

Heavy Earth Moving Machinery Business - Firm level Analysis (Komatsu Ltd):

A study on analysis of Komatsu Ltd (Japan)

Home Country – Japan , Host country – India (Chapter – Two)



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- **Abstract :**

This paper carries out in depth analyse of Japanese HEMM manufacturer M/s Komatsu Ltd's Internationalisation strategy for Indian market. The first part of the study emphasised on the Japan & it's Industry's strategy to do business in India considering as a host country. In this part, mainly effort has been made to explain the moves by Komatsu Ltd towards globalisation on India's market context. The explanations are made through various strategy frameworks and perspective of business operations. This firm level analysis brings more in depth inputs of Komatsu Global & Indian operation. This paper also talks about impacts of various policy adopted by present Indian Government, e.g; Make in India, MSME/Start up promotion, FDI etc. Finally it is also tried to draw a way forward strategy for future business.

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- **Introduction :**

Komatsu Ltd. is a Japanese multinational corporation that manufactures construction, mining and military equipment, as well as industrial equipment. Its headquarters are at Tokyo, Japan. Worldwide, The Komatsu Group consists of Komatsu Ltd. and 182 other companies (146 consolidated subsidiaries and 36 companies accounted for by the equity method).

Komatsu is the world's second largest manufacturer of construction equipment and mining equipment after Caterpillar. It has manufacturing operations in Japan, Asia, America and Europe. Komatsu is very high on technology and owes its success to continuous innovation in this field and excellent product quality and reliability. It follows a uniform model of partnership/dealership worldwide by tying up with major engineering giants to expand its wings.

- **Brief History :**

Komatsu Japan :

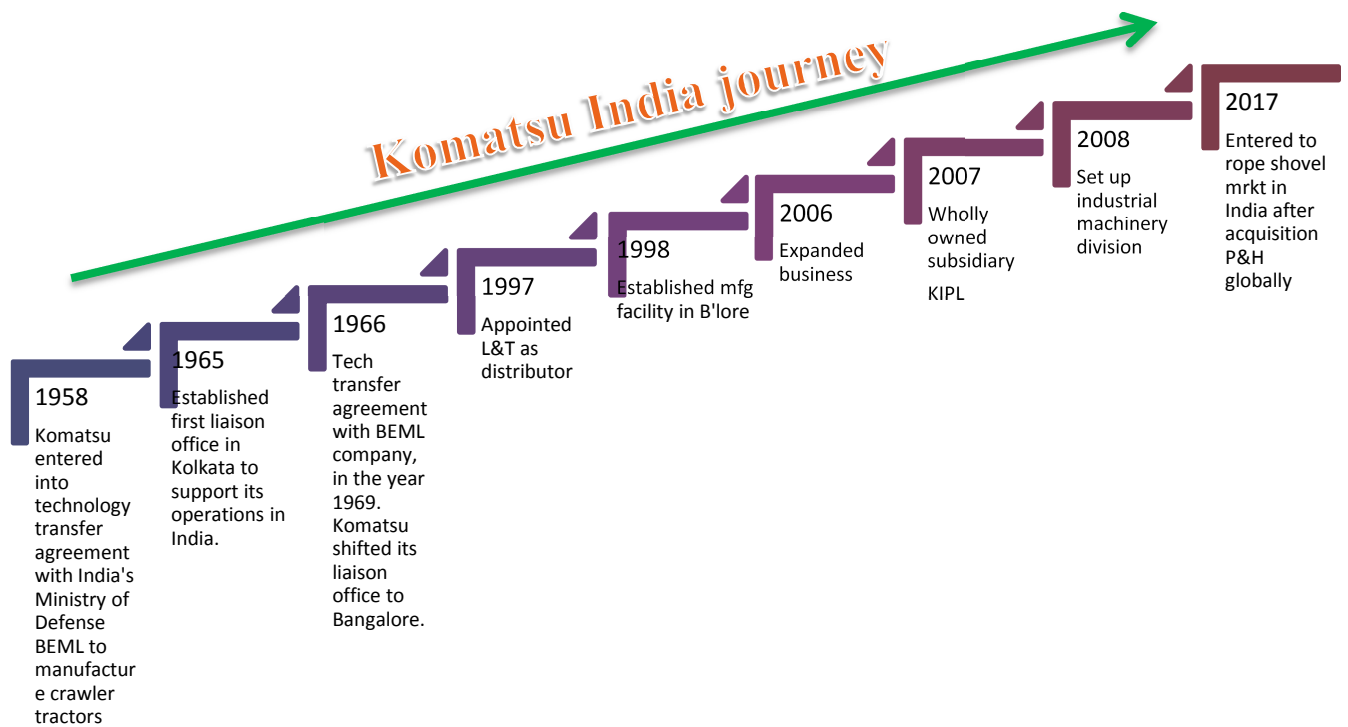
Komatsu Iron Works was started by Takeuchi Mining Industry as a subsidiary to make industrial tools for the parent company. Komatsu became public on May 13, 1921 and became known as Komatsu Limited.

