	108	0	3.52	1.501
Competition from domestic firms	108	0	3.33	1.421
Pricing problems	108	0	3.12	1.309
Quality problems	108	0	2.71	1.381
Frequent changes in consumer trends	108	0	2.64	1.315
Lack of market presence	108	0	2.30	1.518
Production system inability to meet changes	108	0	2.22	1.270
Packaging & transportation problems	108	0	2.10	1.199
Promotional problems	108	0	2.01	1.106
No unique attribute/undifferentiated products	108	0	1.96	1.260
Inadequate market knowledge	108	0	1.82	.936
Poor brand image	108	0	1.47	.891
Distribution problems	108	0	1.36	.755
Other problems	79	29	1.23	.891

Source: Primary data

5.2.22. Financial Status of the Firms

The financial status of the firms was another major issue dwelt on by the survey. 49% of the respondents replied that their firms were running under the neither profit nor loss status, while 3% reported that they were running on loss. 48% of the firms were profitable ventures.

Table 5.2.22. Financial status of the firm

Financial status of Firm	Frequency	Percent	Cumulative Percent
Running on Profit	52	48.1	48.1
Running on Loss	3	2.8	50.9
Neither profit nor loss	53	49.1	100.0
Total	108	100.0	

Source: Primary data

5.3. SWOT ANALYSIS

The SWOT analysis was conducted to gain a clear picture of the seafood industry in India in general. The strengths, weaknesses, opportunities, and threats were classified in an effort to highlight the importance of market orientation of the business (Johnson, 2000). They are as follows:

STRENGTHS

- Abundance of deep sea fishery and aquaculture resources
- Low labour costs
- Potential for fresh and brackish water culture
- Some processing facilities of international quality
- A major player in world fisheries trade
- Commitment to improving quality and quality standards
- Established presence in leading markets

It is true that India has a number of strengths as a seafood producing and exporting country. It has established itself as a player in the global seafood business and sells its products in the leading seafood markets of the world. From the point of this view, it has taken a number of necessary steps towards successful development of its fisheries resources. The country has a sizable seafood resource, facilities that can produce high quality products, and comparatively lower costs of production that many other seafood producing countries.

WEAKNESSES

- General market perception of poor quality products
- Current positioning of Indian seafood as a low priced product.
- Marketing efforts not effective; lack continuity and clarity, do not differentiate Indian products
- Lack of marketing presence of Indian manufacturers
- Many products not suited for large volume markets
- Current product line, excluding shrimp, is not value-added enough to appeal to mainstream market
- Value added products still constitute a small proportion of the total exports
- Absence of joint ventures
- Propensity to seek profits through minimum value addition
- Inability to provide consistent supply to buyer as per specifications
- Wide range of plant sanitation standards – some are of international quality and others are quite poor
- Lack of international cold chain infrastructure
- Slow technological change
- Poor packaging

The weaknesses are significant but not insurmountable. There are many weaknesses which suggest little direct marketing presence of Indian suppliers in the seafood trade. Another group of weakness revolves around the current seafood product line available from Indian producers. The final set of weaknesses involves Indian seafood infrastructure and its current inability to meet the requirements of the seafood buyers. Items such as inferior packaging, substandard plant sanitation in some plants, and lack of good cold chain infrastructure all contribute to the negative perceptions of Indian seafood. As long as some producers allow these weaknesses to continue, producers who have made the effort to correct them will suffer along with them.

OPPORTUNITIES

- Opportunities to expand value-added seafood production
- Expansion of fresh and brackish water aquaculture production
- Potential to create a better image and higher value for products
- Large untapped market
- Wide adoption of HACCP by processors

Opportunities for the Indian seafood industry include expanding raw material and value added production in the country. Both opportunities could result in a wider variety of products to export to the customer countries, and could also offer a chance to increase the value of exports from the country. The wide adoption of HACCP plans by the processors offer opportunities to set the record straight about Indian seafood production standards. Adoption of TQM will increase the market value of the products and will act as a face lift to the industry as a whole, besides fulfilling its primary aim of ensuring products of good and consistent quality.

THREATS

- Competition from newly emerging exporting countries like Vietnam and China
- Doing nothing to change current perceptions will drive perception of Indian seafood even lower.
- If quality standards and value added processing are not pursued then Indian product will continue to go to other countries for reprocessing.

The biggest threat to India is to do nothing regarding the negative realities and perceptions that exist regarding its seafood products. The result will be to drive more and more reprocessing and value-added production out of the country and to send the perceptions about the products even lower than they are at present. Only those producers and countries that will make the effort to meet these demands will succeed and receive top prices for their products.

5.4. Conclusion

This chapter presented a snapshot view of the Indian seafood processing firms participating in the survey. Data on the characteristics of the firms, their size, number of employees, type of concern, revenue, top five products and export markets, export motivation factors, competitive advantages, marketing view, presence of export department, top management characteristics, trade fairs attended, general problems faced, marketing problems faced and financial status, are also presented.

CHAPTER 6

PRELIMINARY DATA ANALYSIS

6.1 Introduction

This chapter presents the results of the psychometric evaluation of the constructs in this study. First of all, the reliability and the validity of the research instrument are tested to confirm consistency and accuracy. Next, descriptive statistics of the major constructs are presented. Correlation analyses were used to establish the relationship between variables and to test for multicollinearity.

6.2 Reliability Tests

The assessment of reliability of a research instrument is essential in order to measure its internal consistency. There is general consensus on the opinion that measures should be both reliable and valid (Nunnally, 1970; Parameswaran *et al.*, 1979; Churchill, 1979). Churchill (1979) has laid down the sequence of steps to be considered while developing marketing constructs. It involves the specification of the domains, generating sample of items, gathering of data, purifying constructs, again gathering of data, assessing reliability and validity and developing norms for the resulting measures.

The reliability of a research instrument concerns the extent to which the instrument yields the same results on repeated trials (Nunnally 1970). This tendency towards consistency, found in repeated measurements, is referred to as reliability (Carmines & Zeller, 1979; Zikmund, 1994). Although unreliability cannot be fully eliminated, an instrument of good quality will generally yield

consistent results, at different times. The consistency is assessed by measuring the inter-item correlation. Cronbach's alpha is a recommended test for measuring construct reliability (Ravichandran & Rai, 2000). Cronbach's alpha (Cronbach, 1951) is an index of reliability associated with the variation accounted for by the true score of the "underlying construct", the construct being the hypothetical variable that is being measured. Cronbach's alpha is based on the average covariance among items in a scale. The use of Cronbach's alpha is recommended highly as a good measure for measuring internal consistency. Hence this study adopts the Cronbach's alpha index for estimating reliability.

Alpha coefficient ranges in value from 0 to 1 and the higher the score, the more reliable the generated scale is. Nunnally (1978) recommends that instruments used in basic research have reliability of about 0.70 or better, although lower thresholds are sometimes used in the literature. He adds that increasing reliabilities much beyond 0.80 is a waste of time with instruments used for basic research. He has also indicated that reliability between 0.50-0.60 is sufficient for the early stages in any research. According to Churchill (1979), a low value of Cronbach α may result if there is very little commonality between the items measured or if there are only a few items measured. Sekaran (1992) sets the minimum acceptable reliability coefficient level at 0.6. As a general rule of thumb (Shoukri and Edge, 1996), a reliability coefficient (r) is considered excellent if r is larger than 0.75, good - if r is between 0.40 and 0.75, and poor if r is less than 0.40. In this study, all the measures were adopted from highly reliable borrowed scales. Since the borrowed scales measure the constructs' in a new setting, for the first time, the cut off value is fixed at 0.60.

The alpha values for intelligence dissemination, competitive intensity, interdepartmental connectedness, centralization, business performance and overall MARKOR, were above 0.80, the highest being that for business performance (0.88). Responsiveness, technological turbulence and top management emphasis recorded alpha values between 0.72 and 0.78. Intelligence generation and risk aversion showed values above 0.60, the cutoff value for this study, their individual values being 0.63 and 0.68.

All the constructs were found to have reliabilities around the acceptable range, except for certain constructs like Market Turbulence (α = 0.315), Interdepartmental Conflict (α = 0.495) and Formalisation (α = 0.544). The reasons for the low α values were attributed to the small number of items and the reverse coded nature of some items. It was seen that the length of the questionnaire as well as the lack of time on the part of the busy executives, proved to be a deterrent, as the respondents tended to go through the questions very fast and generally trip over the reverse coded items under each construct. Overall, the data collected in this study is found to be reliable.

The following table 6.2.1 shows the reliability of the scales used in this study.

Table 6.2.1. Reliability Statistics for the Study

	N of Items	Item-Total Statistics	Cronbach's Alpha	Cronbach's α based on Standardized Items
MARKET ORIENTATION	6	Intelligence Generation	0.655	0.633
	7	Intelligence Dissemination	0.826	0.832
	9	Responsiveness	0.670	0.716
ENVIRONMENTAL MODERATORS	3	Mkt Turbulence	0.357	0.315
	5	Technology Turbulence	0.782	0.782
	15	Competitive Intensity	0.812	0.822
ANTECEDENTS TO MARKOR	6	Conflict	0.447	0.495
	6	Connectedness	0.806	0.860
	4	Formalisation	0.538	0.544
	5	Centralisation	0.848	0.848
	5	Reward System	0.853	0.850
	4	Top Management Emphasis	0.771	0.771
	5	Risk Aversion	0.679	0.679
CONSEQUENCES	21	Business Performance	0.870	0.876
	22	OVERALL MARKOR	0.853	0.853

Source: Primary data

The above results were then compared with the existing literature, namely Kohli & Jaworski (1993), Pulendran *et al.*,(2000, 2003), Gounaris & Avlonitis (1996), Matsuno & Mentzer (2000) and Homburg *et al.*, (2004).

Except for the three constructs of market turbulence, interdepartmental conflict and formalization, it was seen that the reliability scales of the present study had almost similar values to the other scales. For the scales like intelligence generation, while both Kohli & Jaworski (1993) and Homburg *et al.*, (2004) recorded alpha value of 0.71, my study showed similarity to those of Pulendran *et al.*,(2000, 2003), Gounaris & Avlonitis (1996) and Matsuno &

Mentzer (2000), where the alpha was between 0.63 - 0.68. In the intelligence dissemination construct, the range of alpha values were between 0.74 – 0.83, with this study recording the highest value. For the constructs of responsiveness, the range of alpha values were from 0.66 – 0.82, while the present study showed a value of 0.72, right within the approved range of 0.70 and above (Nunnally, 1978). For market turbulence, the range was from 0.32 to 0.68, with this study scoring the lowest, while Kohli & Jaworksi's scale also registered a low value of 0.68 for alpha. It was interesting to note that the three constructs for which this study had values below the cutoff value, like intelligence generation, market turbulence, conflict and formalization, the other studies also showed a corresponding dip in their relative reliabilities. While the low reliability was more prominent in the case of market turbulence where Kohli & Jaworksi's scale also registered a low value of 0.68, all the other scales which were based on the Kohli & Jaworski study, showed corresponding dips in their reliabilities. The results are presented in the table 6.2.2 below.

Table 6.2.2 Comparison of Results With Other Studies

Scale	Present Study	K&J	P,S& W	G&A	M&M	H,K&W
Intelligence Generation	0.633	0.71	0.65	0.675	0.66	0.71
Intelligence Dissemination	0.832	0.82	0.74	0.805	0.78	0.74
Responsiveness (Design & Implementation)	0.716	0.78,0.82	0.72, 0.66	0.682	0.74	0.82
Market Turbulence	0.315	0.68	0.59	-	-	-
Technology Turbulence	0.782	0.88	0.80	-	-	-
Competitive Intensity	0.822	0.81	0.69	0.698	-	-
Interdepartmental Conflict	0.495	0.87	0.78	-	-	-
Interdepartmental Connectedness	0.860	0.80	0.75	-	-	-
Formalisation	0.544	0.76	0.71	0.641	-	-
Centralisation	0.848	0.88	0.80	0.738	-	-
Reward Orientation	0.850	0.73	0.76	-	-	-
Top Mgmt Emphasis	0.771	0.66	0.80	-	-	-
Risk Aversion	0.679	0.85	0.72	0.693	-	-
Business Performance	0.876	0.83	0.93	-	-	-
OVERALL MARKOR	0.853	-	-	-	0.84	-

Source: Primary data

K&J – Kohli & Jaworski (1993), P, S &W – Pulendran *et al.*, (2000, 2003), G&A – Gounaris & Avlonitis (1996), M&M – Matsuno & Mentzer (2000), H,K&W – Homburg, Krohmer & Workman (2004).

6.3 Validity Tests

Test of validity is deemed necessary for a research instrument to assess that the different constructs of the study are sufficiently well defined. A study is valid if its measures actually measure what they claim to, and if there are no logical errors in drawing conclusions from the data. Two types of validity studies are important, namely the content validity and the construct validity. Two types of validity namely convergent validity and discriminant validity assess the

construct validity. Since the study is modeled on valid borrowed scales, and the scales were verified by researchers, its content validity is assured.

Construct validity refers to the degree to which inferences can legitimately be made from the operationalizations in the study to the theoretical constructs on which those operationalizations were based. Convergent validity measures whether constructs that theoretically should be related to each other are, in fact, observed to be related to each other, while Discriminant validity measures whether measures of constructs that theoretically should not be related to each other are, in fact, observed to not be related to each other. To assess the convergent validity, factor analysis is used, to check whether the items under each construct load cleanly under one factor, i.e., to check whether the items under each subheading measure the same variable (Carmines & Zeller, 1979). Hair *et al.*, (1987) advocate that factor loadings of 0.5 or higher are considered significant for the study.

The following tables 6.3.1 - 6.3.3 show the results of the factor analysis for the components of market orientation. Fig. 6.3 shows the scree plot of the factor analysis.

6.3.1 Kaiser-Meyer and Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic which indicates the proportion of variance in the variables which is common variance, i.e. which might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis is useful with the given data. The KMO value for the given factor analysis is 0.668, which is high enough to proceed with. Bartlett's test of sphericity indicates whether the correlation matrix is an

identity matrix, which would indicate that the variables are unrelated. The significance level gives the result of the test. Very small values (less than 0.05) indicate that there are probably significant relationships among the variables. Values higher than about 0.10 or so may indicate that the data are not suitable for factor analysis. The significance level of 0.000 as shown in the study indicates that the variables are suitable for conducting factor analysis.

Table 6.3.1 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.668
Bartlett's Test of Sphericity	Approx. Chi-Square	1532.709
	df	231
	Sig.	.000

Source: Primary data

The factor analysis results show that, the three factors do not load cleanly under each of the three components, namely intelligence generation, intelligence dissemination and responsiveness. The factor analysis reveals a six component structure, with Eigen values over 1 and which accounts for 71% of the variation. Eigen values represent the total variance explained by each factor (Rumelt, 1970) and are used in the study to determine the number of components to be extracted.

But the results, as reported in Pulendran *et al.*, (2000) were unintelligible. Hence the factor analysis was redone with the specification that three factors should be extracted. This resulted in a factor solution of three factors, but the items under each factor still did not load cleanly. The variance accounted for was 54%.

Table 6.3.2. Rotated Component Matrix

	Components		
	1	2	3
INT GEN 1		0.606	
INT GEN 2	0.610		
INT GEN 3			-0.755
INT GEN 4		0.665	
INT GEN 5		0.810	
INT GEN 6		0.488	
INT DISM 1	0.775		
INT DISM 2	0.581		
INT DISM 3	0.811		
INT DISM 4	0.843		
INT DISM 5	0.666		
INT DISM 6		0.545	
INT DISM 7			0.509
RESPONS 1			0.505
RESPONS 2			0.697
RESPONS 3	0.793		
RESPONS 4			0.525
RESPONS 5	0.667		
RESPONS 6		0.330	
RESPONS 7	0.353		
RESPONS 8		-0.677	
RESPONS 9			0.584

Source: Primary data. Extraction Method: Principal Component Analysis. Rotation Method:Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

The scree plot is used to help determine the optimal number of factors or components to retain in the solution. Here, the scree plot clearly shows that there are three main factors contributing to market orientation.

