

Competitive Strategies in Green Business - A Case Study on Aegis Logistics Ltd.

Madhushree L. M.¹, Revathi R.², & P. S. Aithal³

^{1,2}Research Scholar, Srinivas Institute of Management Studies, Srinivas University, Mangalore – India

³Srinivas Institute of Management Studies, Srinivas University, Mangalore – India
E-mail: madhushreemraju@gmail.com

Type of the Paper: Research Case Study.

Type of Review: Peer Reviewed.

Indexed In: OpenAIRE.

DOI: <http://dx.doi.org/10.5281/zenodo.1344848>.

Google Scholar Citation: [IJCSBE](#)

How to Cite this Paper:

Madhushree, L. M., Revathi, R., & Aithal, P. S. (2018). Competitive Strategies in Green Business-A Case Study on Aegis Logistics Ltd. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(2), 1-17. DOI: <http://dx.doi.org/10.5281/zenodo.1344848>.

International Journal of Case Studies in Business, IT and Education (IJCSBE)

A Refereed International Journal of Srinivas University, India.

© With Authors.



This work is licensed under a [Creative Commons Attribution-Non Commercial 4.0 International License](#) subject to proper citation to the publication source of the work.

Disclaimer: The scholarly papers as reviewed and published by the Srinivas Publications (S.P.), India are the views and opinions of their respective authors and are not the views or opinions of the S.P. The S.P. disclaims of any harm or loss caused due to the published content to any party.

Competitive Strategies in Green Business - A Case Study on Aegis Logistics Ltd.

Madhushree L. M.¹, Revathi R.², & P. S. Aithal³

^{1,2}Research Scholar, Srinivas Institute of Management Studies, Srinivas University, Mangalore – India

³Srinivas Institute of Management Studies, Srinivas University, Mangalore – India
E-mail: madhushreemraju@gmail.com

ABSTRACT

Aegis Logistics Limited was incorporated in 1956 and its shares have been listed on the Bombay Stock Exchange since 1978 and traded on the National Stock Exchange. Aegis Group plays a key role in India's downstream oil and gas sector, and its flagship company, Aegis Logistic Limited, is India's leading oil, gas, and chemical logistics company. Competition is a basic issue for every organization. Logistic companies also facing the same pressure of competition. In order to deal with the challenging business atmosphere, all private organizations seek new ways of business development. For logistic companies, environmental issues are highly important. Therefore, green policies have become a strategy for them. Competitive levels of private companies may be affected by green policies as a result of regulations regarding environmental concerns. Logistics may improve efficiency and effectiveness such as using reusable containers and boxes instead of the paper carton may reduce waste and optimize product packaging; building a green warehouse lead to reduce the overall operating cost while using the hybrid engine in trucks may reduce carbon emissions and consume less gas. In today's highly competitive environment, green logistics issues are gaining high attention. Since it is an important part of supply chain management and plays an important role in the improvement of a transport system. Logistics facilitates in getting products and services as and when they are needed and desired to the customer. It serves as a major enabler of the growth of trade and commerce in an economy because it is helpful in economic transactions. In this paper, we studied and analysed the competitive strategies followed in the green business Logistics industry and how it affects the green business environment of the company by considering the case of Aegis Logistics Limited.

Keywords: Aegis Logistic Limited, Case study, Green business environment of Logistic Company, Competitive strategies of Logistic Company.

1. INTRODUCTION

Aegis Logistics Limited (Aegis) is a logistics company that provides oil, gas, and chemical logistics services. The company offers services such as EPC services, gas logistics, liquid logistics, gas supply and marine services. It provides bulk liquid handling terminals, liquefied petroleum gas terminals, filling plants, pipelines, and gas stations. Aegis offers a solution for operating an existing oil and gas storage installation, selection and training of employees, operating the facilities, and maintaining the plant. The company has its presence in India and Singapore. Aegis is headquartered in Mumbai, Maharashtra, India. Aegis Logistics Limited amalgamated on June 30, 1956, as a private limited business with the name of Atul Drug House Limited in the year 1962, the company set up their first plant for the manufacturing of formaldehyde and hexamine at Kandla. In the year 1967, they set up another plant at Capi near Bulsar in Gujarat State for the manufacturing of 14,400 tonnes of formaldehyde and 540 tonnes of hexamine per annum. In the year 1970, the organization set up at Vapi a plant for the manufacturing of pentaerythritol formaldehyde with a capability of 1,200 tonnes per annum with the technical know-how delivered by Joset Meissner of W. Germany. On September 14, 1976, the name of the organization was transformed into Atul Chemical Industries Limited. Also, they

became a public limited company. The name of the company was again reformed by Atul Chemical Industries Limited to Aegis Logistics Ltd. In the year 1999, the Petrochemicals Divisions was stored off to Perstorp Aegis Chemicals Ltd, (PACL) a joint venture company between the company and Perstorp AB Netherlands. Their Visualization is to be the proper industry leader in their organizational divisions by distributing higher customer service with attentiveness on quality, safety, and environmental standards. The individual obligates the five distinct related organizational segments, and activates a network of bulk liquid handling terminals, liquefied petroleum gas (LPG) terminals, filling plants, pipelines, and gas stations to transport products and services. Their customer base contains many signs of industrial companies in India as well as individual wholesale customers whom they serve at their Aegis Autogas stations. Aegis Group also operates across many countries through its sourcing and trading subsidiaries situated in Singapore. Green business can be defined as business practices which are evaluated to be environmentally friendly. Green Logistics is a term used to describe attempts to reduce the ecological impact of the logistics industry on the wider environment. Sustainable development is one of the pillars of strategic management. Competitiveness employing green technologies in business can lead to competitive advantage. It is possible to reduce costs during the procurement process with long-term relations.