Komatsu produced its first agricultural tractor prototype in 1931. Through the 1930s, Komatsu also produced military tractors for the Japanese military, as well as bulldozers, tanks and howitzers. After World War II, under its new president Yoshinari Kawai, Komatsu added non-military bulldozers and forklifts to its line of equipment. In 1949 it began production of its first diesel engine. Its growth as a company was aided by the strong demand for its bulldozers during Japan's post-war reconstruction in the 1950s. In August 1951 the corporate headquarters were moved to Tokyo. By 1957 the company had advanced technologically to the point that all its models were using Komatsu engines.

In 1964 Rioichi Kawai, son of Yoshinari Kawai, became president of Komatsu and it began exporting its products, looking to counteract the postwar image of Japanese products as being cheap and poorly made. In July 1967, it entered the U.S. market, taking on Caterpillar, the largest bulldozer maker, in its home market. This was done under the company slogan of "Maru-C", ("encircle Caterpillar") where encircling an opponent results in capture of his territory).

Komatsu India :

Komatsu initiated business in India in 1958 after Historical bilateral agreement "agreement of commerce" happened between Japan and India. The journey of Komatsu in India is followed as under :



- **Global strategy frame work:**

This framework is used here to understand the Internationalization strategy of Komatsu, Japan. To understand the strategy, we have to identify four attributes , e.g; Global ambition, Global business system, Global organization and Global positioning.



i) Global ambition :

Global ambition of a firm indicates its region wise performance or, its penetration strategy region wise. To understand the Global ambition of Komatsu, a GCI-GRI graph has been drawn based on the available data and assumption as followed as under :

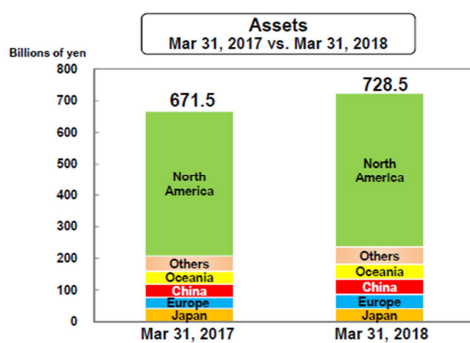
Particular	China	Asia & Oceania	Europe & CIS	Middle east & Africa	Americas	Total
Unit sales (millions in yen)	1,27,446	350804	2,20,622	1,07,811	6,02,818	14,09,501
Assets (billions in yen)	30,000	100000	67000	3,500	4,71,000	6,71,500
Industry World Market(in million \$)	22000	40700	11055	6880	23865	1,04,500
Industry World Market(%)	21.05	38.95	10.58	6.58	22.84	100.00

The above table is made based on following data, information & assumption :

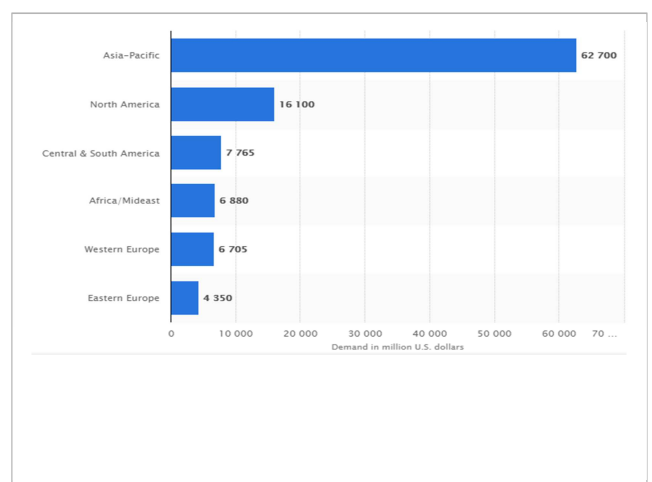
Currently, the Asian Pacific region accounts for an estimated 60 percent of the total global market share. It is anticipated that the market share in this region will continue to experience a compound annual growth rate of about 17 percent during the forecasted time period. An increase in investments in the development of infrastructure throughout all regions in Asia Pacific is expected to fuel the growth of the construction equipment market globally during the predicted time period. Moreover, the ever-growing demand for new transportation and utility infrastructures are expected to add to the augmentation of this market. The boost in the demand for new transport and utility infrastructures is expected to result in a robust compound annual growth rate in Asia Pacific through the year 2020.