Fig.6.3. Scree Plot of Factor Analysis of Market Orientation Constructs.

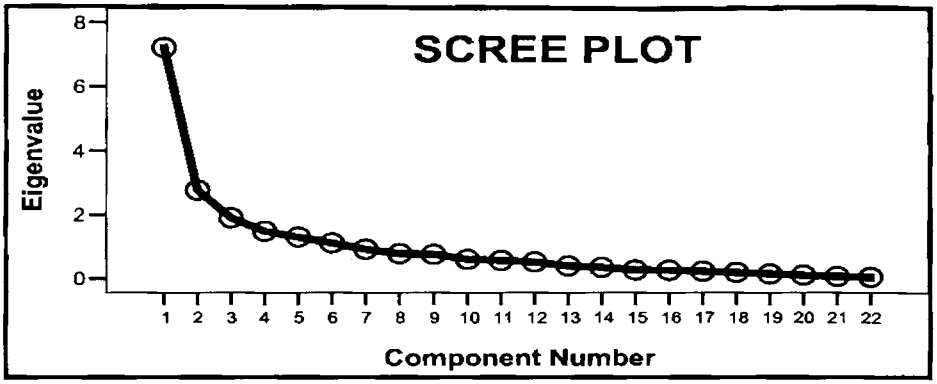


Table 6.3.3. Factor Analysis - Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	Percent of Variance	Cumulative Percentage
1	5.293	24.059	24.059
2	3.534	16.066	40.125
3	3.047	13.851	53.976

Extraction Method: Principal Component Analysis.

The above table shows the rotated sum of squared loadings. It is seen that the three component construct of market orientation explains 54% of the variance in market orientation. Pulendran *et al.*, (2000) reported only 48% variance in their study. Thus, this study supports the Pulendran *et al.*, (2000) recommendation that future studies should explore the scale validation and address the substantive and application issues related to the psychometric deficiencies of the MARKOR scale.

6.4 Descriptive Statistics of the Constructs

The descriptive statistics for the market orientation constructs and for the performance variables are computed as shown in the table below.

Table 6.4. Descriptive Statistics

Variables	Mean	Std. Deviation	Skewness	Kurtosis
Market Orientation Constructs				
Intelligence Generation	3.3009	0.62836	-0.204	-0.892
Intelligence Dissemination	3.4511	0.80129	-0.128	-0.911
Responsiveness	3.8416	0.51340	-0.091	-0.893
Market Orientation	3.7131	0.50013	-0.042	-1.076
Antecedents to Market Orientation				
Interdepartmental Conflict	3.4090	0.49050	-0.004	0.362
Interdepartmental Connectedness	3.8194	0.60721	-0.812	2.144
Formalisation	3.1551	0.62063	0.352	-0.284
Centralisation	3.1870	0.75691	0.315	-0.048
Reward System Orientation	2.7778	0.90289	0.299	-0.170
Top management Emphasis	3.7222	0.63791	-0.462	-0.044
Top Management Risk Aversion	3.0463	0.65202	0.034	-0.195
Environmental Moderators				
Market turbulence	3.5370	0.62125	0.153	-0.151
Technological Turbulence	3.2259	0.76076	-0.072	-0.674
Competitive Intensity	3.7093	0.45494	-0.168	0.233
Business Performance				
Business Performance	3.8095	0.36828	0.130	0.831

Source: Primary data

Table 6.4 lists the means and standard deviations of the variables. It is seen that the market orientation value is generally high (Mean = 3.71, S.D = 0.50). A

similar study on marketing orientation of Indian manufacturing companies, conducted by Mehta and Joag (1981) using a 54-item scale revealed that the average marketing orientation was found to be 2.6 and the standard deviation 0.41, on a 5-point scale with 1 representing the highest orientation.

Correspondingly, the values for the market orientation components in this study are also generally high, ranging from 3.30 to 3.84, the lowest being intelligence generation, and the highest being responsiveness. Thus, the Indian seafood processing plants generally demonstrate a high value for the market orientation constructs. Among the antecedents of market orientation, it is seen that the seafood processing firms generally exhibit highest value for interdepartmental connectedness and lowest for reward systems orientation, with a range between 2.78 to 3.82. Therefore, the statistics show that the activities in the departments are highly connected and integrated. The descriptive statistics show that the top managements are highly involved in market orientation activities (Mean=3.72). Higher degrees of formalisation, centralisation, conflict and top management risk aversion, coupled with a low reward system orientation, show that a lot of work still remains to be done, on the path to complete adoption of market orientation principles. The Indian seafood firms need to initiate and institutionalize a system of change in the company structure, management principles and policies, so that they may augment market orientation and in turn business performance.

In the case of environmental moderators, it is seen that the Indian seafood firms operate under moderate to high degrees of turbulence, namely arising from the competitive intensity (Mean=3.71), which is the highest, followed by market turbulence with a mean score of 3.54 and the lowest being

technological turbulence with a mean score of 3.23. Previous studies generally exhibit that the first two types of moderators tend to increase, while the latter inhibits market orientation.

Seafood firms in India display a high degree of business performance, as evidenced by the mean score of 3.81. Adoption of market orientation principles can increase the performance further.

The table 6.4 shows that the skewness and kurtosis values represents that the data is normally distributed, as the values are generally close to zero. Thus the assumption of normality is adhered to.

6.5 Correlation Analyses

Correlation is a bivariate measure of association (strength) of the relationship between two variables, the Pearson's r being the most common measure adopted. It varies from 0 (random relationship) to 1 (perfect linear relationship) or -1 (perfect negative linear relationship). The significance of each correlation coefficient is also displayed in the correlation table. The significance level (or p-value) is the probability of obtaining results as extreme as the one observed. If the significance level is very small (less than 0.05) then the correlation is significant and the two variables are linearly related. If the significance level is relatively large (for example, 0.50) then the correlation is not significant and the two variables are not linearly related.

Cohen (1988) sets a cutoff point for 0.30 for the correlation between the coefficients to be significant, while Rowntree (1987) formed guidelines for interpreting the correlation value ranges. He advocated that the relationship

was very weak and negligible when r ranges between 0-0.2, weak and low for 0.2-0.4, moderate for 0.4-0.7, strong and high for 0.7-0.9, and very strong and very high for 0.9-1.0. A rule of thumb is that multicollinearity exists when r is greater than 0.90 or several are greater than 0.7 in the correlation matrix formed by all the independents (Hair et al, 1998).

Table 6.5.1. Correlation Analyses of Market Orientation and its Constructs with Business Performance

	IG	ID	IR	MARKOR	BUS.PERF
Intelligence Generation	1	0.499(**)	0.278(**)	0.669(**)	0.510(**)
Significance level		0.000	0.004	0.000	0.000
Intelligence Dissemination	0.499(**)	1	0.629(**)	0.888(**)	0.417(**)
Significance level	0.000		0.000	0.000	0.000
Responsiveness	0.278(**)	0.629(**)	1	0.816(**)	0.239(*)
Significance level	0.004	0.000		0.000	0.013
Market Orientation	0.669(**)	.888(**)	0.816(**)	1	0.488(**)
Significance level	0.000	0.000	0.000		0.000
Business Performance	0.510(**)	0.417(**	0.239(*)	0.488(**)	1
Significance level	0.000	0.000	0.013	0.000	

Source: Primary data.

Correlation is significant at the ** 0.01 level (2-tailed), *0.05 level (2-tailed).

The correlation analysis shows that the results are significant at the 0.000 level. The three constructs are strongly, positively and significantly related to the market orientation construct. Positive moderate correlations are observed between the three components of market orientation except for that between responsiveness and intelligence generation, where it is low. The occurrence of reverse coded items in these scales may be the reason for this discrepancy. All

the components show a high positive correlation to the market orientation and business performance constructs, except for the responsiveness-business performance correlation, which is low.

Table 6.5.2. Correlation Analyses of Market Orientation with Environmental Moderators.

	MARKOR	MKT TURB	TECH TURB	COMP INT	BUS PERF
Market Orientation	1	-0.100	0.244(*)	0.461(**)	0.488(**)
Significance level		0.303	0.011	0.000	0.000
Market turbulence	-0.100	1	0.649(**)	0.285(**)	-0.133
Significance level	0.303		0.000	0.003	0.170
Technological Turbulence	0.244(*)	0.649(**)	1	0.378(**)	0.150
Significance level	0.011	0.000		0.000	0.122
Competitive Intensity	0.461(**)	0.285(**)	0.378(**)	1	0.365(**)
Significance level	0.000	0.003	0.000		0.000
Business Performance	0.488(**)	-0.133	0.150	0.365(**)	1
Significance level	0.000	0.170	0.122	0.000	

Source: Primary data
Correlation is significant at the - ** 0.01 level (2-tailed), *0.05 level (2-tailed).

It is seen that except for market turbulence, all the environmental moderators are positively related to market orientation and business performance. Market turbulence is negatively and insignificantly related to both market orientation and business performance.

Table 6.5.3. Correlation Analyses of Market Orientation with Antecedents.

	1	2	3	4	5	6	7	8	9
Market Orientation	1								
Significance									
Conflict	.245	1							
Significance	.010								
Connectedness	.008	.157	1						
Significance	.934	.105							
Formalisation	.175	-.478	.132	1					
Significance	.070	.000	.174						
Centralisation	-.151	-.326	-.095	.139	1				
Significance	.119	.001	.327	.153					
Reward System	.595	-.114	-.018	.296	.468	1			
Significance	.000	.239	.852	.002	.000				
Management Emphasis	.546	-.126	-.059	.235	.046	.568	1		
Significance	.000	.192	.542	.014	.639	.000			
Risk Aversion	.319	-.024	.251	.380	-.357	.199	.372	1	
Significance	.001	.808	.009	.000	.000	.039	.000		
Business Performance	.488	.174	.178	.171	-.029	.222	.238	.311	1
Significance	.000	.072	.065	.076	.765	.021	.013	.001	

Source: Primary data

The above table shows the correlation matrix for the antecedents, market orientation and business performance. Significant positive relationships exist between market orientation and the antecedents of conflict, reward system orientation, top management emphasis, top management risk aversion and business performance.

Table 6.5.4. Correlation Analyses of Market Orientation with Business Performance Indicators.

	1	2	3	4	5	6
Market Orientation	1	0.488(**)	0.315(**)	0.545(**)	0.452(**)	0.453(**)
Significance	-	0.000	0.001	0.000	0.000	0.000
Business Performance	0.488(**)	1	0.895(**)	0.959(**)	0.683(**)	0.804(**)
Significance	0.000	-	0.000	0.000	0.000	0.000
Economic Performance	0.315(**)	0.895(**)	1	0.732(**)	0.576(**)	0.546(**)
Significance	0.001	0.000	-	0.000	0.000	0.000
Non economic Performance	0.545(**)	0.959(**)	0.732(**)	1	0.678(**)	0.881(**)
Significance	0.000	0.000	0.000	-	0.000	0.000
Customer Consequences	0.452(**)	0.683(**)	0.576(**)	0.678(**)	1	0.506(**)
Significance	0.000	0.000	0.000	0.000	-	0.000
Employee Consequences	0.453(**)	0.804(**)	0.546(**)	0.881(**)	0.506(**)	1
Significance	0.000	0.000	0.000	0.000	0.000	-

Source: Primary data. ** Correlation is significant at the 0.01 level (2-tailed).

The correlationship between market orientation and business performance is further examined by looking at the various components of business performance. Business is measured by both its economic and non-economic indicators. Non-economic indicators include the customer and employee consequences. Market orientation exhibits positive significant relationships to all the business performance components. The highest correlation is showed between market orientation and non-economic performance (r=0.545). According to Hair *et al.*, (1998), correlations between independent variables of 0.90 and above indicate multicollinearity problems. Since the non-economic

business performance is a component of overall business performance, the question of multicollinearity does not arise.

Thus, there is no evidence of multicollinearity existing between any of the variables. Therefore another assumption of normality is adhered to.

6.6 Conclusion

This chapter examined the psychometric properties of the market orientation scales used in the study. The reliability and validity studies were conducted to assess the suitability of the research instrument and to check whether the data obtained is appropriate and relevant to the study. Descriptive statistics of all the measures were then computed followed by correlation analyses to establish the relationship between the variables, before the application of empirical tests, and to test for multicollinearity as well, which would otherwise hamper the quality of the results obtained.

CHAPTER 7

EMPIRICAL RESULTS

7.1 Introduction

This chapter bears the most important findings of this thesis. Here the testing of the hypotheses pertaining to the relationship between market orientation and business performance, the role of the antecedents to market orientation and the role of moderators are performed. The effect of the antecedents and moderators pertaining to the Indian seafood industry, and their relationship to the constructs of intelligence generation, intelligence dissemination and responsiveness and to business performance are detailed through the method of stepwise multiple regression analysis.

7.2 Hypothesis Testing using Stepwise Regression Analysis

This section includes the results of the major hypotheses of the thesis. Hypothesis testing is done by the multiple regression analysis, using the step-wise method. Coakes and Steed (2001) have laid down the rule regarding the use of the regression analysis, namely that the study should have at least five times the number of cases than the independent variables. This study meets with the above requirement comfortably. All the assumptions of regression

analysis are fulfilled, as shown in Chapter 3. The stepwise regression analysis is based on the variance of the variables. The probability for entry and removal of the variables are specified and accordingly, the variables in the order of importance are loaded onto the model. The probability value for entry into the model is 0.05 while the probability for removal of the variable is 0.1. Stepwise procedures select the most correlated independent first, remove the variance in the dependent, then select the second independent which most correlates with the remaining variance in the dependent, and so on until selection of an additional independent does not increase the R-squared by a significant amount (usually significant = 0.05). Mainly four major hypotheses are being tested in this chapter. They include:

Hypothesis I

Antecedents significantly determine levels of Intelligence generation.

Antecedents significantly determine levels of Intelligence dissemination

Antecedents significantly determine levels of Intelligence responsiveness

Hypothesis II

Antecedents determine the level of overall market orientation of firms.

Hypothesis III

Market orientation significantly determines level of Business performance.

Hypothesis IV

The market orientation-business performance relationship is moderated by market turbulence, technological turbulence and competitive intensity.

The hypotheses and results of regression analyses are discussed in the following sections.

7.2.1 Hypothesis I:-

7.2.1.1 Antecedents significantly determine levels of Intelligence generation.

The first regression analysis involves the relationship between the seven independent variables, i.e., the antecedents and the dependent variable intelligence generation. This hypothesis thus involves seven sub-hypotheses 1-7 jointly given:

Intelligence generation increases when, the top management emphasis increases, the top management risk aversion decreases, the interdepartmental connectedness increases, the interdepartmental conflict decreases, the formalization decreases, the centralization decreases, and when the reward system orientation increases.

They are represented by the following regression equation:

$$\text{I.G.} = \alpha + \beta_1 \times \text{TME} + \beta_2 \times \text{RA} + \beta_3 \times \text{IDCN} + \beta_4 \times \text{IDCL} + \beta_5 \times \text{FM} + \beta_6 \times \text{CN} + \beta_7 \times \text{RSO} + e_i$$

According to Jaworski and Kohli (1993), the antecedents to intelligence generation included top management emphasis, reward system orientation and centralization. Thus this study is partially consistent with above results as, it is seen that the predictors for the model include only two out of the seven antecedents namely, Top Management Emphasis and Interdepartmental Connectedness. Thus, the sub- hypotheses 1 and 3 are supported, while hypotheses 2, 4, 5, 6 and 7 are rejected.