Table 1: List of Top performed Indian Logistics Companies during 2017- 2018

Rank	Name of the Company	Year of Establishment and Certification	Industry partners/ Alliance/ Clients/ Acquisitions/ Subsidiaries.
01	Aegis Logistics Limited	1956 OHSAS18001:2007 Occupation Health and Safety Certification ISO 9001:2008 Quality Management Certification ISO 14001:2004 Environment Management System Certification	Bharat Petroleum, HP, Shell, Reliance, ESSAR STEEL, SHV Gas, TATA STEEL, BHARAT OMAN REFINERIES Ltd., Mahindra, HUL, BAJAJ, JUBILANT LIFE SCIENCE, BOMBAY DYEING, PIAGGIO, SPL.
02	Agarwal Packers & Movers Limited	1987 ISO 9001:2008 IBA Approved.	Airtel, Apollo, Asian paints, Godrej, HAVELLS, HYUNDAI, PEPSICO, SUZKI, TATA
03	Allcargo Logistics Limited-	1993 ISO-9001:2008, OHSAS-18001:2007	ECU Line, Hindustan Cargo Ltd, Hong Kong-based Companies, MHTC Logistics Pvt. Ltd, Econocaribe Consolidators, FCL Marine Agencies
04	Blue Dart Express Limited	1983 ISO 9001 - 2015 certification by Lloyd's Register Quality Assurance for our entire operations, products and services.	DHL
05	Container Corporation of India Limited	1988 ISO 27001: 2005 standard for establishing and maintaining Information Security Management System (ISMS).	HYUNDAI, HAMBURG
06	DHL Express India Pvt Ltd.	1969 ISO 9001: 2008	Williams Lea Group Limited

07	FedEx Express TSCS India Pvt Ltd.	1971 ISO 14001: 2004	Gelco Express International, Tiger International Inc., Caliber System Inc., Tower Group International Inc. worldTariff Ltd., American Freightways Corp., Kinko's Inc., ANC Holding Limited, Tianjin Datian W. Group Co., Ltd., Praksh Air Friegt Pvt. Ltd., AFL Pvt. Ltd./ Unifreight India Pvt. Ltd., TATEX, Supaswift, Bongo International, GENCO, TNT Express, P2P mailing Limited.
08	First Flight Couriers Ltd	1988 ISO 9001: 2008	Vakrangee Limited.
09	Gati Limited	1989 ISO 9001: 2003	Zen Cargo Movers Pvt. Ltd., Kausar India Limited.
10	Globe Express Services Pvt Ltd	2005 ISO 9001: 2008	NIL

2. JOURNEY OF SUCCESS

Aegis Group has adopted a policy of striving for continuous improvement in its operations. The use of Lean Six Sigma as well as “5S” techniques have led to significant improvements in operational efficiency, improvements in environmental standards, quicker turnaround times for tanker deliveries, and significantly improved quality performance. Aegis celebrates world environmental day every year on June 5 with a number of events to promote environmental attentiveness surrounded by its employees. Active setting out of the Re-use, Recycle and Reduce the mindset is encouraged with a number of initiatives in progress at key sites. These consist of recycling programmes with wholesaler partners, water recycling, and energy conservation and meeting Health, Safety, and Environment (HSE) standards, while providing better customer service is a key part of the mission of Aegis Group and is designed into the management processes. Aegis is committed to spreading the culture of excellence in operations during the course of all its sites and encourages its employees to undergo training in Lean Six Sigma techniques.

Awards & Milestones

- Aegis Logistics expeditions into marine bunkering division to offer fuels and servicing solutions.
- Aegis Group launches Its Marine Products Division.
- Aegis Awarded BORL Contract.
- Aegis enters into a most important deal with APM Terminals Pipavav for a Port Infrastructure Assignment [1], [2].

3. RESEARCH OBJECTIVES

A. Research objectives

1. To learn competitive strategy in the green business Logistics industry.
2. To know how the logistics industry will support the green environment.
3. To learn about green business strategy.
4. To know ecological impact of the logistics industry on the wider environment.
5. To suggest the measures to improve the green business logistic industry.

B. Study Method: Document Research was used from secondary data.

4. GREEN BUSINESS IN LOGISTICS

4.1 What is “Green” Business?

Green business can be defined as business practices which are evaluated to be environmentally friendly. These practices might include the use of organic and natural products to build its facilities, tighter protections against emissions, environmentally responsible sourcing of supplies and designing organizations and processes in order to efficient and economical use of resources. Green business is to adopt principles, policies, and practices that improve the quality of life for customers and protect resources [3]. Using renewable energy resources, enhancing material recyclability, reducing toxic dispersion are all eco-efficient practices while doing green business. Managing a green business can be considered as a cost unit or as an opportunity for saving money. It can be the integrated to daily operations at a different level of environmental consciousness. Furthermore, the organization can develop approaches on the leading edge of current environmental practice and think as a pioneer. Most of the managers suppose they have to make a choice between planet and profit, but with the proper understanding of environmental issues, this dilemma can be considered as a win-win situation.

4.2 Green Logistics

Green practices in the logistics industry can be examined under several dimensions. Firstly, fuel consumption and emissions are related to green logistics. Logistics companies especially transporters tend to use less fuel consuming vehicles. As a function of green logistics, green transportation can be defined as transportation service that has a lesser or reduced negative impact on human health and the natural environment when compared with competing for transportation services that serve the same purpose. There are so many regulations which target to minimize emissions. Efficient use of transport resources which aimed at the selection of vehicle types, consolidation of freight flows and selection of a type of fuel can help to minimize negative effects on the environment such as pollution, noise, and congestion [4].

Secondly, accurate planning and scheduling can save the resources. Choosing the appropriate vehicle or route has important effects on consumption. Thirdly, designing logistics networks with the perspective of environmental friendliness, companies will be able to protect nature. Global enterprises have increasingly undertaken measures, including the integration of corresponding suppliers, distributors and reclamation facilities in order to green their supply chains. Moreover, the materials used in packaging and warehousing can affect the environment.

Reverse logistics is a new business area which can be considered within the scope of green logistics. Waste management, especially nuclear wastes, may become one of the niche markets for logistics companies according to the increasing figures of nuclear energy usage. Several industrial countries in Europe have enforced environmental legislation charging manufactures with the responsibility for reverse logistics flows including used products and manufacturing-induced wastes.

Environmental concerns can affect the value chain of a company. Therefore, companies seek different strategies for managing environmental issues. Not only has the increasing importance of environmentally friendly implications but also state regulations encouraged private companies to take incentives about environmental impacts of their production process. Both inbound and outbound logistics activities are affected by policies regarding environmental issues. Despite the fact that consumption of sources like fuel, other kind of activities such as supply chain management, distribution networks or mode and fleet decisions are subject to green logistics concept.