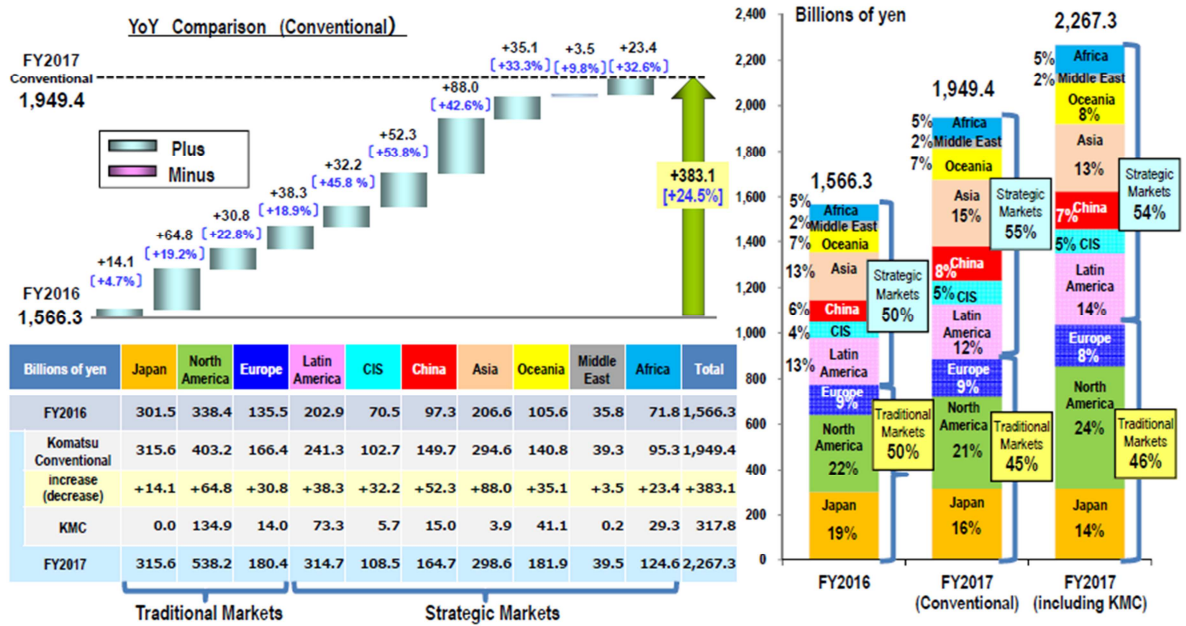
Europe has been seeing a gradual improvement in the global construction equipment market since 2015. The Committee for European Construction Equipment (CECE) stated that the European construction equipment market has seen a positive incline in its business climate. Though there has yet to be a large upturn in sales, the existence of positive momentum in this market as a result of incoming orders being placed does indicate that there will be an improvement in the sales of construction equipment in this region over the forecasted time period. Germany, in particular, is expected to head the European market. Spain and Portugal are also expected to largely contribute to the market.

Asset distribution- region wise:



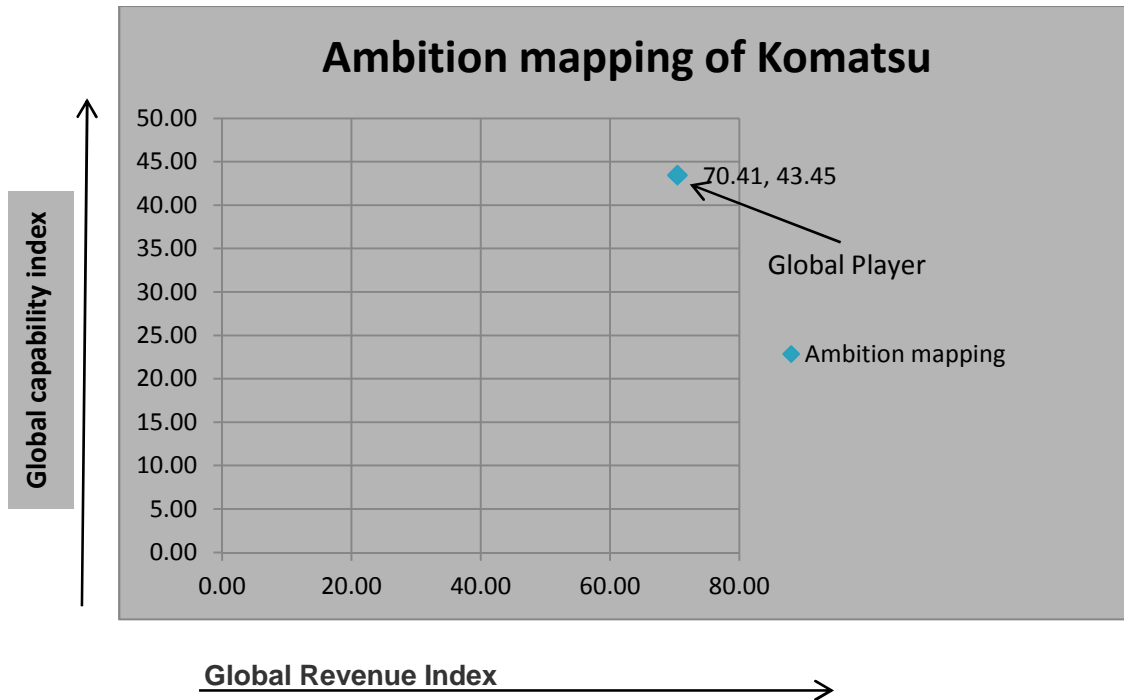
Industry demand-World:





Source : Investor relation 2017

GRI Calculation					
Industry	21.05	38.95	10.58	6.58	22.84
Komatsu (Rx)	9	25	16	8	43
CumRx	9	34	50	57	100
CumRx-n	0	9	34	50	57
CumRx + CumRx-n	9	43	84	107	157
Ix*(CumRx + CumRx-n)	1.90	16.74	8.83	7.03	35.91
Komatsu's GRI	70.41				
GCI Calculation					
Industry	21.05	38.95	10.58	6.58	22.84
Komatsu (Rx)	4	15	9.98	0.52	70
CumRx	4	19	29	30	100
CumRx-n	0	4	19	29	30
CumRx + CumRx-n	4	23	48	59	130
Ix*(CumRx + CumRx-n)	0.94	8.96	5.08	3.90	29.66
Komatsu's GCI	43.45				
Description	Value				
Komatsu's GCI	43.45				
Komatsu's GRI	70.41				



From the above position of the pointer shows the Global ambition of Komatsu Ltd.