The following table illustrates the stepwise regression analysis for the above hypotheses.

Table 7.2.1.1. Antecedents to Intelligence Generation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
AVERAGE INTELLIGENCE GENERATION	Top Management Emphasis	0.284	3.087	0.003
	Top Management Risk Aversion	-0.067	-0.649	0.518
	Interdepartmental connectedness	0.196	2.128	0.036
	Interdepartmental conflict	0.134	1.434	0.155
	Formalisation	0.033	0.340	0.735
	Centralisation	-0.168	-1.838	0.069
	Reward System Orientation	0.067	0.595	0.553

R^2 = 11.3%, Adjusted R^2 = 9.6%, F-Statistic significant at 0.002 level

The regression explains only 10 % of the variance in intelligence generation and is lower than Jaworski & Kohli's 1993 study, which had an R^2 value of 0.34, for Sample I and 0.33 for Sample II. Nevertheless, its F value is highly significant at the 0.002 level. Thus, although the model explains a statistically significant amount of the variation, it still leaves most of it unexplained.

Thus the estimated model, which contains two independent factors, is as represented below-:

Intelligence Generation= 1.484 + 0.284 × Top Management Emphasis+ 0.196 ×Interdepartmental Connectedness.

Further, the t values and the significance level suggest that for the given model the two independent variables are useful predictors of intelligence generation.

The top management emphasis (ß=0.284, p=0.003) is statistically significant and positively related to the market orientation construct of intelligence generation. This suggests that Indian seafood firms can increase their market orientation and therein their business performance, if the top management commits more of their time and energy towards creating and inculcating a market oriented behaviour in their employees. This change will be brought about through the construct of intelligence generation. The studies also reveal that, holding interdepartmental connectedness constant, with the change of

one unit of top management emphasis, the intelligence generation of the seafood firms in India is increased by 0.28 units. This reinforces the theory that the top management's active participation is necessary to effect any possible positive change in the firm towards market orientation.

Alternatively, it also suggests that with all other variables kept constant i.e. the top management emphasis on market orientation, intelligence generation increases by 0.20 units, with a unit change in interdepartmental connectedness. This relationship further shows that in firms which are more internally connected, the intelligence generated seems to be more than in firms, which are less internally connected. It thus follows that, if the firms focus on increasing their interdepartmental communication, then the market orientation will increase through an increase in the intelligence generated. Therefore, there is partial support for Hypothesis 7.2.1.1.

7.2.1.2 Antecedents significantly determine levels of Intelligence dissemination

The second stepwise multiple regression analysis assesses the relationship between the seven independent variables, i.e., the antecedents and the

dependent variable intelligence dissemination. The sub-hypotheses 1-7 involved include:

Intelligence dissemination increases when top management emphasis increases, top management risk aversion decreases, interdepartmental connectedness increases, interdepartmental conflict decreases, formalization decreases, centralization decreases and reward system orientation increases.

The above hypotheses are represented by the following regression equation:

$$\textbf{I.D.} = \alpha + \beta_1 \times \textbf{TME} + \beta_2 \times \textbf{RA} + \beta_3 \times \textbf{IDCN} + \beta_4 \times \textbf{IDCL} + \beta_5 \times \textbf{FM} + \beta_6 \times \textbf{CN} + \beta_7 \times \textbf{RSO} + e_i.$$

The table 7.2.1.2 illustrates the stepwise regression analysis for the hypotheses.

Table 7.2.1.2. Antecedents to Intelligence Dissemination.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
AVERAGE INTELLIGENCE DISSEMINATION	Top Management Emphasis	0.254	3.083	0.003
	Top Management Risk Aversion	-0.142	-1.815	0.072
	Interdepartmental connectedness	-0.113	-1.744	0.084
	Interdepartmental conflict	0.124	1.797	0.075
	Formalisation	0.054	0.793	0.430
	Centralisation	-0.344	-4.484	0.000
	Reward System Orientation	0.642	6.896	0.000

R^2 = 56.5%, Adjusted R^2 = 55.3%, F-Statistic significant at 0.000 level.

The regression explains 55 % of the variance in intelligence dissemination and its F value is highly significant at the 0.000 level. From the above table, it is seen that there are three significant and useful predictors for the model, namely Top Management Emphasis, Centralisation and Reward System Orientation. Thus, the sub- hypotheses 1, 6 and 7 are supported, while hypotheses 2, 3, 4 and 5 are rejected. Jaworski & Kohli's seminal work included the antecedents of conflict and connectedness, besides the above three antecedents revealed in the present study.

Thus the estimated model, which contains three independent factors, is as represented -:**I.D. = 1.842 + 0.254 × TME – 0.344 × CN + 0.642 × RSO.**

The top management emphasis and reward system orientation are statistically significant and positively related to the market orientation construct of intelligence dissemination, while the predictor variable Centralisation shows a negative but statistically significant relationship, as expected. This suggests that intelligence sharing in Indian seafood firms increases with active encouragement from the top management, formulation of the right reward systems and adoption of a decentralised pattern of decision making. The results further imply that, holding the other predictor variables constant, with the change of one unit of top management emphasis, the intelligence

dissemination in the seafood firms in India is increased by 0.25 units. This reinforces the necessity of the top management's active participation in effecting any possible positive change in the firm towards the adoption of the market orientation philosophy.

Alternatively, it also suggests that with all other variables kept constant, a unit decrease in centralisation brings about an increase in market orientation by 0.34 units. Similarly, a unit increase in the institution of reward systems increases the market oriented behaviour of firms by 0.64 units.

Thus, the three antecedents influencing level of intelligence dissemination in Indian seafood processing firms include top management emphasis, centralisation and reward system orientation, while the other four antecedents namely, risk aversion of top management, interdepartmental connectedness, conflict and formalisation were insignificant and were subsequently removed from the regression equations during the stepwise regression procedure. Therefore, Hypothesis 7.2.1.2 is partially supported.

7.2.1.3. Antecedents significantly determine levels of Intelligence responsiveness

The second stepwise multiple regression analysis assesses the relationship between the seven independent variables, i.e., the antecedents and the

dependent variable intelligence responsiveness. This hypothesis involves sub-hypotheses 1-7 given jontly, as below:

Intelligence responsiveness increases when, top management emphasis increases, risk aversion decreases, interdepartmental connectedness increases, interdepartmental conflict decreases, formalization increases, centralization decreases and reward system orientation increases.

The above hypotheses are represented by the following regression equation:

$$\text{I.R.} = \alpha + \beta_1 \times \text{TME} + \beta_2 \times \text{RA} + \beta_3 \times \text{IDCN} + \beta_4 \times \text{IDCL} + \beta_5 \times \text{FM} + \beta_6 \times \text{CN} + \beta_7 \times \text{RSO} + e_i.$$

The table 7.2.1.3 illustrates the stepwise regression analysis for the above hypotheses.

Table 7.2.1.3. Antecedents to Intelligence Responsiveness.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
AVERAGE INTELLIGENCE RESPONSIVENESS	Top Management Emphasis	0.045	0.572	0.569
	Top Management Risk Aversion	0.179	2.366	0.020
	Interdepartmental connectedness	-0.299	-4.763	0.000
	Interdepartmental conflict	0.273	4.165	0.000
	Formalisation	-0.042	-0.540	0.590
	Centralisation	-0.449	-5.276	.000
	Reward System Orientation	0.675	8.869	0.000

R^2 = 64.0%, Adjusted R^2 = 62.2%, F-Statistic significant at 0.000 level

The resultant model is: **I.R. = 3.310 + 0.179 × R.A – 0.299 × IDCN + 0.273 × IDCL – 0.449×CM+ 0.675× RSO.**

The t values and significance levels corresponding to the factors included in the model shows that all the factors are useful predictors of average intelligence responsiveness. Thus the predictor variables in the model include top management risk aversion, interdepartmental connectedness, interdepartmental conflict, centralisation and reward system orientation. The factors excluded from the chosen model, namely top management emphasis and formalization, are not significant and are not useful predictors of the dependent variable. Further, their partial correlation values are low.

It is seen that, contrary to the hypothesized relations, the interdepartmental connectedness and conflict are both oppositely related to market responsiveness.

7.2.2. Hypothesis II:-

7.2.2.1 Antecedents determine the level of firms' overall market orientation.

Here, the market orientation represents the unweighted average of all the three constructs namely, intelligence generation, intelligence dissemination and responsiveness to the information which was generated and disseminated.

This hypothesis involves seven sub-hypotheses, namely:

Market Orientation increases when, top management emphasis increases, risk aversion decreases, interdepartmental connectedness increases, interdepartmental conflict decreases, formalization increases, centralization decreases and reward system orientation increases.

The regression equation for market orientation is:

$$\mathbf{MARKOR} = \alpha + \beta_1 \times \mathbf{TME} + \beta_2 \times \mathbf{RA} + \beta_3 \times \mathbf{IDCN} + \beta_4 \times \mathbf{IDCL} + \beta_5 \times \mathbf{FM} + \beta_6 \times \mathbf{CN} + \beta_7 \times \mathbf{RSO} + e_i$$

The table 6.3.4 illustrates the stepwise regression analysis for the above hypotheses. The table shows that the significant predictors for the dependent variable include top management emphasis, interdepartmental conflict, centralisation and reward system orientation. This is consistent with Jaworski and Kohli's study, which also additionally includes interdepartmental connectedness. Sample I of the Jaworski & Kohli study includes centralisation, but in Sample II of the same study, centralisation is deemed insignificant. The table 6.3.4 represents the summary of the above regression analysis.

Table 7.2.2.1. Antecedents to Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
AVERAGE MARKET ORIENTATION	Top Management Emphasis	0.190	2.477	0.015
	Top Management Risk Aversion	-0.059	-0.803	0.424
	Interdepartmental connectedness	-0.043	-0.711	0.479
	Interdepartmental conflict	0.213	3.346	0.001
	Formalisation	0.117	1.663	0.099
	Centralisation	-0.422	-5.635	0.000
	Reward System Orientation	0.709	8.241	0.000

R^2 = 64.1%, Adjusted R^2 = 62.7%, F-Statistic significant at .000 level

The four predictors account for 62.7% of the variance. The F-statistic is found significant at the 0.000 level. Thus, the sub- hypotheses 1, 4, 6 and 7 are supported, while hypotheses 2, 3 and 5 are rejected. Thus the estimated model, which contains three independent factors, is as represented below-:

$$\mathbf{MARKOR} = \alpha + 0.190 \times \mathbf{TME} + 0.213 \times \mathbf{IDCL} - 0.422 \times \mathbf{CN} + 0.709 \times \mathbf{RSO} + e_i$$

The top management emphasis and the reward systems are both positively related and significant to market orientation, while the centralisation variable is negatively related and significant to market orientation, as expected. Another point of interest was that the interdepartmental connectedness was

negatively and insignificantly related to the dependent variable, while the interdepartmental conflict was positively and significantly related. The negative and significant value of the centralisation variable shows that a decentralised mode of decision-making would help in fostering market orientation, and that the top management needs to adopt a bottoms-up approach and encourage and empower the employees to make decisions regarding their work, so that they are motivated to do their best and are committed to the goals of the organisation.

Although the positive relationship between the conflict variable and market orientation is contrary to the findings of Jaworski and Kohli (1993), Pulendran *et al.*, (2000), Selnes *et al.*, (1996) etc, support is found in a similar observation has been made by Qu *et al.*, (2002) in Chinese firms across two different industries. Therefore hypothesis 7.2.2.1 is partially supported.

7.2.2.2. Summary of Stepwise Regression Analysis – Antecedents to Market Orientation

A consolidated analysis of the regression results of the two hypotheses is given below in the Table 7.2.2.2. The regression results of the relationships between the independent variables, i.e. the antecedents and the dependent variables

namely intelligence generation, intelligence dissemination, responsiveness and overall market orientation are shown in the following summary. The results show only the relevant significant values of the standardized beta regression coefficients.

Table 7.2.2.2. Summary of Stepwise Regression Analysis – Antecedents to Market Orientation- Anticipated and Obtained Results

Independent Variables	Overall Market Orientation	Intelligence Generation	Intelligence Dissemination	Responsiveness
Top Management Emphasis	0.190 (+)	0.284 (+)	0.254 (+)	+ NS (+)
Risk Aversion	– NS (–)	– NS (–)	– NS (–)	0.179 (–)
Connectedness	– NS (+)	0.196 (+)	– NS (+)	-0.299 (+)
Conflict	0.213 (–)	+ NS (–)	+ NS (–)	0.273 (–)
Formalisation	+ NS (–)	+ NS (–)	+ NS (–)	– NS (–)
Centralisation	-0.422 (–)	– NS (–)	-0.344 (–)	-0.449 (–)
Reward System	0.709 (+)	+ NS (+)	0.642 (+)	0.675 (+)
Constant	2.217	1.484	1.842	3.310
R^2	0.641	0.113	0.565	0.640
Adjusted R^2 (%)	62.7%	9.6%	55.3%	0.622
F Statistic	46.001	6.663	45.107	36.224
Significance	0.000	0.002	0.000	0.000

Anticipated Result in Parentheses; NS– Not significant; **p<0.01; *** p<0.001;

On reviewing the results of the stepwise regression analysis with respect to the relationship between the antecedents and the market orientation in Indian

seafood processing firms, it is noted that the results show a marked convergence to the existing market orientation literature. The only exceptions relate to the antecedents of interdepartmental connectedness and conflict, which show opposite relationship to market orientation. Each of the factors is examined here individually.

1. Top management emphasis is important in the collection and sharing of information, but it is insignificant in framing a response to the intelligence generated. It also forms a significant variable of overall market orientation. The relationships are all positive, as hypothesized.

2. Top management risk aversion has been hypothesized to be significant and negative in all relationships to the constructs of market orientation and overall market orientation. But the results show that, out of the three constructs of market orientation, it is only significant in the responsiveness construct, where it is positively related. It shows a negative but insignificant relationship in the case of intelligence generation and intelligence dissemination.

3. Interdepartmental connectedness is hypothesized to have a positive effect on all the four dependent variables. But the results demonstrate that all the relationships with the exception of intelligence generation, are found to be negatively related. The results are significant only in the case of intelligence

generation and responsiveness, whereas it is insignificant in intelligence dissemination and overall market orientation.

4. Interdepartmental conflict is hypothesized to be negatively related to all the four dependent variables. Existing literature also emphasizes the adverse effect of conflict on all the marketing constructs. But this study shows that conflict is positively related to overall market orientation and responsiveness. In the case of intelligence generation and dissemination, the value of standardized beta coefficient is positive but insignificant.

5. In the case of formalisation, the study corrobates the findings of Jaworski and Kohli (1993), Selnes *et al.,* (1996), Pulendran, Speed and Widing Jr. (2000), and Shoham and Rose (2001), in that all of them reported insignificant influence of formalisation on market orientation. The only difference was that in this study formalisation showed positive but insignificant relation to overall market orientation, intelligence generation and dissemination, while responsiveness remained true to the hypothesis.

6. The antecedent centralisation, as hypothesized was found to have a significant negative relation to all the dependent variables, except for intelligence generation, where the ß value was insignificant, although negative.

Nevertheless, centralisation is an important factor affecting overall market orientation.

7. The reward system orientation based on customer satisfaction, has the highest ß value for all the constructs. It has a positive relationship to all the dependent variables, except intelligence generation. Reward system orientation, as proposed by Jaworski & Kohli (1993) thus plays a very important role in facilitating market orientation.