4.3 Competitive Strategies in Green Business.

The environment they exist and interact with should not be considered apart from business life. Furthermore, protection and development of habitat in which the workers, managers, and their families live should be taken into account. Companies have to secure flow of sources not only today but also in the future. They should build up long-term relations that based on trust with their suppliers. This will increase the quality if supply process and better procurement with better input will support the development. Hence, having an effective role in creating the future, will contribute to secure long-term existence and development.

Employing green technologies in business can lead to competitive advantage. It is possible to reduce costs during the procurement process with long-term relations as mentioned above. State regulations can influence the competitiveness of a particular country. For instance, the European Union provides

important restrictions for the private sector and degree of environmental friendly implications may affect the company’s competitiveness. The green eco-efficiency perspective argues that pollution is a form of economic inefficiency, whereby pollution reduction is beneficial to productivity. Eco-efficient logistics management can reduce resource consumption and costs which will result in more competitiveness. Besides cost advantage, taking care of the environment and protecting the resources will support the company image and the marketing activities. The environmental friendly image helps companies to have better reputation relative to competitors. Since reputation is a source of competitive advantage, green practices should result in enhanced cash flow and business performance. Offering green processes to customers means differentiation and creating value which means competitiveness.

5. A BUSINESS CAN GAIN THE FOLLOWING BENEFITS FROM GETTING INTO ‘GREEN LOGISTICS’

Table 2: Benefits from getting into Green Logistics

S. No.	Green Business	Benefits
1	Reduction in CO ₂ emissions	1. To contribute to the prevention of global warming as well as to improve transportation efficiency while reducing costs. 2. Focusing on the introduction of low-emission vehicles and biodiesel fuel, reduction in transportation distance, and improvement in load factor. 3. Our global CO ₂ emission from logistics activities came to 0.82 million tons across the world.
2	Product Differentiation and Competitive advantage	It helps an organization to position itself and its products as environmentally friendly in the customers’ perception. Besides attracting new profitable customers for organizations, it will give a competitive edge over the competitors in the marketplace. It will also strengthen the brand image and reputation in the marketplace.
3	Adapting to Regulations and Reducing Risk	Organisations adopting Green business practices can reduce the risk of being prosecuted for anti-environmental and unethical practices. A demonstrated effort towards creating an effective Green business through the sustained dedication of resources, activity, measurement and management protocol, will be highly regarded in the event that any question arises.
4	Improved quality and products	Organisations that produce products which are technologically advanced and the environment- friendly will find this will enhance the brand image and brand reputation in customers’ mind.
5	Shipping and transport	1. The least expensive shipping modes often also have the lowest environmental impact. However, it’s important to balance the economic and ecologic advantages of bulk shipping with the impacts of larger order sizes and carrying more inventories. 2. Revisit route optimization frequently. Changes in market conditions, fuel costs, traffic patterns, and road construction can impact delivery times, costs, and emission. The regular analysis is necessary to refine and validate.
6	Boosted business performance	Green business will help in reduction in CO ₂ , improve quality and products transportations, Product Differentiation, Competitive advantage, and it will help in reducing wastages.

By getting into a green business they can get so many benefits and also they can improve their performance by having the environmental support [5], [6].

6. REWARDS OF GOING GREEN

The benefits of a trade going green is immense. When a business can make a concerted determination to decrease its negative environmental impact that is going green. It can take attractive measures to

reduce utility costs, in starting recycling and reusing procedural programs, to obtaining green products and services in the service of the company.

6.1 Legal Compliance: Many states and countries have adopted various laws that obligate environmental compliance in a number of ways and forms, to varying in degrees. Every year more laws are voted for on local, state, and federal levels to go green in Earth's ecology. Going green means getting into the future of the curve — if certain green laws aren't on the books it gives a company a leg up to begin as soon as possible. The World Environmental Protection Agency launched its 2020 action agenda and it is a truly mind-bogglingly comprehensive plan to decrease carbon emissions while promoting sustainability and obligates actionable consequences, as well as incentives for being in advance of the green curve.

6.2 Saves Money: Increasing the vitality of efficiency protects on a value of costs. Reusing existing material in inventive techniques means that fewer dollars are spent purchasing new stock to create products. Streamlining transportation of employees or shipping saves the earth as well as an extensive amount of money. Although there is often a bit of money to be spent creating green business procedures, it saves a lot of money over time. Purchasing low-carbon, renewable fuel by many airlines is price-competitive with tradition fuel and allows Airlines to reduce costs completely.

6.3 Green Marketing Awareness: A trade going green makes customers feel that it is a trustworthy business. Going green fosters a sense of community and a positive impress of the business. Word-of-mouth is the greatest invaluable form of promoting and green businesses can't buy that kind of public relations. This not only supports a company's existing market base but extends its people who may never have heard of that company may pay attention to one that believes in being eco-friendly.

6.4 Employee Morale: Going green isn't only foster positive approaches from customers. Employees feel safer in work for green businesses. Including workers in company-wide green creativities increases morale. Employees feel that their health is to be concerned for and they aren't simply consumable commodities. This is also a good way to reduce takings because employees don't want to leave a place that creates them to feel as they are a part of a work community that cares.

6.5 Establishing Status: As more and more across many countries known companies go green, the idea of going green becomes much more tantalizing. In fact, it's becoming a status symbol to be an environmentally friendly business. The computer company Dell launched a recycling program that enables customers to return notoriously difficult-to-recycle electronics for free.

7. FRAME WORK OF GREEN LOGISTICS

7.1 Green Office: Green Office Program in the year 2010 received the Green Office Certification in the year 2013, contravention broken up in the industry. Green Office, a program which provides savings and improvement in office, is eminent as part of the strategic method which WWF introduced to reduce human pressure on natural resources and reduce the "Ecological Footprint". The Green Office program strategically evaluates the participating offices' resources to identify areas for relative savings and supports them to develop their own environmental management system consequently.

7.2 Green warehouse: Layout optimizations minimize the program and increase a firm's productivity in terms of reducing cost and increases profit. Green equipment will result in the high charge for customers and save energy will automatically save cost.