M/s Komatsu is currently a Global player and captured almost every potential market with substantial investment through subsidiary, JV, global sourcing etc.

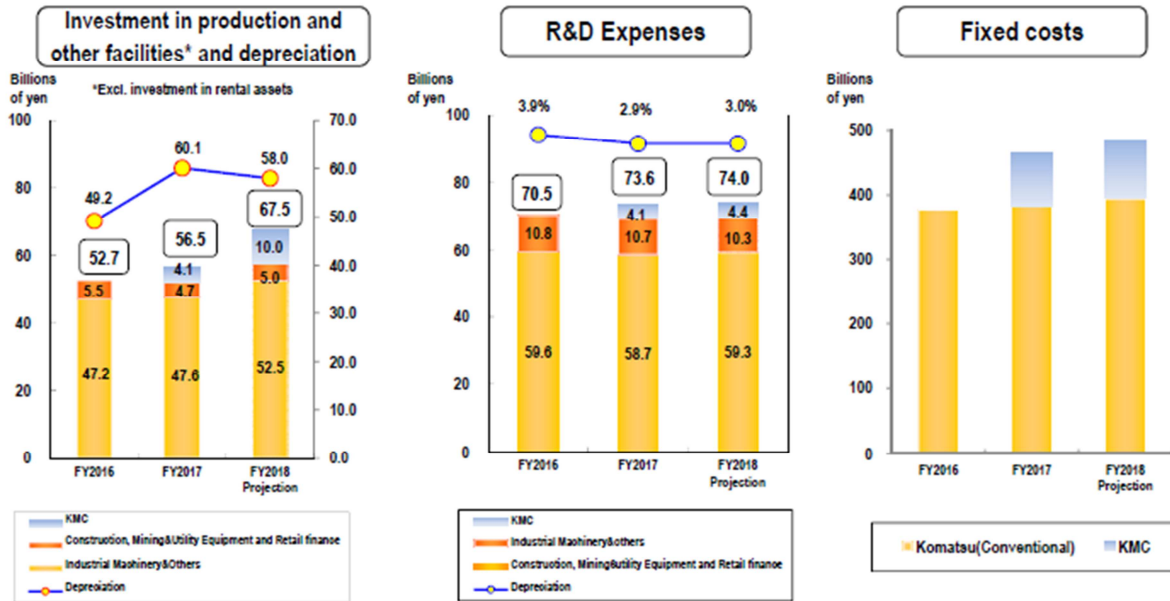
ii) Global business system:

To create global value chain, M/s Komatsu invest region/country wise.

Capital investment : To respond to labor shortage at Japanese plants, it is very crucial for them to invest in capital globally.

R&D expenses: They focus investment in the development of key components, application- and region-specific models as well as next-generation models based on innovation, such as unmanned models.

Fixed costs: Fixed costs will increase, as affected by the addition of Komatsu and other companies to consolidated accounting as well as up-front investment in ICT-driven work reforms.



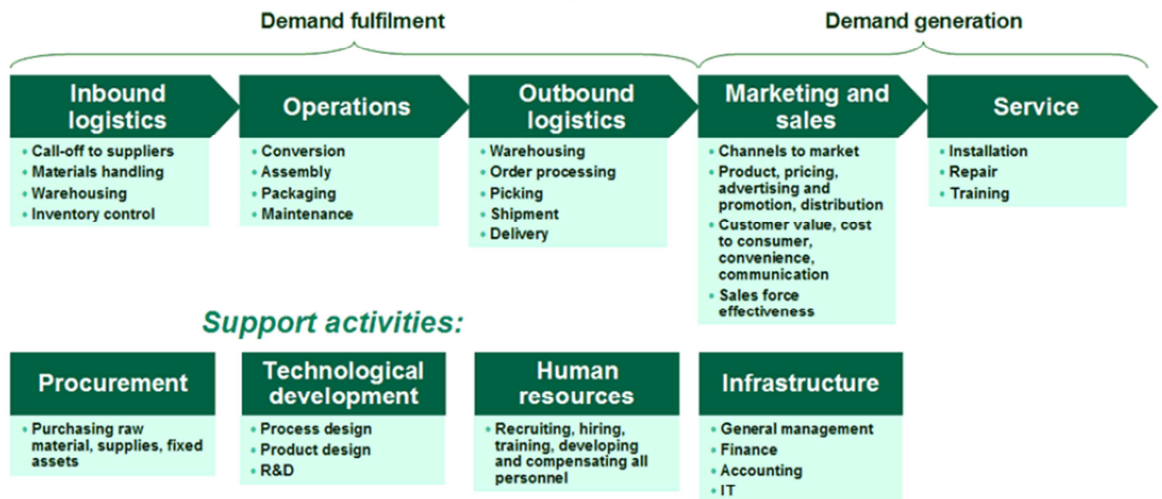
- Value chain analysis :**

Komatsu believes that growth with the value chain, which includes their customers, as well as our sales and service distributors and business associates (suppliers), is essential to increasing corporate value.