7.2.3 Hypothesis III: Market orientation significantly determines level of Business Performance.

7.2.3.1. Market orientation significantly determines level of Overall Business performance.

This is the most important objective of this thesis. This study thus attempts to replicate the studies done by Kohli & Jaworski (1991) and Jaworski & Kohli (1993). The postulate that improved business performance is the consequence of implementing market orientation is tested here. The table 6.3.3.1 below presents the results of the stepwise regression analysis for the major consequence namely business performance. The table below shows that in the Indian seafood industry, out of the three constructs of market orientation, the

intelligence generation and intelligence dissemination significantly determine business performance, while responsiveness is insignificant.

Table 7.2.3.1.Overall Business Performance Consequence of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
BUSINESS PERFORMANCE	Intelligence Generation	0.402	4.248	0.000
	Intelligence Dissemination	0.216	2.286	0.024
	Responsiveness	-0.015	-0.141	0.888

R^2 = 29.5%, Adjusted R^2 = 28.1%, F-Statistic significant at 0.000 level

The model explains 28% of the variance in business performance and is significant at the 0.000 level. The table demonstrates that, of the three constructs of market orientation, only the first two namely intelligence generation and intelligence dissemination are significantly and positively related to business performance. The third construct of responsiveness showed an insignificant value and was hence dropped from the stepwise regression analysis.

The table also holds that if keeping the intelligence dissemination constant, one unit of intelligence generation is increased, there is also an increase in the business performance by 0.402 units. Similarly a unit increase in intelligence

dissemination produces a 0.216 unit increase in business performance keeping the intelligence generation variables constant.

This partially proves the original hypothesis that business performance in Indian seafood firms will be increased, if the firms adopt market orientation.

7.2.3.2. Market orientation significantly determines level of Economic Performance and Non-Economic Performance.

A further classification of the overall business performance into economic performance and non-economic performance was done to study the impact of market orientation on the respective performances. The economic business performance comprised of five subjective measures namely, increase in performance over last year, performance relative to major competitors, return on investment relative to all competitors, sales of the firm relative to all competitors last year, and the business performance relative to expected outcomes last year. The table below shows the relationship between economic business performance and market orientation.

Table 7.2.3.2.1. Economic Business Performance Consequence of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
ECONOMIC BUSINESS PERFORMANCE	Intelligence Generation	0.469	5.460	0.000
	Intelligence Dissemination	0.018	0.182	0.856
	Responsiveness	-0.060	-0.667	0.506

R^2 = 22.0%, Adjusted R^2 = 21.2%, F-Statistic significant at 0.000 level

From the table it is clear that only the intelligence generation is positively and significantly related to and accounts for 21.2% of the variation in economic business performance. The other two constructs have been removed from the stepwise regression analysis, due to their insignificant contributions.

The non-economic performance measures included sixteen subjective measures, which included scales on the customer satisfaction, repeat purchase frequency, employee consequences, equity measures, environmental factors affecting the job, introduction of new products, relative trend of product pricing, material usage efficiency, labour efficiency, capital utilization efficiency, environment protection awareness and market expansion.

Table 7.2.3.2.2. Non-Economic Business Performance Consequence of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
NON-ECONOMIC BUSINESS PERFORMANCE	Intelligence Generation	0.322	3.433	0.001
	Intelligence Dissemination	0.319	3.400	0.001
	Responsiveness	0.045	0.425	0.672

R^2 = 30.7%, Adjusted R^2 = 29.4%, F-Statistic significant at 0.000 level

Thus, both intelligence generation and intelligence dissemination are significant contributors to the non-economic business performance. Together they account for 29.4% of the variance in the dependent variable. The variable responsiveness is seen to be insignificant and is removed from the regression analysis.

The results showed that market orientation showed a significant effect on both the economic and the non-economic performance indicators, but the variance was higher in the case of the latter (ΔR^2= 29.4%, F-statistic significant at p=0.000) than the former (ΔR^2= 21.2%, F-statistic significant at p=0.000). This corrobates the findings of Jaworski and Kohli (1993) in that the effect of market orientation is more pronounced in the non-economic factors of business performance than in economic factors.

7.2.3.3. Market orientation significantly determines level of Customer Consequences.

This includes the measures of customer satisfaction and repeat customers.

Table 7.2.3.3. Customer Consequences of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
CUSTOMER CONSEQUENCES	Intelligence Generation	0.153	1.476	0.143
	Intelligence Dissemination	0.370	4.104	0.000
	Responsiveness	0.199	1.732	0.086

R^2 = 13.7%, Adjusted R^2 = 12.9%, F-Statistic significant at .000 level

The table also reveals that intelligence dissemination accounts for 12. 9% of the customer consequences (ß=0.370, p=0.000). The other two constructs of market orientation were removed from the regression analysis due to insignificant contributions. Hence increasing a unit of intelligence dissemination increases the benefits to consumers by 0.37 units.

7.2.3.4. Market orientation significantly determines level of Employee Consequences.

The employee consequences include measures like employee commitment, employee job satisfaction and job security, improvement in equity of the company and improvement in training function.

Table 7.2.3.4. Employee Consequences of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
EMPLOYEE CONSEQUENCES	Intelligence Generation	0.010	0.098	0.922
	Intelligence Dissemination	0.500	5.939	0.000
	Responsiveness	-0.098	-0.908	0.366

R^2 = 25.0%, Adjusted R^2 = 24.3%, F-Statistic significant at 0.000 level

The result shows that only intelligence dissemination contributes to the dependent variable employee consequences and accounts for 24.3% of its variance.

7.2.3.5. Market orientation significantly determines level of Customer Retention Consequences.

In the Indian seafood processing industry it is seen that both intelligence generation and intelligence responsiveness contribute to customer retention significantly. Intelligence dissemination is seen to be removed from the regression analysis as it is insignificant.

Table 7.2.3.5. Customer Retention Consequence of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
NUMBER OF REPEAT CUSTOMERS INCREASING.	Intelligence Generation	0.225	2.388	0.019
	Intelligence Dissemination	-0.005	-0.040	0.968
	Responsiveness	0.240	2.547	0.012

R^2 = 13.8%, Adjusted R^2 = 12.2%, F-Statistic significant at 0.000 level

The model accounts for 12% of the variance in the customer retention consequence. While keeping intelligence generation constant, a unit increase in responsiveness leads to an increase in customer retention by 0.24 units. Similarly a unit increase in intelligence generation leads to a 0.225 unit increase in customer retention.

7.2.3.6. Market Orientation Significantly Determines Level of Introduction of New or Modified Products.

The construct of intelligence dissemination is seen to be the only significant variable affecting the success rate in introduction of new or modified products. The table 7.2.3.6 shows that intelligence dissemination accounts for 9% of variance in the new product introduction success. The standardized regression coefficient shows that for a unit increase in the intelligence dissemination, the dependent variable increases by 0.312 units.

Table 7.2.3.6. Increasing Success in Introduction of new or modified products Consequence of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
SUCCESS RATE IN INTRODUCING NEW OR MODIFIED PRODUCTS INCREASING	Intelligence Generation	0.054	0.502	0.617
	Intelligence Dissemination	0.312	3.378	0.001
	Responsiveness	0.190	1.617	0.109

R^2 = 9.7%, Adjusted R^2 = 8.9%, F-Statistic significant at 0.001 level

The other two constructs are found to be insignificant.

7.2.3.7. Market orientation significantly determines level of Market expansion

The table below shows that intelligence generation and intelligence dissemination are significantly related to the dependent variable namely improving market expansion. The model accounts for 29% of the variance in the dependent variable. It is noted that the intelligence dissemination is negatively related to market expansion, while intelligence generation is positively related.

Table 7.2.3.7. Market Expansion Consequence of Market Orientation.

Dependent Variable	Independent Variables	Standardized Coefficient Beta	T Value	Significance
IMPROVING MARKET EXPANSION	Intelligence Generation	0.631	6.716	0.000
	Intelligence Dissemination	-0.256	-2.719	0.008
	Responsiveness	0.035	0.335	0.738

R^2 = 30.3%, Adjusted R^2 = 29.0%, F-Statistic significant at 0.000 level

The regression results for the overall business performance, economic performance, non-economic performance, customer consequences, employee consequences, frequency of repeat sales, success rate in introduction of new products, learning orientation, entrepreneurial orientation, product line

expansion and innovation consequences are all discussed below.

Table 7.2.3.8 Summary of Stepwise Regression Analysis – Consequences of Market Orientation

Independent Variable	Dependent Variables- Consequences	Standardized Coefficient Beta	T Value	Significance	R^2	Adjusted R^2
AVERAGE MARKET ORIENTATION	Overall Business Performance	0.488	5.752	0.000	0.238	0.231
	Economic Performance	0.315	3.420	0.001	0.099	0.091
	Non Economic Performance	0.545	6.688	0.000	0.297	0.290
	Customer Consequences	0.452	5.220	0.000	0.204	0.197
	Employee Consequences	0.453	5.230	0.000	0.205	0.198
	Repeat Sales	0.345	3.786	0.000	0.119	0.111
	Success rate of new products	0.379	4.211	0.000	0.143	0.135
	Learning Orientation	0.677	9.464	0.000	0.458	0.453
	Entrepreneurial Orientation	0.675	9.419	0.000	0.456	0.450
	Pdt expansion	0.261	2.782	0.006	0.068	0.059
	Innovation	0.441	5.064	0.000	0.195	0.187

The results show that the market orientation accounts for 23% of the variation in overall business performance i.e., there is a significant positive relationship between market orientation and overall business performance in Indian seafood processing firms. This proves the original hypothesis that business performance in Indian seafood firms will be increased, if the firms adopt market orientation (ß=0.488, p=0.000). This result is consistent with the

existing literature studies. Jaworski and Kohli (1990, 1993), Narver and Slater (1990), Pulendran, *et al.*,(2000), Shoham and Rose (2001), Selnes *et al.*, (1996) and Mehta and Joag (1981) all report that market orientation is significantly and positively related to business performance.

7.2.4. Hypothesis IV

The Market orientation-business performance relationship is moderated by environmental moderators like market turbulence, technological turbulence and competitive intensity.

It is hypothesized that Business performance increases when, technological turbulence decreases, market turbulence increases and competitive intensity increases.

The regression equation for the above hypothesis is as follows:

$$\textbf{Business Performance} = \alpha + \beta_1 \times \textbf{MARKOR} + \beta_2 \times \textbf{MKTTURB} + \beta_3 \times \textbf{TECHTURB} + \beta_4 \times \textbf{COMPINT} + \beta_5 \times \textbf{MARKOR} * \textbf{MKTTURB} + \beta_6 \times \textbf{MARKOR} * \textbf{TECHTURB} + \beta_7 \times \textbf{MARKOR} * \textbf{COMPINT} + \textbf{ei}$$

Where MARKOR*MKTTURB=the multiplicative interactive term of market turbulence, MARKOR*TECHTURB=the multiplicative interactive term of technological turbulence and MARKOR*COMPINT = the multiplicative interactive term of competitive intensity.

The results of the studies on the effect of the moderators on the relationship between market orientation and business performance has been cited frequently in the market orientation literature, mainly by Kohli and Jaworski (1990), Jaworski and Kohli (1993), Narver and Slater (1990), Slater and Narver (1994a), Greenley (1995b), Selnes *et al.,* (1996), Pulendran *et al.,* (2000) etc. Jaworksi & Kohli (1993) found no effect of moderators, while Narver and Slater (1994) reported limited effect of competitive environment on the market orientation–business performance relationship. Greenley (1995) in his study on the effect of market orientation on business performance in the form of new product success found that market turbulence and technological turbulence had a negative effect on the market orientation and business performance relationship. Pulendran, *et al.,* (2000) report that market turbulence plays a positive moderator role on the market orientation-business performance relationship. The moderated regression analysis test as recommended by Sharma *et al.,* (1981) was used to test for moderators in the relationship between market orientation and business performance.

7.3 Moderated Regression Analysis

The hypotheses are first tested with moderated regression analysis as proposed by Sharma, Durand and Gur-Arie (1981). If the relationship is significant this

suggests the presence of a moderator effect, conversely the absence of a significant relationship leads to the next step wherein it is determined whether the hypothesized moderator is related to either the predictor or criterion variable.

According to the moderator regression analysis, Sharma, Durand and Gur-Arie (1981) propose that the following three equations be considered for equality of regression coefficients (Zedeck, 1971):

$y = a + b_1 x$ ---- (1)

$y = a + b_1 x + b_2 z$ ---- (2)

$y = a + b_1 x + b_2 z + b_3 xz$ ---- (3)

They classify hypothesized moderators into three namely, pure moderators, homologizers and quasi moderators. If equations (2) and (3) are not significantly different, i.e., $b_3=0$, $b_2\neq0$, then the variable z is not a moderator variable instead an independent predictor variable. If z is a pure moderator variable, then $b_2=0$, $b_3\neq0$, i.e. equations (1) and (2) are significantly similar, but different from equation (3). Conversely it is a quasi moderator variable if $b_2\neq0$, $b_3\neq0$ i.e. if all the three equations are significantly different from each other.

Here it is seen that, in the case of market turbulence, $b_2\neq0$, $b_3=0$. Therefore as

Sharma *et al.,* (1981) advocate, market turbulence is not a moderator variable instead is an independent predictor variable. Therefore it should be treated as an independent predictor variable. Then the competitive intensity variable is a pure moderator as the values for $b_2=0$, $b_3\neq0$, pending further analysis as per the framework proposed by Sharma *et al.,* (1981).

The framework proposed by Sharma *et al.,* (1981) for identifying moderator variables, includes the following four steps:

1. Using the Moderated Regression Analysis (MRA) procedure to determine whether any significant interaction exists between the hypothesized moderated variable, z, and the market orientation variable. If a significant interaction exists, they suggest proceeding to Step 2, and if not, proceeding to Step 3.

The stepwise regression results are given in the table below for the relationships between the overall business performance, and the dependent variables of:

(a) Market orientation,

(b) The hypothesized moderators namely, competitive intensity, market turbulence and technological turbulence, and

(c) The multiplicative interaction terms of market orientation and competitive intensity (MARKOR*COMPINT), market orientation and market

turbulence (MARKOR*MKTTURB) and market orientation and technological turbulence (MARKOR* TECHTURB).

In the table 7.2.3.8, the model accounts for 28.6% of the variance in the dependent variable business performance.

Table 7.3.1 Stepwise Regression Analysis – Hypothesized Moderators with Market Orientation and Business Performance

Dependent Variable	Independent Variables	Standardized Coefficient ß	T Value	Significance
Overall Business Performance	Market Orientation	0.005	0.026	0.980
	Market Turbulence	- 0.178	-2.171	0.032
	Technological Turbulence	0.150	1.283	0.202
	Competitive Intensity	-0.080	-.516	0.607
	MARKOR * COMPINT	0.533	6.502	0.000
	MARKOR * MKTTURB	0.327	1.225	0.223
	MARKOR * TECHTURB	0.150	1.283	0.202

R^2=0.30, Adjusted R^2=28.6%

It is noted that only two independent variables contribute significantly to the business performance. One is market turbulence (ß=-.178, p=0.032) and the other is the multiplicative interaction term of market orientation and competitive intensity (ß=0.533, p=0.00). Since a significant interaction exists, the next procedure will be Step 2.

2. Determining if z, the hypothesized moderator (here, the multiplicative interaction term of market orientation and competitive intensity) is related to the criterion variable business performance. If it is, then z is a quasi moderator

variable, and if not, then z is a pure moderator. This is verified by conducting a Pearson's correlation test among the variables.

Table 7.3.2. Correlation Analysis of the Hypothesized Moderators with Market Orientation and Overall Business Performance.