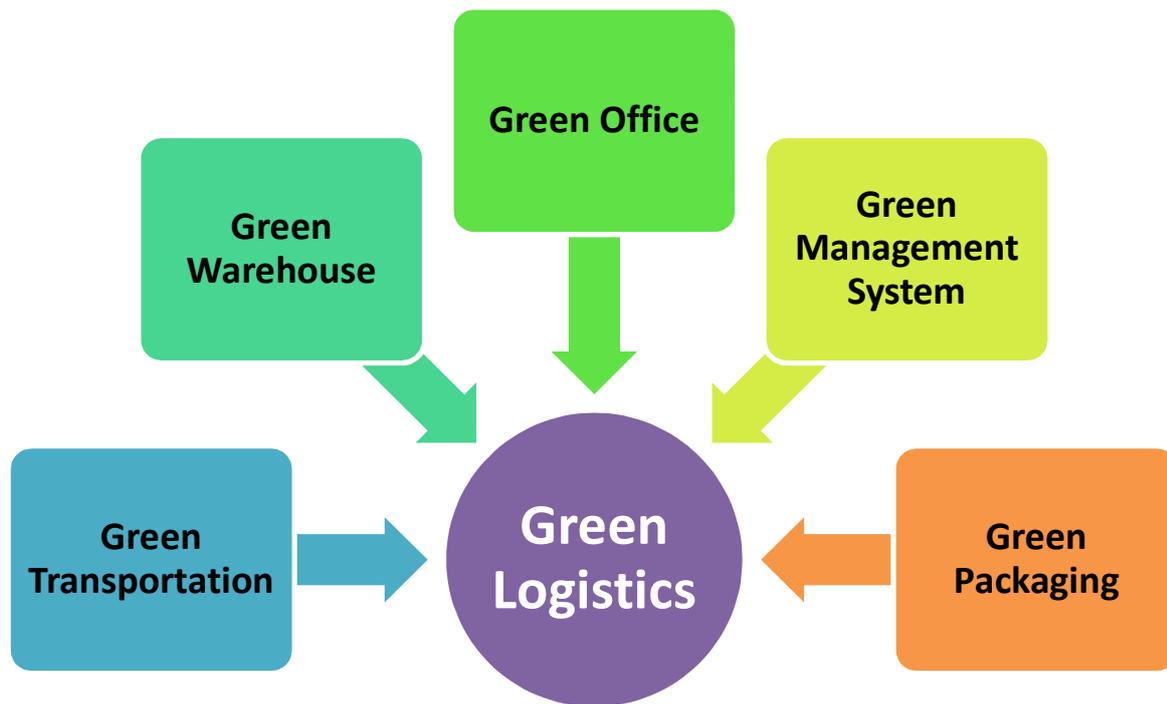


Fig.1: Frame work of Green Logistics

7.3 Green Management System: Top management commitment to carry out an environmental sustainability strategy and transport everyone on board improvement active. The employees' morale to exercise it and create the job relaxed, practicing eco-friendly stationery enhance, electric saving air conditioner results in successfully save cost for electricity that is also one of the benefits to the organization in reducing costs.

7.4 Green Packaging:

- Reduce environmentally problem.
- Reduces greenhouse effects.
- Reduces layers of packaging.
- Recyclable content.
- Use of minimal materials to reduce packaging cost.

7.5 Green Transportation:

- Route optimizations utilize fuel usage and reduce mileages, capacity, and wastage that results in improved transportation cost.
- Intention to replace the use of alternative fuel like natural gas to replace petrol and diesel in future reduces the transportation cost.
- Save cost, increase competitiveness (increase speed/ shorten transport time).
- Reduce pollution.
- Increase security of workers, increase comfort level [7], [8].

8. THE DRIVERS OF GREEN LOGISTICS

Green logistics is quickly gaining prominence throughout the logistics and supply chain industry as protection of the environment has appeared as one of the rated objectives among the governing bodies all over the world. The following features play an important role to drive green logistics.

1. Increasing energy costs: Mounting power and fuel costs along with the cost of related raw materials required for operating have brought into focus the need for a more cost-effective green alternative. Low power consuming IT solutions, substitute energy sources and recycling can have a positive impact in developing the bottom line in a business financial sheet.

2. **Global alarm over greenhouse Gas emission:** corporate policies are concentrating more on identifying and lowering the carbon footprints caused by their IT equipment, infrastructure, and people.
3. **Climate change:** Global warming is impacting the weather, ice caps, and glaciers in both the northern and southern hemisphere in a negative way. The rise in the sea level due to the reduction in the ice caps and glaciers cover is turning out to be a primary cause of concern for the environmentalists all over the world.
4. **Government and Environmental Protection Agency regulations:** An organization needs to follow certain specifications to obtain energy star rating and other environmental certifications. Penalization by policing agencies to implement carbon credit obedience is another inspiring factor for Green IT initiatives.
5. **Improved environmental awareness among the community:** Vendor selection based on Green IT practices, sharing of best practices in companies across the supply chain, an end to end obedience along the supply chain are the instrumental factors behind a successful and flourishing Green It strategy [9], [10].

9. CONTRADICTION OF GREEN LOGISTICS

The green logistics is made up of two words green and logistics and showed that the green and logistics are often opposite to each other. Logistics are used to manage its different activities strategically through cost minimization, but this cost minimization comes at the expense of the environment. Thus, there is a kind of contradiction between the "green" and "logistics". Contradiction are occurring in several key areas - cost, time/availability, Network, Reliability, storage, e-commerce [11], [12].

Table 3: Contradictions of Green Logistics

MEASUREMENT	OUTCOME	CONTRADICTION
Costs	The reduction of the costs over improvement in packing and decrease of wastes. Benefits are resulting by the traders.	Environmental costs are normally externalized.
Time / Flexibility	Collective supply chains. JIT and DTD provide flexible and effective physical distribution schemes.	Extended production, distribution and transaction arrangements for consuming more space, more energy and producing more emissions (CO ₂ , particulates, NO _x , etc.).
Network	Increasing the system-wide effectiveness of the distribution system from end to end network (Hub-and-spoke structure).	A concentration of environmental inspirations following to most significant centers and a along flight path. Pressure on local communities.
Reliability	Reliable and on-time delivery of cargo to passengers.	Methods used, trucking and air transportation, are the minimum amount of environmentally effective.
Warehousing	Reducing the requirements for private warehousing amenities.	Inventory get rid of in part to public roads (or in containers), contributing to blocking and space consumption.
E-commerce	Increased business openings and alteration of the supply chains.	Variations in physical distribution systems in the direction of higher levels of energy consumption.