Komatsu’s value chain analysis identifies the company’s “primary activities that create customer value” and its related support activities (Thomson et al., 2012). In this part of the paper, illustrations will follow of the company’s general value chain, the suppliers’ chain, manufacturing activity system map, transportation and logistics chain and the actual global value chain.

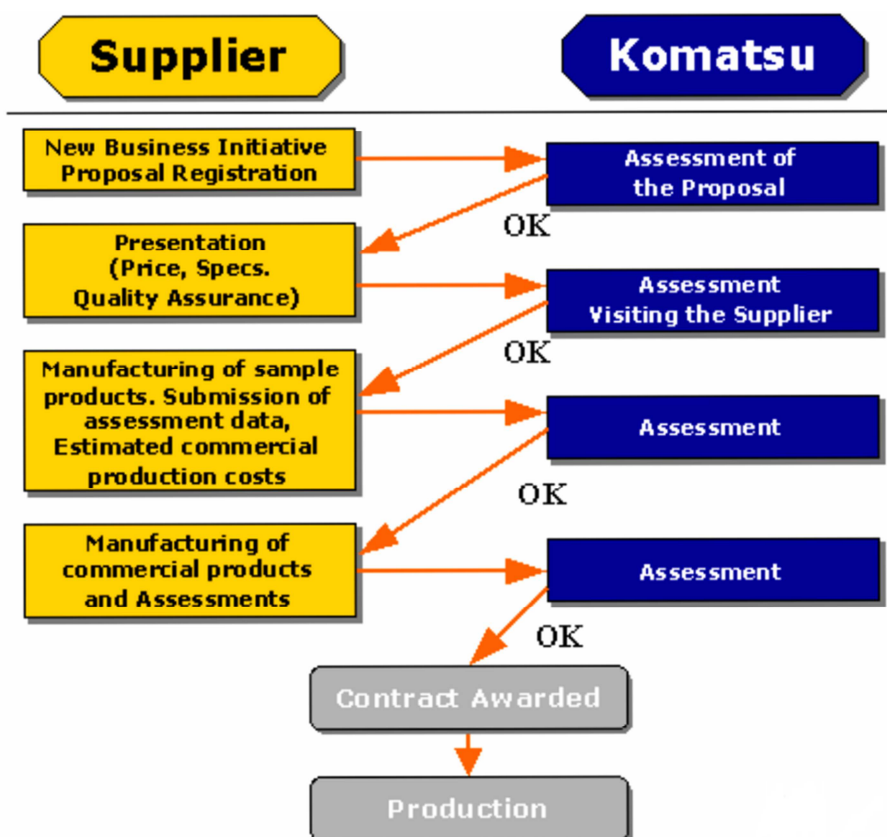
The following illustration shows the general structure of Komatsu’s value chain from raw material purchasing to after sales services and support activities.

Primary value chain:



Source: Komatsu website, 22/03/2014.

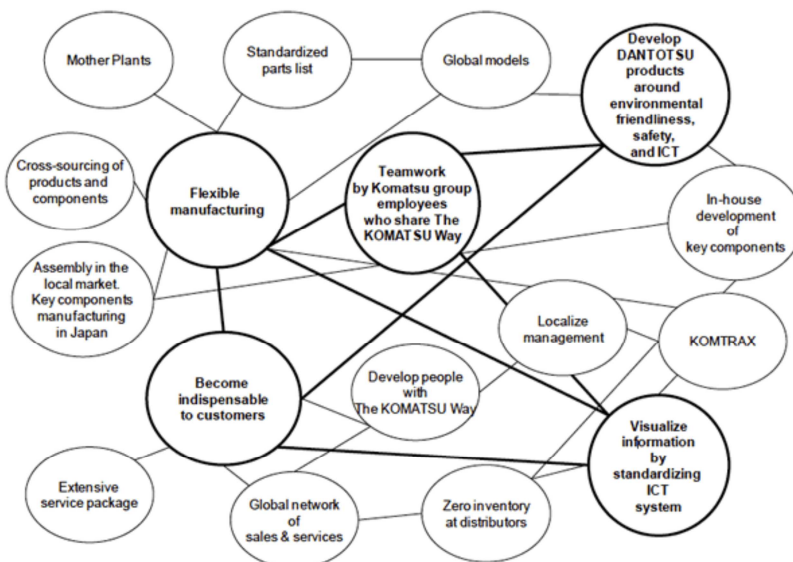
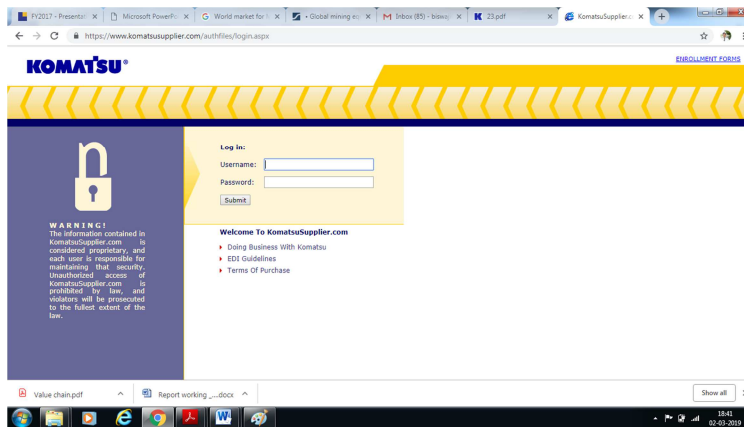
Next is the illustration which depicts the vertical integrated goods and materials sourcing that Komatsu controls, through dividing its suppliers into groups, based on the materials.