Variables	MARKOR	OBP	MKTTURB	TECHTURB	COMPINT
MKTTURB	-0.100	-0.133	1	0.649(**)	0.285(**)
p =	0.152	0.085	-	0.000	0.001
TECHTURB	0.244(**)	0.150	0.649(**)	1	0.378(**)
p =	0.005	0.061	0.000	-	0.000
COMPINT	0.461(**)	0.365(**)	0.285(**)	0.378(**)	1
p =	0.000	0.000	0.001	0.000	-

**** Correlation is significant at the 0.01 level (1-tailed).**

Competitive intensity shows significant relationship towards both market orientation and business performance. Hence it is not a pure moderator; instead it is a quasi moderator. Market turbulence shows no relationship to either market orientation or business performance. Hence we next proceed to Step 3.

3. Determining if z is related to the criterion variable - business performance or the predictor variable - market orientation, if yes, then z is not a moderator, instead an exogenous, predictor, intervening, antecedent or a suppressor variable. If z is not related to either variable then they recommend proceeding to Step 4.

Here, for those hypothesized moderators which did not yield significant results

in terms of their multiplicative interaction terms, namely market turbulence and technological turbulence, it is determined whether they are related either to the criterion variable or the predictor variable. It is noted from the correlation test that technological turbulence is related to the predictor variable market orientation, while market turbulence is not related to either of them. Thus according to Sharma *et al.,* (1981), it holds that technological turbulence is not a moderator, while market turbulence needs to be checked to see if it is a homologizer.

4. This step involves splitting the total sample into subgroups on the basis of the hypothesized moderator variable based on the median or similar type of split. Then a test of significance is to be done for differences across the subgroups. If significant differences exist, z is a homologizer, operating through the error term, if not, z is not a moderator and the analysis concludes.

As described above, the subgroup analysis was conducted for testing presence of homologizer by splitting the samples into two halves based on the median, running correlation analysis and testing significance for differences between the correlation coefficients for subgroups. The results for the subgroup analysis shows that there is no difference between the two subgroups of market turbulence. Thus market turbulence is not a homologizer.

Therefore, the only moderator variable mediating the relationship between market orientation and business performance in the seafood industry is competitive intensity. It is positively and significantly related to the market orientation-business performance relationship.

7.4 Conclusions

- In Hypothesis 7.2.1.1, the sub-hypotheses 1 and 3 are supported.
- In Hypothesis 7.2.1.2, the sub-hypotheses 1,6 and 7 are supported.
- In Hypothesis 7.2.1.3, the sub-hypotheses 2,6 and 7 are supported. In hypotheses 2,3 and 4 are not supported but are signigficant.
- In Hypothesis 7.2.2.1, the sub-hypotheses 1,6 and 7 supported, while sub hypothesis 4 is significant, that is not supported.
- In Hypothesis 7.2.3.1, the sub-hypothesis 1 is suppotreted.
- In Hypothesis 7.2.3.2 the sub-hypotheses 1 and 2 are supported.
- In Hypothesis 7.2.3.3, the sub-hypothesis 2 is supported
- In Hypothesis 7.2.3.4 , the sub-hypothesis 2 is supported.
- In Hypothesis 7.2.3.5 , the sub-hypotheses 1 and 3 are supported
- In Hypothesis 7.2.3.6 , the sub-hypotheses 2 is supported
- In Hypothesis 7.2.3.7 , the sub-hypotheses 1 and 2 are supported.
- In Hypothesis 7.2.4 , the sub-hypotheses 3 is supported.

This chapter thus examined the main hypotheses of the study and studied its relevance in the light of the Indian seafood processing industry. The results of the hypothesis testing are given below:

1. None of the antecedents are seen to significantly affect all the four dependent variables namely, the three constructs of market orientation and the overall market orientation.

2. The overall market orientation construct is affected by antecedents top management emphasis, conflict, centralization and reward system.

3. Top Management Emphasis is antecedent to all the dependent variables except responsiveness, while top management risk aversion is significant only in case of responsiveness.

4. Interdepartmental connectedness is antecedent to intelligence generation and responsiveness, but not for dissemination and overall market orientation. Interdepartmental risk aversion is antecedent to both overall market orientation and responsiveness, but it shows a positive significance to both, instead of the hypothesized negative relationship.

5. Formalisation is not an antecedent to any of the dependent variables, while centralization is antecedent to all the dependent variables except intelligence generation.

6. Reward system orientation is seen as the most significant antecedent to all the dependent variables except intelligence generation.

7. Among the hypothesized moderators, it is noted that only competitive intensity is a moderator. An increase in the competitive intensity in the seafood processing industry leads to a stronger relationship between market orientation and business performance. Market turbulence and technological turbulence have no impact on the relationship between market orientation and business performance.

CHAPTER 8

DISCUSSION

8.1. Introduction

This chapter examines the results of the previous chapter in the light of existing literature and attempts to discuss the research findings. The succeeding sections of this chapter focus on the consequences of market orientation, the antecedents of market orientation and the moderating influences on the relationship between market orientation and business performance.

8.2. Consequences of Market Orientation

It is seen that the adoption of market orientation results in the improved business performance, customer consequences and employee consequences. The first research question of this thesis is whether market orientation affects business performance in Indian seafood processing firms. The following section answers this question.

8.2.1 Improved Business Performance

Academic literature over the years has established that firms will have improved business performance if they implement the principles of market

orientation. It has been tested under different settings and in different countries, and the results have borne out the stated relationship. The chief proponents among them include Kohli & Jaworski (1990), Narver & Slater (1990), Ruekert (1992), Diamantopoulos and Hart (1993), Deng & Dart (1994), Slater and Narver (1994a), Atuahene-Gima (1996), Diamantopoulos & Cadogan (1996), Farrell & Oczkowski (1997), Oczkowski and Farrell (1998), Becker & Homburg (1999), Pulendran *et al.*, (2000); Slater and Narver, 2000 etc. The attempt of this thesis is to examine whether this statement holds true under Indian settings, specifically in the seafood industry in India. Hence the major hypothesis of this study is that market orientation improves business performance in the Indian seafood firms.

Chapter 6 presents the findings of the hypothesis testing. It is therefore proved that market orientation does in fact improve the business performance of the Indian seafood processing firms. It is seen that overall market orientation accounts for 23% of the variance in the business performance variable. Thus, this result corrobates the findings of Mehta and Joag (1981) , Narver and Slater (1990), Jaworski and Kohli (1993), Selnes (1996), Kumar *et al.*, (1998), Pulendran *et al.*, (2000), Shoham and Rose (2001) etc.

Analysing the effect of the market orientation constructs on the business performance, it is noted that only the first two constructs namely intelligence generation and dissemination are significantly related to the business performance of the seafood processing firms in India. These two constructs significantly determine the business performance rather than all three constructs together. This result is consistent with the study conducted by Aggarwal and Singh (2004) in 22 Indian firms wherein the same results have been noted, i.e., the firms showed a commitment towards intelligence gathering and dissemination, but a comparative lack of responsiveness to the market environment.

In the present study, the two constructs together explains 28% of the variance in business performance. The result is higher than that obtained by Jaworski and Kohli (1993) in their two sample study (adjusted R^2= 18% and 25%), and is comparable to the adjusted R^2 value of 32% obtained by 41% obtained by Narver and Slater (1990), 37% obtained by Olivares and Lado (1998) and Pulendran *et al.,* (2000). Shoham *et al.,* (2005), after conducting a meta analysis to study the effect of market orientation on business performance concluded that, the geographic location or the country in which the study was conducted and the performance measures used affected explained variance.

This explains the difference arising in the variance reported by the cited studies.

Although a lot of work has been done on the business performance success factors, the measures mainly pertain to financial indicators. There is a paucity of literature examining the impact of market orientation on non- economic factors (Pulendran *et al.,* 2000). This study therefore seeks to redress the gap and contribute to existing literature. Moreover, market orientation intends to foster a long term focus on the attainment of a sustainable competitive advantage, which therefore shifts the impetus of the performance measures from the short-term economic measures to the long-term non-economic measures. Thus, a further classification of the overall business performance into economic performance and non-economic performance was done to study the effect of market orientation on them.

The economic business performance includes five subjective financial indicators such as ROI (Atuahene-Gima, 1995; Raju *et al.,* 1995; Pelham, 1997), sales growth relative to competitors (Pelham & Wilson, 1996; Ngai and Ellis, 1998), overall performance (Ruekert, 1992; Caruana *et al.,* 1998), overall performance relative to competitors and overall performance related to what was expected. This is in line with the measures used by most market

orientation studies. The non-economic performance on the other hand was a function of sixteen subjective measures, which included scales on the customer satisfaction, repeat purchase frequency, employee consequences, equity measures, environmental factors affecting the job, success in introduction of new products (Baker and Sinkula, 1999), relative trend of product pricing, material usage efficiency, labour efficiency, capital utilization efficiency, environment protection awareness and market expansion.

The findings reveal that intelligence generation alone contributed to the economic performance and accounted for 21.2% of the variance in economic performance, while intelligence generation and dissemination contributed significantly to non-economic performance and accounted for 29.4%of the variance in non-economic performance. This result is consistent with other market orientation studies. Subramanian and Gopalakrishna (2001) examined the role of market orientation on business performance in the Indian setting and found that market orientation plays a positive role in fostering growth in overall revenue, return on capital, success of new products and services, ability to retain customers and success in controlling expenses.

8.2.2 Customer Consequences

Another consequence of adopting market orientation is the benefit accrued from the customers in the form of customer satisfaction, customer repeat buying and retention. Since market orientation has customer emphasis at its core, the consequences of customer satisfaction, customer retention and repeat sales are very important. Here the findings reveal that customer consequences are a function of intelligence dissemination alone. The adjusted R^2 value is 13%, which means that intelligence dissemination accounts for 13% of the variation in consumer consequences.

Thus it is proved that if Indian seafood processing firms implement market orientation, the customer consequences will improve significantly. In the long run, the firm will have to see that it maximizes this consequence, as customer focus is fast becoming imperative for business survival and augmented profitability, as evidenced by Anderson *et al.*, (1994). Siguaw *et al.*, (1994) also opines that, in addition to profitability, market orientation can also help reduce costs associated with customer and employee defection, as it is generally accepted that acquiring a new customer may turn out to be considerably more expensive than building customer loyalty among firm's current customers

(Kotler, 2003). Matsuno and Mentzer (2000) have also highlighted the importance of measuring customer consequences, by suggesting that future studies should take into account the relationship between market orientation and non-economic performance to obtain a holistic view of the effects of market orientation.

8.2.3 Employee Consequences

Jaworski and Kohli (1993) have pointed out the positive effect of market orientation on employee consequences. They opined that market orientation helped to foster psychological and social benefits to the employees. The employee consequences include measures like employee commitment, employee job satisfaction and job security, improvement in equity of the company (wages, promotions, fringe benefits etc) and improvement in employee training function. Only intelligence dissemination is seen to contribute significantly to this consequence, and accounts for 24.3% of its variance.

8.3 Antecedents of Market Orientation

The second research question deals with the effect of the antecedents on the market orientation constructs. Seven antecedents were examined in this study

namely, management emphasis, top management risk aversion, interdepartmental connectedness, interdepartmental conflict, formalisation, centralisation and reward system orientation. The findings in the previous chapter reveal that the antecedents affecting overall market orientation construct in the Indian seafood processing industry are top management emphasis, interdepartmental conflict, centralisation and reward system orientation. The four predictors out of seven together account for 62.7% of the variance in market orientation.

Jaworski and Kohli (1993) found that the antecedents affecting market orientation in their two sample US setting, include top management emphasis, interdepartmental conflict, connectedness, centralisation (in one sample) and reward system orientation. The study of market orientation in Australian firms by Pulendran *et al.,* (2000) yielded similar results to that of Jaworski and Kohli (1993), except for absence of centralisation factor. Selnes *et al.,* (1996), on assessing market orientation in Scandinavian countries, found that the antecedents included top management emphasis, interdepartmental conflict and connectedness, and reward system orientation, while Shoham & Rose (2001), in a similar empirical study conducted in Israel, reported that the antecedents included top management emphasis, risk aversion,

interdepartmental connectedness and reward system orientation. Qu *et al.*, (2002) examined market orientation in two industries in China and concluded that the antecedents included top management emphasis (sample II), risk aversion (sample I), conflict (sample I), reward system orientation (sample I) and two newly introduced antecedents of government regulation of quality and human resources. The meta-analytic studies conducted by Kirca *et al.*, (2005), based on 130 independent samples, reported in 114 studies, reveals that the antecedents of top management emphasis, interdepartmental connectedness, market based reward systems and centralisation are most critical in implementing market orientation. Thus, it is seen that the market orientation scale is robust across different countries, industries and settings.

8.3.1 Top Management Emphasis

Top management emphasis, as hypothesized, plays a significant role in the implementation and institutionalisation of market orientation in the Indian seafood processing firms. This empirical finding therefore bolsters the theoretical approach propounded by Felton (1959) and Webster (1988), who hold that, the top management holds the key to shaping an organisation's values and orientation. Similar empirical findings by Cavusgil and Zou (1994)

and Evangelista (1994) highlight the importance of the role of the top management in the field of export performance and export success. Market orientation can be successfully implemented only with the full approval and support of the top management. Hence the top management in the seafood processing firms needs to pass on a clear message to the lower echelons of the organisations regarding the need to adopt a market orientation. They should be able to impress upon the employees the importance and benefits of being market oriented and should demonstrate explicitly market oriented behaviour. This study therefore demonstrates similar results to those of Jaworski and Kohli (1993), Pulendran *et al.,* (2000), Selnes *et al.,* (1996) and Shoham & Rose (2001).

8.3.2 Top Management Risk Aversion

Risk aversion is hypothesized to be negatively related to all market orientation constructs. The results show that top management risk aversion is not significant in the case of the seafood processing forms in India. It shows significance only in the case of responsiveness, to which it is positively related. Aggarwal and Singh (2004) in their empirical study of 22 Indian firms, conclude that the risk aversion was not an antecedent to market orientation.

Hence the above result is consistent within an Indian setting. Qu *et al.*,(2002) and Shoham & Rose (2001) report positive relationships between risk aversion and market orientation in their respective studies of Chinese and Israeli firms, while Jaworski and Kohli (1993), Pulendran *et al.*, (2000) and Selnes *et al.*,(1996) find that risk aversion has no effect on market orientation.

The positive effect of risk aversion on responsiveness in Indian seafood industry, may have arisen from the fact that the Indian seafood firms, export to markets which are governed by high degree of uncertainty, especially in the wake of product detentions by customer markets, trade regulations imposed by buyer countries, frequent changes in price trends, stiff competition etc. The top managements of the Indian firms may therefore shy away from taking risky decisions. The findings hold that the greater the risk aversion of the top managements, the greater will be the responsiveness of the top management to market intelligence. The overall market orientation remains unaffected by the impact of risk aversion of the top management.

8.3.3 Interdepartmental Conflict

Interdepartmental conflict was hypothesized to be negatively and significantly related to the market orientation of the seafood firms. The findings reveal that

conflict was significantly but positively related to market orientation and responsiveness constructs. This is contrary to the results obtained by other studies, namely Jaworski and Kohli (1993), Selnes *et al.*, (1996) and Pulendran *et al.*, (2000), all of whom recorded negative values for the relationship between conflict and market orientation. Shoham and Rose (2001) also report positive relationship between interdepartmental conflict and market orientation. Further research, under similar settings, in other countries, is needed to account for the difference between the results, and to see whether the difference is country-specific.

The reason for the positive effect of conflict on market orientation is not clear. Levitt (1969) asserts that it is natural for conflict to exist between different functions, and even cites an example of a manufacturing vice-president of a firm who opposes costly projects, as it is his job to see that the firm runs efficiently, even though, the project may be a part of an ambitious effort to be market oriented. It is the researcher's contention that, conflict need not be considered as a negative sign to market orientation on all occasions. Conflict can result in further deliberation following the rejection of an idea originally, and may lead to the formation of a new project or plan which is acceptable to all departments and is also market oriented.