The main objective of sustainability is developing and implementing the proper methods to balance the three pillars, however, there are general factors restraining the achievement of sustainability such as

cost, lack of awareness, coordination, and communication, as well as resistance. Once these barriers which influence the impact of consumption on the environment are being overcome, the economic and social value creation can be achieved [13], [14], [15].

Table 4: Contribution of green logistics to the creation of economic and social value

Economic	Social
<ul style="list-style-type: none"> Improved customer satisfaction Good relations with stakeholders Green image Higher delivery reliability through optimized route planning and less truck downtime Higher productivity through higher motivation of the employees Reduced liability risk Reduced taxes Improved financial performance 	<ul style="list-style-type: none"> Reduced environmental impact (e.g. CO₂ emissions, noise levels) Better utilization of natural resources (e.g. fuel, packaging) Development in concord with principles and available resources Reduced social cost (e.g. health problems in the communities) Access to clean water and clean energy Creation of jobs Enhanced quality of life

All these can be achieved when an organization has green logistics [16], [17].

10. FINANCIALS

1.1.1 Aegis Logistics Limited's financial statement of last Three years is given in table 5.

Table 5: Last Three years Financial Statement. (All amounts are in INR lakhs, unless stated otherwise)

Note		As on March 31, 2018	As on March 31, 2017	As on April 1, 2016
Assets				
Non-current assets				
Property, plant and equipment	8A	74,384.52	55,589.85	48,781.09
Capital work-in-progress		13,167.88	16,129.91	7,197.72
Other intangible assets	9	125.59	59.29	53.14
Financial assets				
I. Investments				
a. Investments in subsidiaries	10	4,037.86	7,870.76	11,806.55
b. Other investments	11	1.62	18.58	35.71
II. Loans	12	48.81	5,113.83	6,921.50
III. Other financial assets- Security deposits		579.77	468.91	645.29
Current tax assets (net)		1,608.70	963.01	968.53
Other non-current assets	13	5,253.81	5,394.60	3,486.00
Total non-current assets		99,208.56	91,608.74	79,895.53
Current assets				
Inventories	14	1,799.46	1,667.79	681.28
Financial assets				
I. Trade receivables	15	3,950.47	3,486.79	2,891.84
II. Cash and cash equivalents	16	1,081.86	788.04	558.47
III. Other bank balances	17	2,444.03	2,549.21	3,709.20
IV. Loans	18	4,320.03	–	–
V. Other financial assets	19	7,855.71	11,366.39	461.50
Other current assets	20	5,141.07	2,121.71	2,090.05

Total current assets		26,592.63	21,979.93	10,392.34
Total assets		1,25,801.19	1,13,588.67	90,287.87
Equity and liabilities				
Equity				
Equity share capital	21	3,340.45	3,340.45	3,340.45
Other equity	22	73,532.77	66,548.71	62,612.71
Total equity		76,873.22	69,889.16	65,953.16
Liabilities				
Non-current liabilities				
Financial liabilities				
I. Borrowings	23	4,883.33	3,567.39	3,947.04
II. Other financial liabilities	24	358.15	285.30	245.75
Other non-current liabilities	25	192.01	228.07	242.36
Provisions	26	919.30	857.12	703.72
Total non-current liabilities		6,352.79	4,937.88	5,138.87
Current liabilities				
Financial liabilities				
i. Borrowings	23	21,205.24	14,726.91	4,034.78
ii. Trade payables	27	3,386.3	23,960.29	2,613.62
Total outstanding dues of creditors other than micro enterprises and small enterprises				
Other financial liabilities	28	8,679.32	8,932.00	3,081.29
Deferred tax liabilities (net)	46	7,035.98	8,572.23	7,921.17
Provisions	26	254.84	114.54	161.01
Current tax liabilities (net)		–	549.05	150.34
Other current liabilities	29	2,013.48	1,906.61	1,233.63
Total current liabilities		42,575.18	38,761.63	19,195.84
Total liabilities		48,927.97	43,699.51	24,334.71
Total equity and liabilities		1,25,801.19	1,13,588.67	90,287.87

* Reported numbers are as per the Indian Accounting Standards adopted by the Aegis Logistics Limited in FY 2017-18.

11. NEW PROJECTS AND EXPANSION

Aegis Logistics Limited through its subsidiary company Hindustan Aegis LPG Limited has commissioned a fully refrigerated LPG terminal at Haldia Dock Complex, West Bengal, with a loading capacity of 25,000 MT and throughput capacity of 2,500,000 MT per annum. This is the largest LPG terminal in the Aegis portfolio. Based on increased demand for LPG in the region, the Company through its subsidiary Aegis Gas (LPG) Private Limited has expanded its LPG storage capacity at Pipavav from 8,100 MT to 18,300 MT, and growth of 10,200 MT. To increase its throughput capacity and to decrease road movement of LPG at its Mumbai Port, the Company has completed its development of debottlenecking of Mumbai LPG terminal by involving it by pipeline to the Uran-Chakan cross country LPG pipeline throughout the year. Post expansion of liquids terminal by addition 25,000 KL of storage capacity at Haldia during the year, the Company is further expanding its liquid terminal by adding another 35,000 KL, which is expected to be commissioned in FY 2018-19. The

future growth is expected from the Company's new liquid terminal recently commissioned at Kandla port with a capacity of 100,000 KL. The Company has announced the implementation of its liquid terminal at the new Mangalore port with the capacity of 25,000 KL, which will be in addition to the existing liquid terminals and will provide a competitive edge to the company. The company is looking for chances of acquiring land at major and minor ports in India [18], [19], [20].