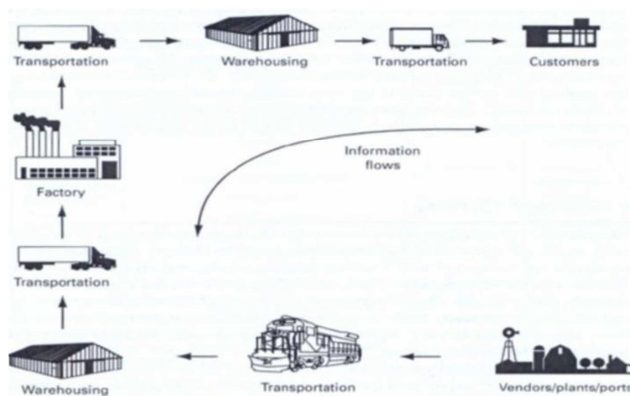
Source : komatusupplier.com, 22/03/2014.

This portal is for supplier.

Source : komatsu website



Next is the transportation and logistics chain which, as mentioned before, adds a lot of value to the end products of the company due to its lack of distribution points globally and transportation channels.

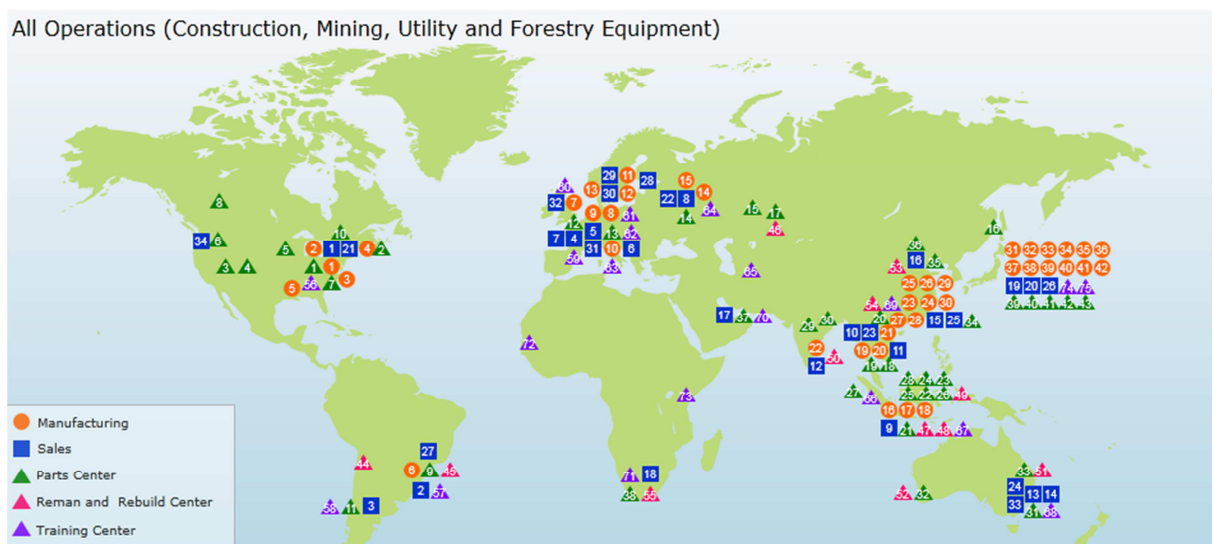


Source : komatusupplier.com

Through reinforcement of the value chain business, komatsu ensure no machine downtime and create higher added value for customers, as they offer retail finance, parts, attachments, service, and rental to used equipment in the lifecycle of their products from customers' purchase to disposal or trade-in. These efforts range greatly from an expanded product mix of high value-added parts and products to maintenance service contracts designed to cut down total costs. Nevertheless, the most important is the human resource development of sales and service distributors. We are working to expand and strengthen our training efforts.

Global value chain of Komatsu:

All Operations (Construction, Mining, Utility and Forestry Equipment)



Source: Komatsu website, 22/03/2014.

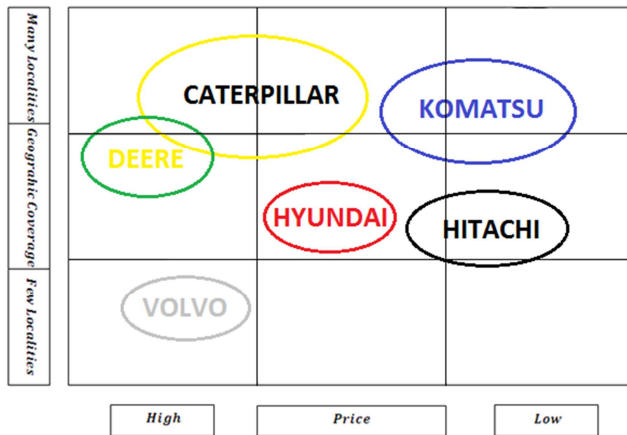
iii) Global Positioning:

Komatsu Ltd has positioned itself across different countries:

- **Key Countries:** UK, North America
- **Emerging Countries:** China, Indonesia, India, Brazil, Australia
- **Marketing Countries:** Middle East, Nigeria, Senegal, Uganda, SAARC
- **Platform Countries:** Japan, Russia
- **Sourcing Countries:** China, Brazil.