Alternatively, the positive relationhsip could be attributed to the low reliability of the conflict measure (Cronbach's α= 0.495). The low reliability is believed to have occurred due to the reverse coded items in the scale.

8.3.4 Interdepartmental Connectedness

Interdepartmental Connectedness was hypothesized to be positively and significantly related to market orientation. The results of the regression analysis reveal that connectedness is not a significant contributor to market orientation, although it is antecedent to intelligence generation and responsiveness. Again this result is contrary to that of Selnes *et al.*, (1996) and Pulendran *et al.*, (2000), both of them recording significant positive values. The reason for insignificance of the interdepartmental connectedness may be attributed to reverse coded items in the scale. It is seen that the reverse-coded items do not elicit the desired result, as they result in lowering the reliability of the scale, and yielding results to be non-significant.

Additionally Jaworski and Kohli (1993), found in their study found that the variable for interdepartmental connectedness, yielded only partial support for the hypothesis, as in their first sample, it was significant only in the case of market orientation, while being insignificant for the other three constructs of

market orientation. In their second sample, connectedness significantly contributed to market orientation and intelligence dissemination, while being insignificant in the case of the other two constructs. Jaworski and Kohli (1993) advocate additional research to examine the linkage between interdepartmental connectedness and market orientation. This study substantiates the need for further research as suggested by them.

8.3.5 Formalisation

Formalisation is hypothesized to be negatively related to market orientation. It is seen from the results that, the impact of formalisation is insignificant on overall market orientation and across all its constructs. Therefore, the result corrobates the evidence of Jaworski and Kohli (1993), Selnes *et al.,* (1996), Pulendran *et al.,*(2000) and Shoham and Rose (2001). Hence formalisation is not seen to be an antecedent to market orientation in Indian seafood firms.

8.3.6. Centralisation

Centralisation is hypothesized to be negatively related to market orientation. The findings show that centralisation is, as hypothesized, significantly and negatively related to market orientation and its constructs, except intelligence generation. Thus when centralisation decreases, market orientation increases.

The negative and significant value of the centralisation variable shows that, Indian seafood firms need to adopt a decentralised mode of decision-making, which would help in fostering market orientation, and that the top management needs to adopt a bottoms-up approach and encourage and empower the employees to make work-related decisions, so that they are motivated to do their best and are committed to the goals of the organisation.

8.3.7 Reward System Orientation

Reward System Orientation is hypothesized to be positively and significantly related to market orientation. The results of the analyses in the previous chapter show that reward system orientation is positively and significantly related to market orientation and all its components except intelligence dissemination. It is seen that the ß values for the reward system are the highest obtained in the study. This result is consistent with the findings of Jaworski and Kohli (1993), Selnes *et al.,* (1996), Pulendran *et al.,* (2000) and Shoham and Rose (2001). Therefore it is important for Indian seafood managers to incorporate a systematic and efficient system of performance appraisal, and reward the employees, so that the employee morale is always kept high due to the encouragement and value recognition, given by the top management. The

performance appraisal should be based on market-oriented behaviour and customer orientation (as in customer satisfaction and customer relations), and not alone on short term results based on the production output, as is generally observed in the Indian seafood industry. It is seen from the findings that such monetary and non-monetary rewards are highly valued by the employees. Thus if the top management wishes to improve market orientation, then it will have to garner employee support by giving them a greater participation in decision making and giving them timely and just rewards, concomitant with their market oriented performance, which will then spur them onto greater heights of personal excellence, which in turn will increase market orientation and thereby business performance. Also these rewards go a long way in reducing employee turnover and losses due to rehiring, retraining and the time taken for the new employee to step into his predecessor's shoes. Reward systems also help in improving the employee job satisfaction Jaworski and Kohli (1993), Selnes *et al.,* (1996), Pulendran *et al.,* (2000) and Shoham and Rose (2001), and in reducing role conflict and ambiguity (Siguaw *et al.,* 1994).

8.4. Moderators of Market Orientation-Business Performance Relationship

The hypothesized moderators of this study include market turbulence, technological turbulence and competitive intensity. These three factors are believed to affect the relationship between market orientation and business performance. The hypothesis is that the relationship between market orientation and business performance increases when, market turbulence increases, technological turbulence decreases and competitive intensity increases.

The findings detailed in the pervious chapter demonstrate that there is no pure moderator affecting the relationship between market orientation and business performance, instead a quasi moderator in the form of competitive intensity is seen. This suggests that competitive intensity in the Indian seafood processing industry affects business performance in two ways, first through its interaction on market orientation, and second through its direct effect on business performance. Both market turbulence and technological turbulence did not have any impact on the market orientation-business performance relationship.

Previous literature shows mixed results when it comes to studying moderator effects on the market orientation-business performance relationship. Narver and Slater (1990) in their seminal study found that the moderators included technological turbulence and market turbulence among others, although the value for competitive intensity was insignificant. Jaworski and Kohli (1993) reported that their study did not reveal any moderators, and concluded that the relationship between MARKOR and business performance appeared to be robust across contexts characterized by different levels of the hypothesized moderators. They ascribed the reasons for the lack of effect of moderators to low reliabilities and insufficient power of the statistical test as a result of the insufficient sample size. Greenley (1995) argued that the market orientation-business performance relationship is stronger when market turbulence is lower, and that buyer power and competitive intensity had no impact on the relationship. Pelham and Wilson (1996) opined that firms become more market oriented in a highly market-oriented environment if they focus on achieving sustainable competitive advantage. Appiah-Adu (1998a) report that market orientation leads to higher business performance when competitive intensity increases. Pulendran *et al.,* (2000) reported that market turbulence was a moderator in their study of market orientation in Australian firms.

On the other hand, Subramaniam & Gopalakrishna (2001) conducted an empirical study on the role of moderators (competitive hostility, market turbulence and supplier power) on the MO-BP relationhsip in an Indian setting, and found that there were no moderating effects i.e., the MO-BP relationship was strong irrespective of the environment. An interesting point noted in their study was that they sought to offer, what they describe as, an 'intuitive' explanation regarding the lack of moderator effect, that, since India as a growing economy was relatively new to the aggressive competitive business environment, being market oriented was enough to insulate the firms from the effects of environmental moderators. They also observe that in time when the economy matures, as is the case with other developed countries, where the majority of the market orientation studies are conducted, the competitive intensity may become important in mediating the MO-BP relationship. Their perception offers support for the quasi-moderator effect of competitive intensity in the MO-BP relationship in the present Indian seafood export scenario.

Zebal (2005) found empirical evidence suggesting that competition and market turbulence were antecedents rather than moderators of market orientation-business performance relationship.

Thus this study reveals that in the Indian seafood industry, the higher the level of competitive intensity, the stronger will be the relationship between market orientation and performance.

8.5 Limitations of the study

The study revealed several limitations. They are as enumerated below:

1. The sample size, although sufficient for this study, is relatively small. Several problems arose because of the small sample size, namely, the reliability of the scale was generally lower than that reported by the market orientation literature. This led to insufficient power of the statistical tests. A larger sample size would have generated more confidence in the results.

2. This study is a cross sectional one and therefore does not take into account the changes taking place over time. Rather it provides a detailed view of a situation at a given point in time. A longitudinal study would have given a better picture of the processes involved in implementing market orientation over a period of time.

3. A single informant from each firm was used as the focal point for data collection for the study. Although the respondents included the top management representatives of the sampled firms, use of multiple informants

would have been better, as more non-biased and well-informed opinions could have been generated.

4. Multiple regression analyses tools were used for data analysis. Although the above form of analysis gives good results, use of sophisticated tools like structured equational modelling would have given accurate results. The small sample size was inhibiting factor for not using SEM.

5. The evaluation of market orientation is done based on the respondent's perception rather than the customer's perception. Although it is an important perspective that needs to be studied thoroughly, as demonstrated amply by existing literature, the self analysis may rather fall short of the actual situation. Therefore firms should, as Deshpande, Farley and Webster (1993) recommend, regularly track customer perceptions for an accurate implementation of market orientation. The customer view would greatly enhance the firm's self assessment of its market orientation.

8.6 Conclusion

This chapter consolidated the major findings of the thesis and discussed them. The first section is the abstract, followed by the discussion of the results of the stepwise regression analysis on the consequences of market orientation.

Market orientation was found to positively influence business performance, as well as customer and employee consequences. Then the results of the antecedents were examined. They revealed that the antecedents affecting overall market orientation construct in the Indian seafood processing industry, are top management emphasis, interdepartmental conflict, centralisation and reward system orientation. Next, the role of moderators in influencing the relationship between market orientation and business performance was discussed. This study reveals that in the Indian seafood industry, the higher the level of competitive intensity, the stronger will be the relationship between market orientation and performance. Technological turbulence and market turbulence were not found to affect the market orientation-business performance relationship.

CHAPTER 9

CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATIONS

9.1 Introduction

This chapter consolidates the findings of the thesis. The chapter-wise summaries are given in the section 9.2, followed by the Contributions of the study in Section 9.3. Managerial implications are discussed in section 9.4. Section 9.5 deals with the recommendations for future research and section 9.6 presents the final conclusions.

9.2 Overview of the Thesis

Chapter One deals with an overview of the seafood industry and market orientation principles in general. Then the research questions to be addressed are detailed, followed by a list of the objectives of the study. The relevance of the study is elaborated in the next section. The final section of this chapter is the organization of the thesis and the chapter framework.

Chapter Two provides a detailed review of the market orientation framework and the literature review. The marketing concept is revisited, and the development of the concept of market orientation is traced. The various

perspectives of market orientation are examined, followed by a detailed description of the market orientation constructs, the antecedents, the consequences and the moderating influences.

Chapter Three deals with the research hypotheses and sub hypotheses. A conceptual model of the market orientation framework is also presented here.

Chapter Four presents the research methodology. The research design of the study is specified, followed by a detailed description of the methods of data collection, the survey instrument and the data analysis tools used, and the assumptions of regression analysis.

Chapter Five provides the general picture of the Indian seafood processing firms. The details of the surveyed firms, including their marketing practices, the problems faced by them, their financial status and the characteristics of their top management are examined in this chapter.

Chapter Six provides the preliminary data analysis in the form of the descriptive statistics, the reliability and validity analyses and the correlation matrices.

Chapter Seven provides the empirical analyses of the hypotheses listed in Chapter Three. The testing of the hypotheses is done using multivariate regression analysis. The tool used is the stepwise regression analysis.

Chapter Eight discusses the results obtained in the previous chapter in the light of existing literature and examines how far the results are consistent with previous studies. This is followed by a listing of the limitations of this research study.

Chapter Nine is the final chapter of the thesis and seeks to consolidate the results of this study. It begins with an overview of the thesis by describing the summaries of all the chapters. It is then followed by the listing of the contributions of this study, the managerial implications and the directions for future research. It is then followed by the conclusions.

9.3. Contributions of the Study

This thesis seeks to answer three research questions, namely:

- Does market orientation affect business performance in seafood processing firms in India?
- How do the antecedents proposed in the study affect the level of market orientation in seafood processing firms in India?
- Do environmental moderators such as market turbulence, competitive intensity and technological turbulence, strengthen or weaken the relationship between market orientation & performance in Indian seafood firms?

The study was successful in answering all the three research questions, and has made the following contributions to existing literature.

The research is one of the first of its kind, to the author's knowledge, in the area of the seafood marketing in India, thus contributing to literature, and filling in a hitherto unexplored gap.

One of the major contributions of this study is that it was successful in forging a link between market orientation and business performance in seafood processing firms. The thesis was thus able to replicate the results of the studies conducted abroad under different settings. Thus, this thesis substantiates the findings of Kohli and Jaworski (1990) and Jaworski and Kohli (1993) and adds to existing literature. The adoption of market orientation by the seafood firms will lead to the improved financial performance as well as improved customer satisfaction and encourage repeated buying and customer loyalty to the firm. Market orientation also improves employee job satisfaction and commitment to the firm.

The second contribution of this study lies in its ability to strongly advocate the need for implementing market orientation principles in the seafood processing firms. The seafood processing industry is at a critical juncture now, when it is trying to establish its name as a strong contender in the global seafood trade

scenario. The application of market orientation principles will help improve its business performance as well as reinforce its image as responsible and world class exporters.

The third contribution is in the area of antecedents of market orientation. The study discusses the antecedents needed for the successful implementation of the market orientation principles. These precursors will help to ensure that a foundation for the adoption of market orientation is laid. The antecedents for the Indian seafood processing industry include top management emphasis, interdepartmental conflict, centralisation and reward system orientation. Thus the top management of the seafood processing firms needs to adopt market-oriented behaviour, encourage employees to be market oriented, support, guide and monitor the progress of implementation of market orientation principles, adopt a decentralised approach towards decision making, encourage employees to make work related decisions and to reward them justly and timely with the right kind of rewards, based on continuous performance appraisal. It is also seen that a judicious amount of interdepartmental conflict also leads to improved performance, although conflict can, if allowed to grow unhampered, defeat its own purpose. However, further studies are recommended under different settings, to critically examine the role of

antecedents on the market orientation, and to obtain results that can be generalised.

Another important contribution was in the area of the moderators. This study provides empirical evidence that market orientation increases in the wake of a highly competitive environment, but remains unaffected by technological turbulence and market turbulence. More work needs to be done in the area of environmental moderators. Addition of other factors like strategy type, firm size, etc to the existing moderators, may yield interesting results.

9.4 Managerial Implications

Empirical evidence presented in the earlier chapters proves that market oriented behaviour increases business performance, and helps seafood processing firms to develop sustainable competitive advantages. The next question in line with this statement would be how to implement market orientation in seafood firms? The preceding chapters have offered views as to what constitutes market orientation behaviour. This section offers insights to seafood industry managers as to the implementation process of market orientation.

The survey revealed that the Indian seafood processing firms rated relationship with customers' as the highest competitive advantage, followed closely by Product Quality and Delivery of the products. The competitive advantages of production capacity and marketing capacity tied together at the fourth position.

An examination of the U.S. importer perception of the Indian seafood products, as per the market research conducted by MPEDA, in the year 2000 revealed that, they were generally unhappy with the product quality, workmanship, sanitation standards and business ethics of the exporters. Another major factor emerging from the market study of the US importers, wholesalers and retailers, conducted by the MPEDA, is the poor perception of the Indian products and the processors, as a whole, followed by a lack of awareness about Indian products in general. The importers also commented on the lack of effective market promotion and offered suggestions for improvement like organising trade shows, developing brand recognition, large-scale media advertising, developing product line and improving image.

Thus a wide gap exists between the perceptions of the Indian exporter and the U.S importer. Therefore, Indian seafood managers would need to look for ways and means to improve their image, increase their marketing skills, improve

product quality and develop sustainable competitive advantages, in order to be assured of a steady clientele, repeat sales and increasing profits over a long term. To develop these advantages, firms need to adopt a dual strategy of market orientation and the resource based view, offered by strategic management specialists. Market orientation helps the firms to attain an outside-in view of the firm, while the resource based view projects an inside-out view. Some Indian seafood firms have well developed resource-based competencies and are producers of world famous brands. As far as Indian firms are concerned, the key to business success lies in the adoption of market oriented competencies to complement the existing resource based competencies they have and thus develop a sustainable competitive advantage over other international firms.

Grant (1996) and Spender (1996) uphold the contribution of knowledge or intelligence as a significant competitive asset that a firm possesses, which also possesses the wherewithal to develop into a sustainable competitive advantage (Wernerfelt, 1984; Barney, 1986, 1991; Prahalad and Hamel, 1990; Peteraf, 1993; Conner, 1991). Market orientation also stresses on the importance of intelligence or knowledge management. Therefore one of the first prerequisites is that the firms should develop and institutionalise an intelligence-based

system, which collects both internal and external information, and collates the results to produce regular updated information for the perusal of the top management to enhance the efficacy of decision making.