12. SUBSIDIARY COMPANIES OF AEGIS LOGISTICS LIMITED

The Company has nine subsidiaries (out of which, six are wholly owned subsidiaries) as on 31st March 2018 having business akin and germane to the business of holding Company, whose details are given in the Annual Report and there has been no change in the nature of business of its subsidiaries, except as stated below during the year [21], [22]. The organization maintains the following steps to develop with having the green business strategies for logistics where every organization seeks to have proper benefits. The operating & financial Performance of the subsidiary Companies are as provided below:

1. **Sea Lord Containers Limited:** During the year under review, the Company's Bulk Liquid terminal continued operations at full capacity. The Company recorded a Turnover of Rs.5, 323.37 Lakhs (Previous year Rs. 4,883.06 Lakhs), increase of 9.01 % on a YoY basis on account of product mix. Net Profit after Tax was recorded at Rs. 4,127.07 Lakhs (Previous year Rs. 3,592.09 Lakhs), an increase of 14.89 %.

2. **Aegis Gas (LPG) Private Limited (wholly owned subsidiary):** During the year under review, the revenue for the year has increased to Rs. 14,634.15 Lakhs as against Rs. 11,540.69 lakhs of the previous year on account of increased volumes. Profit after tax increased to Rs.5, 516.49 Lakhs as compared to Rs. 904.27 Lakhs in the previous year on account of LPG terminalling. During the year under review, the subsidiary has expanded its LPG storage capacity in Pipavav from 8,100 MT to 18,300 MT, an increase of 10,200 MT. It has also redeemed all its outstanding Non – Convertible debentures which were listed on the National Stock Exchange of India Ltd.

3. **Hindustan Aegis LPG Limited:** During the year under review, the operating revenue was Rs. 2,828.26 Lakhs (Previous Year Rs. 4,282.71 Lakhs). Profit for the year ended 31st March 2018 was Rs. 1,164.73 Lakhs as compared to the loss of Rs. 275.71 Lakhs in the previous year. During the year, Itochu Petroleum Co. (Singapore) Private. Ltd., a Singapore based company, subscribed to 19.7% stake in the equity capital of the subsidiary company through Preferential Issue. The Company has during the year commenced terminalling of LPG and bottling plant at Haldia. The LPG terminal was successfully commissioned in Q3 FY 2018 and is operating well.

4. **Konkan Storage Systems (Kochi) Private Limited (wholly owned subsidiary):** During the year under review, the Income was Rs. 703.28 Lakhs as against Rs. 666.40 Lakhs in the previous year. The company made a net profit of Rs. 41.19 Lakhs as against Rs. 2.35 Lakhs in the previous year on account of improved utilization of capacity.

5. **Aegis Group International Private Limited:** The revenue for the year increased to Rs. 405,888.74 Lakhs as against Rs. 336,531.78 Lakhs of the previous year on account of higher volumes. Profit after tax for the year ended 31st March 2018 was Rs. 2,469.66 Lakhs as compared to the profit of Rs. 2,342.30 Lakhs in the previous year.

6. **Aegis International Marine Services Private Limited:** The profit for the year was Rs. 517.16 Lakhs as against Rs. 1,569.22 Lakhs of the previous year. The loss for the year-end on 31st March 2018 was Rs. 8.99 Lakhs as compared to the loss of Rs. 4.01 Lakhs in the preceding year.

7. **Aegis LPG Logistics (Pipavav) Limited:** The business sustained by normal expenses of Rs. 0.22 Lakhs during the year (Previous year Rs. 0.22 Lakhs). The business has not started any money-making operations as yet.

8. **Aegis Terminal (Pipavav) Limited:** The business incurred a normal expenditure of Rs. 0.22 Lakhs during the year (Previous year Rs. 0.22 Lakhs). The business has not started any commercial operations as yet.

9. **Eastern India LPG Company Private Limited:** The business experienced a normal expense of Rs. 4.80 Lakhs during the year (previous year Rs. 4.35 Lakhs). The company has not begun any profitable operations as yet [23].

13. MAIN BUSINESS ACTIVITIES OF THE COMPANY

All the business activities contributing the 10 % or more of the total gross revenue of the company shall be stated.

Table 6: Business activities of the company

S. No.	Name and Description of main products/ Services	NIC Code of the Product/ service	% to total gross revenue of the company
1	Sales – Traded good - Liquefied Petroleum Gas	-	-
2	Wholesale of rock-solid, liquefied and gas, fuels and related products	46610-Wholesale of rock-solid, liquefied and gaseous fuels and related products	59.02 %
3	Storage and warehousing n.e.c. [Includes general merchandise warehouses and warehouse for furniture, vehicles, gas and oil, chemicals, textiles etc. As well contained within is storage of goods in foreign trade zones]	52109 - Storage and warehousing n.e.c. [Consist of overall merchandise warehouses and warehousing of fixtures, automobiles, gases and oil chemicals, fabrics etc. Also contained within is storage of goods in foreign trade zones]	37.92%

14. CORPORATE SOCIAL RESPONSIBILITY (CSR) ACTIVITIES

Rural Upliftment: During the year the company through its sponsored NGO Anarde Foundation continued to work for rural Upliftment all over India, alleviating poverty, and improving the quality of life of the rural. The ANARDE Foundation has adopted 500 villages of Gujarat. It has played role in encouraging other business and industrial houses, through guidance and other services, in their social Upliftment missions.

Water Facility: The foundation was associated with the programme “WASMO” with the aim of providing water facility in villages. Indeed, major focus continues to be water, with major projects in watershed management and trails of water purification in a number of villages.

Channelizing Resources: Aegis has played the role of good Samaritan for the underprivileged in selected areas, by channelizing resources of government-sponsored agencies and nationalized banks under the Integrated Rural Development Programme (IRDP).

ANARDE FOUNDATION: A public trust named ACIL- Navsarjan Rural Development Foundation (ANARDE Foundation) was specifically constituted to make this programme a success. The activities encompass agriculture, lift irrigation, afforestation, animal husbandry, women welfare, health and medical services.

Poverty Eradication: AEGIS is committed to poverty eradication programme in rural India through Anarde Foundation. Around 10,000 villages participate in the programme.

1. Watershed management for conserving irrigation and drinking water.
2. Training villagers especially women folk in income-producing skills such as handcraft and sewing.
3. Micro-credit scheme for village folk.
4. Formation of self-help groups for obtaining credit from banks and institutions.
5. Fundraising for hospitals and eye camps.
6. Tree plantation programme. Award: The Company has achieved Responsible Care Logo from the Indian Chemical Council for achieving distinction in HSE awareness (Health Safety an Environment).