The following graph is a tool for mapping the positioning of Komatsu and its main competitors, according to geographic coverage and products prices. The choices were Komatsu and

Caterpillar as the basic players in the industry, John Deere as part of the forest- machinery segment of the industry, Hyundai and Hitachi as the major competitors of the Komatsu in the emerging markets and finally Volvo, for its complete contrary positioning to Komatsu's.



iv) Global organisation:

Americas

Company	Location
Komatsu America Corp.	
1 Chattanooga Manufacturing Operation	Tennessee, U.S.A.
2 Peoria Manufacturing Operation	Illinois, U.S.A.
3 Newberry Manufacturing Operation	South Carolina, U.S.A.
4 Cummins Komatsu Engine Company	Indiana, U.S.A.
5 Hensley Industries, Inc.	Texas, U.S.A.
6 Komatsu do Brasil Ltda.	São Paulo, Brazil
7 Atommix Indústria e Comercio Ltda.	São Paulo, Brazil

Europe and CIS

Company	Location
8 Komatsu UK Ltd.	Birtley, U.K.
9 Komatsu Hanomag GmbH	Hannover, Germany
10 Komatsu Mining Germany GmbH	Düsseldorf, Germany
11 Komatsu Utility Europe S.p.A.	Este, Italy
12 Stavmek s.r.o.	Mnichovo Hradiste, Czech
13 Komatsu Forest AB	Umeå, Sweden
14 Komatsu KIX LLC	Klepp stasjon, Norway
15 KRANEKS International Co., Ltd.	Ivanovo, Russia
16 Komatsu Manufacturing Rus, LLC	Yaroslavl, Russia

China

Company	Location
26 Komatsu (Changzhou) Construction Machinery Corp.	Jiangsu
27 Komatsu (Changzhou) Foundry Corp.	Jiangsu
28 Komatsu Shantui Construction Machinery Co., Ltd.	Shandong
29 Komatsu Hydraulics Manufacturing Co., Ltd.	Shandong
30 Hensley Lingfeng Co., Ltd.	Zhejiang
31 Komatsu Power Generation Systems (Shanghai) Ltd.	Shanghai
32 Komatsu Undercarriage China Corp.	Shandong
33 Komatsu Utility (China) Machine Co., Ltd.	Shandong
34 Komatsu (Shandong) Cast Steel Co., Ltd	Shandong

Japan

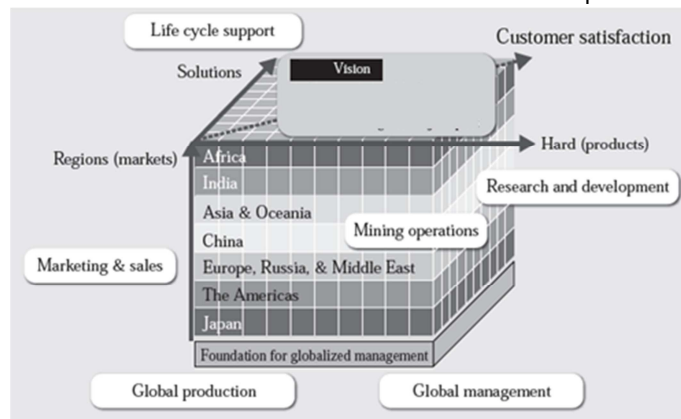
Company	Location
Komatsu Ltd.	
35 Awazu Plant	Ishikawa
36 Kanazawa Plant	Ishikawa
37 Osaka Plant	Osaka
38 Rokko Plant	Hyogo
39 Ibaraki Plant	Ibaraki
40 Oyama Plant	Tochigi
41 Koriyama Plant	Fukushima
42 Shonan Plant	Kanagawa
43 Komatsu Utility Co., Ltd.	Tochigi
44 Komatsu Cummins Engine Co., Ltd.	Tochigi
45 Komatsu Castex Ltd.	
Head Office, Manufacturing Div.	Toyama
Manufacturing Div. (CB Production Dept., Oyama Sec.)	Tochigi
46 Komatsu Cabtec Co., Ltd.	Shiga

Asia	
Company	Location
17 PT Komatsu Indonesia	Jakarta, Indonesia
18 PT Komatsu Undercarriage Indonesia	Bekasi, Indonesia
19 PT KOMATSU FORGING INDONESIA	Bekasi, Indonesia
20 PT Komatsu Patria Attachment	Bekasi, Indonesia
21 Bangkok Komatsu Co., Ltd.	Chonburi, Thailand
22 Bangkok Komatsu Industries Co., Ltd.	Chonburi, Thailand
23 CABTEC THAI Co., Ltd.	Chachoengsao, Thailand
24 L&T-Komatsu Limited	Bangalore, India
25 Komatsu India Pvt. Ltd.	Chennai, India

Komatsu designates those production bases with development capabilities around the world as Mother plants and position them as the core of global production. The Mother plants play an important part in achieving a target cutback on the production cost when a new model is developed or an existing machine is model changed.