Another important prerequisite for implementing market orientation would be to guarantee the total support of the top management. The top management should not only be enthusiastic about the project, they should also be willing to lead upfront all market oriented activities and should institutionalize market-oriented behaviour. They should be able to instill in the employees the necessity and the value of being customer-oriented, as customer focus lies at the centre of any market oriented activity.

The first task of the top management would be to define the vision and mission statements of the marketing organization. If such statements already exist, then they should be examined to see if it reflects the organization's new priorities, if not, it should be redefined, such that, it clearly states the desired future of the firm.

The next step is the process of rigorous assessment of the current level of performance (Van Raaij *et al.*, 1998), holding as a benchmark the level they wish to attain, or modelling their performance according to the best performers in the industry. The usual performance indicators would be

customer satisfaction, customer loyalty, financial performance, sales growth, market growth, market share etc. The assessment of the present system of behaviour within the firm should also be done.

The identification of customer related processes within the business which need improvement comes next. These processes should be analysed and improved. The setting up of a team consisting of 2-5 members is necessary, to identify the above processes. The members should have representations from both the top management and the lower level employees. This team should be entrusted with the task of collecting information regarding the areas that need improvement. The information collected should be disseminated at all levels. The top management should sent personnel to visit the customers at regular intervals, in order to acquaint themselves with the changing culture and background settings, in addition to their business practices, product evaluation measures and their expectations regarding products.

Based on this information, a comprehensive marketing plan should be adopted, incorporating the consumer views, such that the firms are able to deliver exactly what the customers wish for. Delivery should be right on schedule and should contain the correct product specifications, and other labeling as required by the importer. The packaging should be trendy,

attractive and strong enough to withstand any wear and tear. Indian processors should adopt consumer packing. The quality of the product should be competitive enough with the products from other markets. Pricing should be competitive; the firm should try to obtain cost advantages, so that new markets are attracted, which will consequently result in higher profits. Product diversification is another strategy, by which the firms will be able to exert a stronger competitive pressure. Instead of concentrating on block frozen products, Indian processors could instead switch to cooking lines and value addition, taking advantage of the financial assistance schemes proposed by the MPEDA. India should strive to improve its global competitiveness; otherwise it will lose out on lucrative customers and deals. Drawing consumer attention to other products besides the usual shrimps, cuttle fish etc, would help in creating awareness about the diversity of the Indian seafood. Continuous contacts with the importers, followed by regular feedback, as well as enquiries about the importer's views on the product quality should be made, such that the importers feel that the processors are genuinely concerned and committed to them. The processors should work in conjunction with the MPEDA to develop a unique seafood logo for all seafood products, which would raise them to a branded status. Regular attendance of trade fairs, display of products in

attractive packing, working closely with MPEDA to try to tie up with cold store chains and supermarket chains, in the foreign countries, would go a long way to creating customized packs, instead of faceless bulk packs. This would also help to command a premium pricing, as the products reach the final customer, eliminating all middlemen and therefore loss in revenue.

The employees should be properly acquainted with the marketing strategy of the firm, and encouraged to incorporate a market oriented perspective in their behaviour and their activities. Top management should regularly provide feedback regarding employee performance, and should institute a performance appraisal system which should provide timely and just rewards. In order to stimulate motivation for exhibiting market oriented behavior, managers can also think of non-monetary, positive feedback mechanisms, which may be formal or informal, public or private such as an award program, or a 'pat on the back' (Van Raaij *et al.,* 1998).

The implementation of market orientation necessitates adoption of a decentralised decision making pattern, low formalisation, low top management risk aversion and high interdepartmental connectedness. This would encourage employees to come up with innovative ideas, make them feel more responsible for the well-being of the firm and fellow employees, and foster in them a professional

and market oriented attitude. A system of continuous appraisal of processes, systems and people needs to be done regularly, using information technology as an enabler. Low risk aversion will help in creating innovative solutions to problems faced by the exporters. Working in close collaboration with MPEDA and the other fisheries research institutions would go a long way in improving product knowledge and increase available knowledge about customers.

Customer focus is at the heart of any market oriented activity (Day 1990; Deshpande *et al.*, 1993), hence, the employees should never forget to view their customer interests as their first priority. Market oriented activity will also increase the emoployee satisfaction and productivity levels, besides increase the financial performance of the firm. Continuous intelligence generation, dissemination and responsiveness to the intelligence generates should be done regularly. The intelligence generated should include customer information, competitor information, trade related news, product development, dynamic environment, regulations, etc.

Top management should also endeavour to foster strong relationships between the members of different departments, and should keep conflict to a minimum. Employee training and development should be conducted on a regular basis, so that new skills and competencies will be developed by them, which will be

useful to the organization. Although conflict can be healthy, in that the firm may arrive at new and hitherto unconsidered solutions, approved by all departments, which may be the best possible solution under the circumstances, it can also be harmful if allowed to continue unhampered. Regular interdepartmental meetings, brain storming sessions and informal get-togethers will go a long way to reduce conflict and tensions between departments, help in building healthy relationships which may translate into lessening of interdepartmental conflict in the long run and result in arriving at a amicable consensus in all decisions.

9.5 Recommendations for future research

The present research looks at market orientation from the marketer's point of view, which could give rise to biased or inflated opinions. Future research could help build up on customer information and customer perception regarding the market orientation of the Indian seafood firms. Additional research in similar settings would help in consolidating the results of this study. Future research on the extension of market orientation from the company specific level to the value chain level, would be significant, as it is the combined

effort of all these chain members that gives the final customer a perception about the product as a whole (Grunert *et al.*, 2002).

9.6 Conclusion

This thesis studied the impact of market orietnation on business perofrmance, in the seafood industry, which is a unique situation wherein the firms were all 100% export oriented. The study was able to prove that in the context of the seafood indsutry, implementation of market orientation principles will lead to increase in business performance. The business performance variables were measured under two heads, namely economic performance and non-economic performance. Market orientation in Indian seafood firms was significantly and postiively related to both the performance measures. Under the non-economic performance, were the customer and employee consequences. Again market orientation was positively and significantly related to both the consequences. The results were consistent with all major studies namely Narver and Slater (1990), Jaworski and Kohli (1993), Selnes *et al.*, (1996), Pulendran *et al.*, (2000), etc. Thus, the implication arising from the study is this: market orientation in Indian seafood processing firms increases their business performance. The implementation of market orientation will help the seafood

firms in gaining competitve advantages in exporting. This in turn will result in increased exports and the position of Indian seafood in the global market will be strengthened. It will thus become a leading player in the global fish trade.

Next, the focus was on the effect of the antecedents on the market orientation of a firm. It was seen that several factors were antecedents to the adoption of market orientation principles. They include top management emphasis, conflict, centralization and reward system. It is noted that top management emphasis and support is vital to the market orientation programme. The top management needs to adopt market oriented behaviour and reinforce the need for being market oriented, for it to percolate down the line.

Interdepartmental conflict is seen to affect market orientation positively. A large percent of the Indian seafood firms are traditionally family-owned companies, rather than professionally managed firms. This would result in promulgation of old ideas of management whereby, conflict was seen as a healthy exercise, which helped to build up each department's efficiency. But, this view in the long run proves to be detrimental to the firm's performance and must therefore be kept to a bare minimum, if any.

Decentralisation of decision making facilitates the participation of the lower level employees and builds up their motivational levels and commitment to the

firm. Thus employees are encouraged to make their own decisions, so that they can deal with customers faster and more efficiently.

Reward systems help improve an employee's morale, provide encouragement and helps inculcate commitment and loyalty. It improves the employee's self worth and fulfills his need for achievement. A satisfied employee works better, produces more output and needs less supervision, and is happy, thereby reducing costs to the company for replacement and retraining, if the employee quits.

Competitive intensity plays a moderating role on the market orientation-business performance. Thus in times of greater competition, the relationship between market orientation and business performance grows stronger.

Thus, this thesis was successful in investigating a positive relationship between business performance and market orientation. Future research could examine if there is a link between the markt orientation and resource based view, both of which, as per strategic management dictates, are needed to secure competitve advantages for a firm. The significant relationship between market orientation and business performance holds clear implications for seafood managers. Adoption of market orientation principles will help them secure

superior business performance and could therefore give them the competitive advantages needed to excel in the international seafood trade.

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APPENDIX

QUESTIONNAIRE ON MARKET ORIENTATION IN SEAFOOD FIRMS

Name of the Firm: **Respondent Name:**

SECTION 1

1.1. What is your position in this company? _____

1.2. How long have you worked for this company? _____

1.3. Please indicate your knowledge about the operations in seafood export markets. Circle one of the following numbers.

How confident are you that you can report on export market operations (eg; export marketing strategies, competitive environment & export performance)? *Please circle one of the numbers below.*

Very Confident **Not confident**

5 4 3 2 1

SECTION 2

2.1 . What are your primary export products (in order of importance)?

1) 2) 3) 4) 5)

2.2 .What are your primary export markets (in order of importance)?

1) 2) 3) 4) 5)

2.3 .The total number of employees in your firm (including factory staff)? *Please tick one of the following.*

1) Less than 100 people 2) 100 –250 3) 250 –500 4) 500 –1000 5) More than 1000 people.

2.4. How would you rate the level of competitive intensity in your industry? *Please circle one of the numbers.*

Very competitive **Not at all competitive**

5 4 3 2 1

2.5. How would your rate the dynamism of the business environment in which you operate? (If technology or competition or consumer preferences or regulation are often changing or are very unpredictable, then rate the environment as "very dynamic." If these factors are not changing very much and are fairly predictable, then rate the environment as "very stable"). *Please circle one of the numbers.*

Very dynamic **Very stable**

5 4 3 2 1

2.6. What was the approximate annual sales or revenue in the last financial year (in Rupees):

_____

2.7. Age of the Exporting Unit: *Please tick one of the following.*

1) Less than 5 yrs 2) 5 – 10 yrs 3) 10 – 20 yrs 4) 20 – 25 yrs 5) 25 yrs & above

2.8. Type of concern: *Please tick one of the following.*

1) Sole Proprietary ☐ 2) Partnership ☐ 3) Public Limited Company ☐

4) Private Limited Company ☐ 5) Joint Family Business ☐ 6) Foreign subsidiary ☐

2.9 .Were you in any other activity before entering present business? *Please tick appropriate box.*

1.	Civil Contracts ☐	6.	Foreign buyer Representative ☐
2.	Edible Oil business ☐	7.	Ice making ☐
3.	Deep Sea fishing ☐	8.	Cold Store owner ☐
4.	Trawler Leasing ☐	9.	Supplier of Raw material ☐
5.	Dealer in Electronics & electricals ☐	10.	Others(Pleasespecify)___ ☐

SECTION 3

3.1. How many years was your company in operation at the time of your first significant export sales_____ years

3.2. Which was your first significant export market? _____

3.3. Which were the next three countries you exported to?

1. _____ 2. _____ 3._____

3.4. Does your company have a separate export department? *Please circle the number.* 1. Yes 2. No

3.5. Does your company have an export director or manager in charge of export activities? *Please circle the number.* 1. Yes 2. No

3.6. If No, who is in charge of export activities in your firm? Position _____

3.7. When you began exporting, what proportion of your products were?

3.7.1. Exported directly _____%

3.7.2. Exported through trading companies or buyer agencies _____%

3.8. At present what proportion of your exports are?

3.8.1. Exported directly _____%

3.8.2. Exported through trading companies or buyer agencies _____%

3.9. What factors motivated you to initiate export operations. Please indicate the extent to which you agree or disagree that the following factors motivated your firm to initiate export operations? *Please circle the number.*

Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree - 1

1.	Profit Incentive	5	4	3	2	1
2.	Tax benefit	5	4	3	2	1
3.	Managerial Urge	5	4	3	2	1
4.	High growth rate of this business	5	4	3	2	1
5.	Receive unsolicited order	5	4	3	2	1
6.	Company's future growth	5	4	3	2	1
7.	Competitive pressure from domestic market	5	4	3	2	1
8.	Inherited business	5	4	3	2	1
9.	Less competetion	5	4	3	2	1
10.	Less investment required	5	4	3	2	1
11.	Have technical know-how	5	4	3	2	1
12.	Locational Advantage	5	4	3	2	1

3.10. When you began exporting, how did you get your early customers? Please indicate the extent to which you agree or disagree with the following statements on how you got your customers for your export markets. *Please circle the number.*

Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree - 1

1.	Customers approached our office directly (Receive unsolicited order)	5	4	3	2	1
2.	We get our customers through government assistance	5	4	3	2	1
3.	We get our customers through affiliated companies	5	4	3	2	1
4.	We get customers because we send staff to foreign markets	5	4	3	2	1
5.	We get customers because we advertised	5	4	3	2	1
6.	We get customers because we participate in trade fairs & exhibitions	5	4	3	2	1
7.	Industry contacts	5	4	3	2	1
8.	Internet	5	4	3	2	1
9.	Buying agents	5	4	3	2	1

3.11. What are your competitive advantages in exporting? Please indicate how much you agree or disagree that each of the following factors is one of your competitive advantages in exporting. *Please circle the number.*

Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree - 1

1.	Cost Factor	5	4	3	2	1
2.	Product Quality	5	4	3	2	1
3.	Product Uniqueness/ Product Differentiation	5	4	3	2	1
4.	Technology	5	4	3	2	1
5.	Production Capacity	5	4	3	2	1
6.	Marketing Capacity	5	4	3	2	1
7.	After Sales Services	5	4	3	2	1
8.	Delivery Time	5	4	3	2	1
9.	Relationship with Customers	5	4	3	2	1

Section 4

Please answer each of the statements giving below, indicating the way things are viewed/done in your company. Put a circle around any of the 5 alternatives: strongly agree, agree, neither agree nor disagree, strongly disagree, against each of the following statements. *Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree - 1*

Marketing is:

4.1	Primarily a sales-support function	1 2 3 4 5
4.2	About promoting our products	1 2 3 4 5

4.3	About identifying/specifying our customers' needs and satisfying them	1 2 3 4 5
4.4	What the Marketing and/or the Sales Departments do	1 2 3 4 5
4.5	The effort to analyze market conditions	1 2 3 4 5
4.6	Literally non-existent in our company	1 2 3 4 5
4.7	The philosophy/culture leading our company	1 2 3 4 5
4.8	About building an image/positioning for our products	1 2 3 4 5
4.9	A way to handle decisions concerning quality & quantity of the production process	1 2 3 4 5
4.10	About managing the production process	1 2 3 4 5
4.11	A way to create customer contacts and closing deals	1 2 3 4 5
4.12	Adapting to changing market conditions	1 2 3 4 5
4.13	Building customer relationships	1 2 3 4 5
4.14	A confusing concept	1 2 3 4 5

5. Intelligence Generation *(5 - Always, 4 - Almost Always, 3 - Sometimes, 2 - Rarely, 1 - Never)*

1. In this business unit, we meet with customers at least once a year to find out what products or services they will need in future.	1 2 3 4 5
2. In this business unit, we do a lot of in-house market research.	1 2 3 4 5
3. We are slow to detect changes in our customers' product preferences.	1 2 3 4 5
4. We poll end users at least once a year to assess quality of our products & services	1 2 3 4 5
5. We often talk with or survey those who can influence our end users' purchases (e.g. retailers, distributors)	1 2 3 4 5
6. We periodically review the likely effect of changes in our business environment (e.g. regulation) on our customers.	1 2 3 4 5

6. Intelligence Dissemination *(5 - Always, 4 - Almost Always, 3 - Sometimes, 2 - Rarely, 1 - Never)*

1. We have interdepartmental meetings at least once a quarter to discuss market trends and developments.	1 2 3 4 5
2. Marketing personnel in our business unit spend time discussing customers' future needs with other functional departments.	1 2 3 4 5
3. When something important happens to a major customer or market, the business unit knows about it within a short period.	1 2 3 4 5
4. Data on customer satisfaction are disseminated at all levels in this business unit on a regular basis.	1 2 3 4 5
5. Our salespeople regularly share information within our business concerning competitors' strategies	1 2 3 4 5