Award: The Company has achieved Responsible Care Logo from the Indian Chemical Council for achieving distinction in HSE awareness (Health Safety an Environment). Aegis is a proud sponsor of Anarde Foundation, which was established in 1979. The mission of the foundation is to eradicate poverty in rural India through a programme of integrated rural development. Anarde operates in eighteen states of India, where it is involved in several initiatives such as the management of village

water resources, skills training, self-help groups, empowerment of women, and entrepreneurship development. ANARDE Foundation also works closely with banks to promote the inclusion of the rural population in the formal financial sector. A number of low-cost rural housing projects have been coordinated by the Foundation, in collaboration with international agencies such as Habitat for Humanity. The foundation operates as an independent charitable foundation under the Bombay Public Trust Act, 1950 and receives substantial donations from Aegis Logistics Limited to carry out its mission [24], [25], [26], [27].

15. SWOC ANALYSIS

Many analysis frameworks are used to analyse business strategy of an organization in which popular are ABCD analysis framework [28], [29] and SWOC analysis framework [30] [31]. SWOC analysis is a kind of analysis for internal abilities of a company [32], [33]. By identifying strength, weakness of the company, one can find further opportunities and challenges for the company in its business. This comprehensive SWOC profile of Aegis Logistics Limited provides a detailed strategic exploration of the firm trades and operations. The interpretation of company's ability gives a clear and fair observation of the business's important strengths and weaknesses and the potential opportunities and challenges [34], [35].

Strength

1. Presence in the entire value chain in the gas business.
2. Steady cash flow from the liquid division.
3. Economies of scale in bulk sourcing.
4. Strategic terminal locations.
5. Strong customer relationships.
6. JV with one of the largest global trading company.

Weakness

1. Gas business contributes the majority of EBITDA.
2. Majority of the gas business dependent on B2B clients only.
3. Dependence on OMCs for a large part of the LPG business.

Opportunities

1. Expanding the market size of B2C business i.e. Autogas and commercial cylinders.
2. Expand LPG terminal capacity to tap rising demand.

Challenges

1. Government policies.
2. Exchange rate volatility.
3. High LPG prices can hurt demand.
4. OMCs expanding their LPG terminal capacities.

Aegis Logistics Ltd (Aegis) is a logistics business that delivers oil, gas, and biochemical logistics services. The business's facilities include manufacturing, procurement, and construction facilities, liquid logistics, gas logistics, gas supply and marine services [36].

16. CONCLUSION

The competitive and environmental strategies of Aegis Logistics Ltd are studied in detail. It is seen that these strategies, in general, contribute to a reduction in pollution, traffic congestion and as a consequence it improves the quality of life and also reduces health diseases due to a reduction of air pollution and conceptual framework which defines green logistics as the sum of five pillars: green transport; green warehousing; green packaging; green office, green management system. Waste management from the environmental perspective supports environmentally sound practices such as recycling, remanufacturing, reuse and recall. The basic principle is that if the product has a long life it will benefit the environment. Logistics may improve efficiency and effectiveness such as using reusable containers and boxes instead of the paper carton may reduce waste and optimize product packaging; building a green warehouse lead to reduce the overall operating cost while using the hybrid engine in trucks may reduce carbon emissions and consume less gas. Companies nowadays have to integrate their supply chain with environmental management due to pressures from customers who have increasing environmental concerns. In addition, organizations can generate more business

opportunities than their competitors if they can address environmental issues successfully. New logistics processes, which attempt to reduce costs through better use of available resources. Logistics with its key function in competition, offers a new opportunity for companies with reduced costs, creating value for customers and contributing to the long-term existence of limited resources of the World by doing green logistics activities. Aegis Logistics Ltd has followed these strategies and marching towards sustainability.

REFERENCES

- [1] <http://www.aegisindia.com>, Retrieved - on 11/07/2018.
- [2] <http://www.fundoodata.com>, Retrieved - on 13/07/2018.
- [3] Karagülle, A. Ö. (2012). Green business for sustainable development and competitiveness: an overview of Turkish logistics industry. *Procedia-Social and Behavioral Sciences*, 41, 456-460. DOI: <http://doi.org/10.1016/j.sbspro.2012.04.055>.
- [4] Wijittra Srisorn., (2013). The Benefits of Green Logistics to organisation. *International Journal of management and Engineering (IJME)*, 7(8), 1-4. DOI: [10.5281/ZENODO.1086845](https://doi.org/10.5281/ZENODO.1086845).
- [5] <http://www.smallbusiness.chron.com>, Retrieved – on 17/07/2018
- [6] SHARLIZA MOHD SAFAAI, N., ZAINON NOOR, Z., HASHIM, H., UJANG, Z., & TALIB, J. (2011). Projection of CO2 emissions in Malaysia. *Environmental progress & sustainable energy*, 30(4), 658-665. DOI: <http://doi.org/10.1002/ep.10512>.
- [7] Kumar, A. (2015). Green Logistics for sustainable development: an analytical review. *IOSRD International Journal of Business*, 1(1), 07-13.
- [8] Aithal P. S. (2017). A critical study on Various Frameworks used to analyze International Business and its Environment. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 1(2), 74-98. DOI: <http://dx.doi.org/10.5281/zenodo.1053578>.
- [9] Lee, S. Y., & Klassen, R. D. (2008). Drivers and enablers that foster environmental management capabilities in small-and medium-sized suppliers in supply chains. *Production and Operations management*, 17(6), 573-586. DOI: <https://doi.org/10.3401/poms.1080.0063>.
- [10] Silvia Cosimato., (2015). Green supply chain management- practices and tools for logistics competitiveness and sustainability. The DHL case study. *TQM Journal*, 27(2), 256-275. DOI: [10.1108/TQM-01-2015-0007](https://doi.org/10.1108/TQM-01-2015-0007).
- [11] Marcus Thiell, Juan Pablo Soto zuluaga., (2013). Is it Feasible to Implement Green logistics in Emerging Markets? *International journal of applied Logistics (IJAL)*, 4(1), 4-13. DOI: [10.4018/jal.2013010101](https://doi.org/10.4018/jal.2013010101).
- [12] Aithal, P. S., (2017). Company Analysis – The Beginning Step for Scholarly Research. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 1(1), 1-18. DOI: <http://dx.doi.org/10.5281/zenodo.573769>.
- [13] Aithal, P. S. (2017). An Effective Method of Developing Business Case Studies Based on Company Analysis. *International Journal of Engineering Research and Modern Education (IJERME)*, 2(1), 16-27. DOI: <http://dx.doi.org/10.5281/ZENODO.400579>.
- [14] Aithal, P. S. (2017). Industry Analysis – The First Step in Business Management Scholarly Research. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(1), 1-13. DOI: <http://dx.doi.org/10.5281/zenodo.810347>.
- [15] Aithal, P. S., Suresh Kumar P. M. (2017). Ideal Analysis for Decision Making in Critical Situations through Six Thinking Hats Method. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 1(2), 1-9. DOI: <http://dx.doi.org/10.5281/zenodo.838378>.
- [16] Aithal P. S., (2017). Impact of Domestic, Foreign, and Global Environments on International Business Decisions of Multinational Firms: A Systematic Study. *International Journal of*