6. There is minimal communication between marketing and other departments concerning market developments 1 2 3 4 5

7. When one department finds out something important about customers, it is slow to alert other departments 1 2 3 4 5

7. **Response Design** *(5 - Always, 4 - Almost Always, 3 - Sometimes, 2 - Rarely, 1 - Never)*

1. For one reason or another, we tend to ignore changes in our customers product needs. 1 2 3 4 5
2. We periodically review our product development efforts to ensure that they are in line with what customers want. 1 2 3 4 5
3. Several departments get together periodically to plan a response to changes taking place in our business environment. 1 2 3 4 5
4. Our business strategies are driven by our beliefs about how we can create greater value for customers. 1 2 3 4 5
5. We measure customer satisfaction systematically and frequently. 1 2 3 4 5
6. We give close attention to after-sales service. 1 2 3 4 5

8. Response Implementation *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1. The activities of the different departments in this business unit are well coordinated. 1 2 3 4 5
2. Even if we came up with a great marketing plan, we probably would not be able to implement it in a timely fashion. 1 2 3 4 5
3. When we find that customers would like us to modify a product, the departments involved make a concerted effort to do so. 1 2 3 4 5

9. Market Turbulence *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1. In our kind of business, customers' product preferences change quite a bit over time. 1 2 3 4 5
2. Our customers tend to look for new products all the time. 1 2 3 4 5
3. Sometimes our customers are very price sensitive, but on other occasions, price is relatively unimportant. 1 2 3 4 5

10. Technological Turbulence *(Strongly Agree–5, Agree–4, Neither agree nor disagree–3, Disagree–2, Strongly disagree – 1)*

1. The technology in our industry is changing rapidly. 1 2 3 4 5
2. Technological changes provide big opportunities in our industry. 1 2 3 4 5
3. It is very difficult to forecast where the technology in our industry will be in the next 2 to 3 years. 1 2 3 4 5
3. A large number of new product ideas have been made possible through technological breakthroughs in our industry. 1 2 3 4 5
5. Technological developments in our industry are rather minor. 1 2 3 4 5

11. Competitive Intensity *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

The firm gathers ...(for questions 1- 8)

1.	Knowledge of number of firms offering similar products/services/substitutes	1	2	3	4	5
2.	Knowledge of number of firms offering similar products/services/substitutes to the same set of customers.	1	2	3	4	5
3.	Knowledge of competitors' marketing practices	1	2	3	4	5
4.	Assessment of competitors' likely moves & potential success factors	1	2	3	4	5
5.	Knowledge of competitor strategy	1	2	3	4	5
6.	Competitors' current potential strengths & weaknesses	1	2	3	4	5
7.	Knowledge of competitors' key data –sales, market share, profit margin, ROI, capacity utilization	1	2	3	4	5
8.	Knowledge of competitors' key success factors-quality image, organizational image, technical competence, product differentiation, after sales services	1	2	3	4	5
9.	Competition in our industry is cutthroat	1	2	3	4	5
10.	There are many promotion wars in our industry.	1	2	3	4	5
11.	Anything that one competitor can offer, others can match readily.	1	2	3	4	5
12.	Price is a hallmark of our industry.	1	2	3	4	5
13.	One hears of a new competitive move almost every day.	1	2	3	4	5
14.	Our salespeople regularly share information within our business concerning competitors' strategies.	1	2	3	4	5
15.	We rapidly respond to competitive actions that threaten us.	1	2	3	4	5

12. Conflict *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1.	When members of several departments get together, tensions frequently run high.	1	2	3	4	5
2.	People in one dept generally dislike interacting with those from another dept.	1	2	3	4	5
3.	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	1	2	3	4	5
4.	Protecting one's departmental turf is considered to be a way of life in this firm.	1	2	3	4	5
5.	The objectives pursued by the marketing department are incompatible with those of the production department.	1	2	3	4	5
6.	There is little or no interdepartmental conflict in this business unit.	1	2	3	4	5

13. Connectedness *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1.	In this business unit, it is easy to talk with virtually anyone you need to, regardless of rank or position	1	2	3	4	5
2.	There is ample opportunity for hall talk among individuals from different departments in this business unit.	1	2	3	4	5
3.	In this business unit, employees from different departments feel comfortable calling each other when the need arises.	1	2	3	4	5

4. Managers here discourage employees from discussing work related matters with those who are not their immediate superiors or subordinates. 1 2 3 4 5

5. People around here are quite accessible to those in other departments. 1 2 3 4 5

6. Junior managers in my department can easily schedule meetings with junior managers in other departments. 1 2 3 4 5

14. Formalisation *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1. In my firm, employees feel that they are their own bosses in most matters. 1 2 3 4 5

2. A person can make his own decisions without checking with anybody else. 1 2 3 4 5

3. How things are done here is left up to the person doing the work. 1 2 3 4 5

4. Employees are constantly supervised to see that they obey the rules. 1 2 3 4 5

15. Centralisation *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1. There can be little action taken until a supervisor approves. 1 2 3 4 5

2. A person who wants to make his own decision would be quickly discouraged here. 1 2 3 4 5

3. Even small matters have to be referred to someone higher up for a final answer. 1 2 3 4 5

4. Employees need to ask their bosses before doing almost anything. 1 2 3 4 5

5. All decisions taken by employees has to be approved by the concerned bosses. 1 2 3 4 5

16. Reward System Orientation *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

1. No matter which department they are in, people in this business unit get recognized for being sensitive to competitive moves. 1 2 3 4 5

2. Customer satisfaction assessments influence senior managers' pay in this firm. 1 2 3 4 5

3. Formal rewards (i.e. pay raise, promotion) are forthcoming to anyone who provides good market intelligence. 1 2 3 4 5

4. Marketing / Sales people's' performance in this business unit is measured by the strength of the relationship they build with customers. 1 2 3 4 5

5. We use customer polls for evaluating our marketing / sales people. 1 2 3 4 5

17. Top Management Emphasis *(Strongly Agree–1,Agree–2,Neither agree nor disagree–3,Disagree–4,Strongly disagree– 5)*

1. Top managers repeatedly tell employees that this business unit's survival depends on its adapting to market trends. 1 2 3 4 5

2. Top managers often tells employees to be sensitive to the activities of our competitors. 1 2 3 4 5

3. Top managers keep telling people around here that they must gear up now to meet customers' future needs. 1 2 3 4 5

4. According to top managers here, serving customers is the most important thing our business unit does. 1 2 3 4 5

18. Risk Aversion *(Strongly Agree–1, Agree–2, Neither agree nor disagree–3, Disagree–4, Strongly disagree – 5)*

1. Top managers in this business unit believe that higher financial risks are worth taking for higher rewards.	1	2	3	4	5
2. Top managers in this business unit like to take big financial risks.	1	2	3	4	5
3. Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail.	1	2	3	4	5
4. Top managers in this business unit like to play it safe.	1	2	3	4	5
5. Top managers around here like to implement plans only if they are very certain that they will work.	1	2	3	4	5

19. Business Performance *(1- Very Good, 2- Good, 3- Satisfactory, 4 - Bad, 5- Very Bad)*

1. Overall performance of the business unit increased last year.	1	2	3	4	5
2. Overall performance of the business unit relative to major competitors last year.	1	2	3	4	5
3. The return on investment of the business unit relative to all competitors last year.	1	2	3	4	5
4. The sales of the business unit relative to all competitors last year.	1	2	3	4	5
5. The overall performance of the business unit last year, in comparison to what was expected.	1	2	3	4	5

Response Scale from 6–21: *(Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2, Strongly disagree – 1)*

6. The number of repeat customers have increased in the past three years	1	2	3	4	5
7. The equity of our company (e.g. wage, promotions, fringe benefits) to employees has been continuously improving in the past 3 years.	1	2	3	4	5
8. The training function provided to employees for the acquisition of necessary job skills and knowledge has been continuously improving in the past 3 years.	1	2	3	4	5
9. The extent of employee job satisfaction has been continuously improving in the past 3 years.	1	2	3	4	5
10. The extent of employee job security has been continuously improving in the past 3 years.	1	2	3	4	5
11 The environmental factors affecting the job (e.g. safety of the job environment) have been continuously improving in the past 3 years.	1	2	3	4	5
12 The success rate of our company in introducing new or modified products/services to satisfy customer needs has been continuously improving in the past 3 years.	1	2	3	4	5
13 The price of the products/services of our company has remained relatively competitive to the price trend of the competitors in the past 3 years.	1	2	3	4	5
14 The ability of our company to satisfy customer needs has been continuously improving in the past 3 years(e.g. decrease in customer complaints, product returns)	1	2	3	4	5
15 The efficiency of materials usage of our company (e.g. ratio of total output to material input) has been continuously improving in the past 3 years.	1	2	3	4	5
16 The efficiency of labor of our company (e.g. ratio of total output to labor input) has been continuously improving in the past 3 years.	1	2	3	4	5
17 The efficiency of capital utilization of our company (e.g. ratio of total output to capital input) has been continuously improving in the past 3 years.	1	2	3	4	5
18 The level of consumer rights of our company has been continuously increasing in the past 3 years.	1	2	3	4	5

19 The level of recognition of the need to protect the environment in our company has been continuously increasing in the past 3 years.	1	2	3	4	5
20 The expansion of the product/market of our company has been continuously increasing in the past 3 years.	1	2	3	4	5
21 The provision of employment opportunities by our company has been continuously increasing in the past 3 years.	1	2	3	4	5

20.Key Respondent Knowledge & Ability (*5-Completely,4-To a Large Extent,3-To some extent,2-Very little extent,1- Not at all)*

1. In your firm, to what extent are you responsible for achieving market orientation?	1	2	3	4	5
2. In your firm, to what extent are you responsible for making and implementing marketing strategy?	1	2	3	4	5

21. In our strategic business unit–(*Strongly Agree – 5, Agree – 4, Neither agree nor disagree – 3, Disagree – 2,*
Strongly disagree – 1)

1. Our business objectives are driven primarily by customer satisfaction.	1	2	3	4	5
2. We rapidly respond to competitive actions that threaten us.	1	2	3	4	5
3. We constantly monitor our level of commitment and orientation to serving customer needs.	1	2	3	4	5
4. Our top managers from every function regularly visit our current and prospective customers.	1	2	3	4	5
5. We freely communicate information about our successful and unsuccessful customer experiences across all business functions.	1	2	3	4	5
6. Our strategy for competitive advantage is based on our understanding of customers' needs.	1	2	3	4	5
7. All of our business functions (e.g., marketing/sales, manufacturing, R&D, finance/accounting, etc.) are integrated in serving the needs of our target markets.	1	2	3	4	5
8. Top management regularly discusses competitors' strengths and strategies.	1	2	3	4	5
9. All of our managers understand how everyone in our business can contribute to creating customer value.	1	2	3	4	5
10. We target customers where we have an opportunity for competitive advantage.	1	2	3	4	5
11. We share resources with other business units.	1	2	3	4	5

Section 5 - Respondent & Firm Details. (*Please tick one of the 5 choices to the following questions*)

1. Age of owner/manager

1. Less than 30 yrs ☐ 2) 30 – 40 yrs ☐ 3) 40 – 50 yrs ☐ 4) 50 – 60 yrs ☐ 5) Above 60 yrs ☐

2. Qualification of owner/manager: 1) Schooling 2) Pre – University 3) Graduate 4)Post Graduate/ Higher 5) Professional degree in Management 6) Other Professional 7) Technical 8) Training

3. Return on Investment of the firm, for the last five years:

Year	ROI %	Year	ROI %	Year	ROI %
2002		2004		2006	
2003		2005			

4. Financial Status as reported by owner:

1) Running on profit ☐ 2) Running on loss ☐

3) Running on neither profit nor loss ☐ 4) Do not know ☐

5. A number of common problems faced by seafood firms are given below. Please rank the problems faced by your firm in the boxes provided. The most critical problem is to be ranked 1, while the least critical problem is ranked as 10.

1. Raw material scarcity ☐
2. Marketing problems ☐
3. Personnel problems ☐
4. Production problems ☐
5. General Administration problems ☐
6. Financial Problems ☐
7. Own country & Buyer country regulations ☐
8. Technical problems ☐
9. Quality problems ☐
10. Others(Please specify)____ ☐

6. Please rank the major marketing problems faced by your firms in the boxes provided. The most critical problem is to be ranked 1, while the least critical problem is ranked as 15.

1. Competition from domestic firms ☐
2. Competition from international firms ☐
3. Quality of products ☐
4. No unique attribute/ undifferentiated product ☐
5. Frequent changes in consumer trends ☐
6. Frequent changes in price trends ☐
7. Lack of market presence ☐
8. Production system unadaptable to meet market changes ☐
9. Promotional problems ☐
10. Poor brand image ☐
11. Pricing problems ☐
12. Poor Packaging & Transportation problems ☐
13. Inadequate market knowledge ☐
14. Distribution Problems ☐
15. Others (please specify) ☐

7. Please give your **assessment of your firm's present market orientation**, based on the following factors. The **1-5 response scale for questions 7 – 22** are as given. *1 - the unit does not engage in the practice at all, or do not agree to the concept/idea or do not possess any knowledge at all; 5 - the unit engages in the practice to a great extent or fully agrees to the idea/concept or possesses the specific strength to a great extent.*

1. Gathering of market intelligence on market size, market potential, market share, market characteristics and sales performance is done routinely 1 2 3 4 5
2. The firm regularly updates its knowledge about existing products, new products, technical development, packaging, after sales services 1 2 3 4 5

3. The firm regularly conducts short range forecasting (upto 1 year)	1	2	3	4	5
4. The firm regularly conducts long range forecasting (above 1 year)	1	2	3	4	5
5. The firm has an effective promotional plan in place	1	2	3	4	5
6. The firm conducts surveys of the distributors and middle men involved in export	1	2	3	4	5
7. The firm is aware of customer perception of competitive products	1	2	3	4	5
8. The firm has the ability to define the market, identify features with maximum appeal, identify benefits the customer gets from each appeal.	1	2	3	4	5
9. The firm has been successfully retaining its customer base. Customers tend to repeat purchases more often than not.	1	2	3	4	5
10. Competitor products' image, strengths, weaknesses, marketing strategies are collected.	1	2	3	4	5
11. The firm regularly advertises its products in foreign trade journals and other media.	1	2	3	4	5
12. The firm is regularly looking out to expand its markets to other countries.	1	2	3	4	5
13.The firm intends to initiate joint venture programmes with foreign firms.	1	2	3	4	5
14.The firm has offices in foreign buyer countries	1	2	3	4	5
15. Vertical and horizontal integration strategies for production are in place	1	2	3	4	5
16. The firm underwent product changes during past 5 years in response to competition	1	2	3	4	5
17. The firm underwent price changes during past 5 years in response to competition	1	2	3	4	5
18. There were promotional changes during past 5 years in response to competition	1	2	3	4	5
19. There were distribution changes during past 5 years in response to competition	1	2	3	4	5
20. The firm is planning to enter the domestic market with its products	1	2	3	4	5
21. Export of live seafood products is an upcoming area in which the firm has plans.	1	2	3	4	5
22.The firm intends to enhance its quality image by adopting total quality management	1	2	3	4	5
23. The foreign country regulations have drastically affected the firm's export sales.	1	2	3	4	5
24. Implementing market orientation principles will help improve business performance.	1	2	3	4	5
25. Indian seafood firms need strong marketing skills to remain globally competitive.	1	2	3	4	5

Please check to ensure you have answered all questions in all the sections.
Thank you very much for your time and cooperation.