- Management, Technology, and Social Sciences (IJMTS)*, 2(2), 57-73. DOI:<http://dx.doi.org/10.5281/zenodo.1067103>.
- [17] Madhushree, L. M., Revathi, R., Anil Kumar, Aithal, P.S., (2018). Business Strategies of Top Indian IT Company: Mindtree. *International Journal of Case Studies in Business IT and Education (IJCSBE)*, 2(1), 22-36. DOI: [http:// dx.doi.org/10.5281/zenodo.1249871](http://dx.doi.org/10.5281/zenodo.1249871).
- [18] Karia, N. and Wong, C.Y., (2012). The impact of logistics resources on the performance of Malaysian logistics service providers. *Production and Planning & Control*, 24(1), 589-606. DOI:[10.1080/09537287.2012.659871](https://doi.org/10.1080/09537287.2012.659871).
- [19] Seroka-Stolka, O. (2014). The development of green logistics for implementation sustainable development strategy in companies. *Procedia-Social and Behavioral Sciences*, 151, 302-309. DOI: [http:// doi.org/ 10.1016/j.sbspro.2014.10.028](http://doi.org/10.1016/j.sbspro.2014.10.028).
- [20] Sbihi, A., & Eglese, R. W. (2010). Combinatorial optimization and green logistics. *Annals of Operations Research*, 175(1), 159-175. DOI: [10.1007/s 10479-009-0651-z](https://doi.org/10.1007/s10479-009-0651-z).
- [21] [http:// www.indiainfoline.com](http://www.indiainfoline.com), Retrieved – on 19/07/2018.
- [22] Ronald, H. Ballou (1995). Logistics Network Design: Modelling and Informational Considerations. *The International Journal of Logistics Management (IJLM)*, 6(2), 39-54. DOI: [10.1108/09574099510805332](https://doi.org/10.1108/09574099510805332).
- [23] Devashish Pujari, Gillian Wright, Ken Peattie., (2003). Green and Competitive Influences on environmental new product development performance. *Journal of Business Research*, 56(1), 657-671. DOI: [10.1016/SO148-2963\(01\)00310-1](https://doi.org/10.1016/S0148-2963(01)00310-1).
- [24] Moravcikova, D., Krizanova, A., Kliestikova, J., & Rypakova, M. (2017). Green Marketing as the Source of the Competitive Advantage of the Business. *Sustainability*, 9(12), 2218. DOI: [10.3390/su9122218](https://doi.org/10.3390/su9122218).
- [25] Muhamad Zameri Mat saman., (2012). Green Supply Chain Management: A Review and Research direction. *International Journal of Managing Value and Supply Chains (IJMVSC)*, 3(1), 2-17. DOI: [10.512/ijmvsc.2012.3101](https://doi.org/10.512/ijmvsc.2012.3101).
- [26] Heal, G. (2005). Corporate social responsibility: An economic and financial framework. *The Geneva papers on risk and insurance-Issues and practice*, 30(3), 387-409. DOI: <http://dx.doi.org/10.2139/ssrn.642762>.
- [27] Thomas Andre., (2014). Corporate Social Responsibility Boosts Value Creation at the Base of the Pyramid. *Cahier de recherche*, 11, 10-20. <https://hal.archives-ouvertes.fr/hal-00989791>.
- [28] Aithal, P. S., (2017). ABCD Analysis as Research Methodology in Company Case Studies. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 2(2), 40-54. DOI: <http://dx.doi.org/10.5281/zenodo.891621>.
- [29] Aithal, P. S., (2016). Study on ABCD Analysis Technique for Business Models, Business Strategies, Operating Concepts & Business Systems. *International Journal in Management and Social Science*, 4(1), 98-115. DOI: <http://doi.org/10.5281/zenodo.161137>.
- [30] Aithal, P. S. and Suresh Kumar, P. M. (2015). Applying SWOC Analysis to an Institution of Higher Education. *International Journal of Management, IT and Engineering (IJMIE)*, 5(7), 231-247. DOI: <http://doi.org/10.5281/zenodo.163425>.
- [31] Jithin Raj, K. & Krishna Prasad, K. (2018). A Critical Study on Business Strategies of 3i Infotech Ltd. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(1), 13-21. DOI: <http://dx.doi.org/10.5281/zenodo.1247319>.
- [32] Sneha, M. S. & Krishna Prasad, K. (2018). Analysis of Business Strategies of Salesforce.com Inc. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(1), 37-44. DOI: <http://dx.doi.org/10.5281/zenodo.1252028>.

- [33] Sudharshan Prabhu, S. & Vaikunth Pai T. (2018). A Study on Products and Services of HCL Technologies. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(1), 45-53. DOI: <http://dx.doi.org/10.5281/zenodo.1253722>.
- [34] Revathi, R., Madhushree, L. M. & Aithal, P. S. (2018). Business Strategy of Top Indian Company: L&T InfoTech. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(1), 64-89. DOI: <http://dx.doi.org/10.5281/zenodo.1302770>.
- [35] Harshith Kumar, M., Krishna Prasad, K., & Bhat, Subramanya. (2018). Accenture-Understanding Sustainable Business Strategies. *International Journal of Case Studies in Business, IT and Education (IJCSBE)*, 2(1), 54-63. DOI: <http://dx.doi.org/10.5281/zenodo.1254137>.
- [36] <https://www.aarkstore.com>, Retrieved- on 31/07/2018.