They are also assigned with a task of strengthening the production competitive edge of their daughter plants that manufacture the same models as well as that of their own.

Komatsu follows three dimensional model for Global operation.



- **Komatsu India operation :**

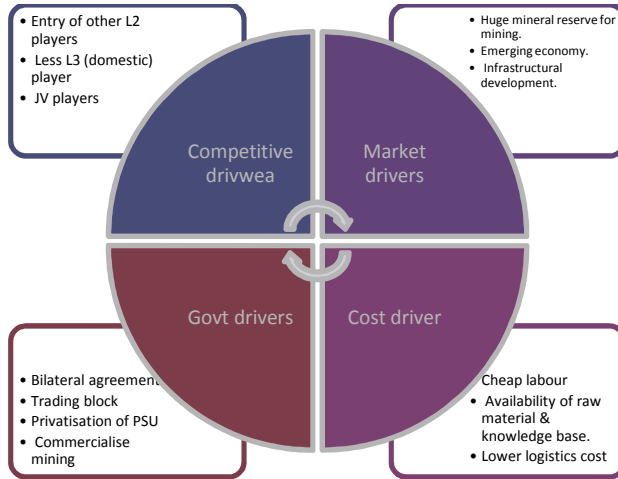
Komatsu entered into technology transfer agreement with India's Ministry of Defense to manufacture crawler tractors at an establishment in Kolkata. It established first liaison office in Kolkata to support its operations in India. Komatsu entered into a technology transfer agreement with a government organization and progressively introduced wide range of construction machines, manufactured by the collaborating organization. Accordingly, to support the government company, in the year 1969 Komatsu shifted its liaison office to Bangalore. It appointed Larsen & Toubro one of the leading companies in construction and engineering industry as the authorized distributor in India to market and supports a wide range of Komatsu construction and mining equipment. Komatsu entered into an agreement with Larsen & Toubro to jointly manufacture world class small and medium sized hydraulic excavators. This establishment is named as L&T-Komatsu Pvt. Ltd.

In 2007, Komatsu established Komatsu India Pvt. Ltd. (KIPL) a wholly owned subsidiary of Komatsu group of company, Japan and built a world class indigenous manufacturing facility near Chennai, Tamil Nadu. This facility manufactures mining dump trucks of 60 ton (HD465) and 100 ton (HD785); also established branch office in Bangalore to support the distributor's activities across India.

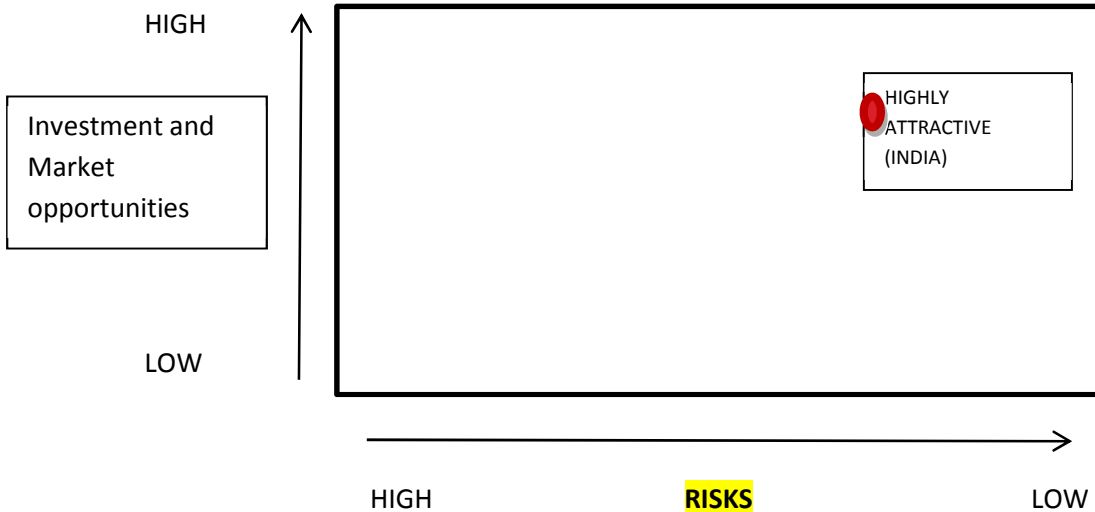
April 2013 saw the dissolution of excavator manufacturing JV L&T Komatsu. A statement from Komatsu said, "Komatsu believes that India is one of the leading markets with promising growth in the mid to long terms for construction equipment and regards its business in India in a long-range perspective. Komatsu positions this new factory for hydraulic excavators in Chennai as a core manufacturing site to deliver high-quality products to customers in, not only India, but also the Middle East and Africa in the future. With this new factory, Komatsu is going to build up more flexible global production and supply operations and further sharpen its global competitiveness.

- External analysis for India business :

- Drivers :

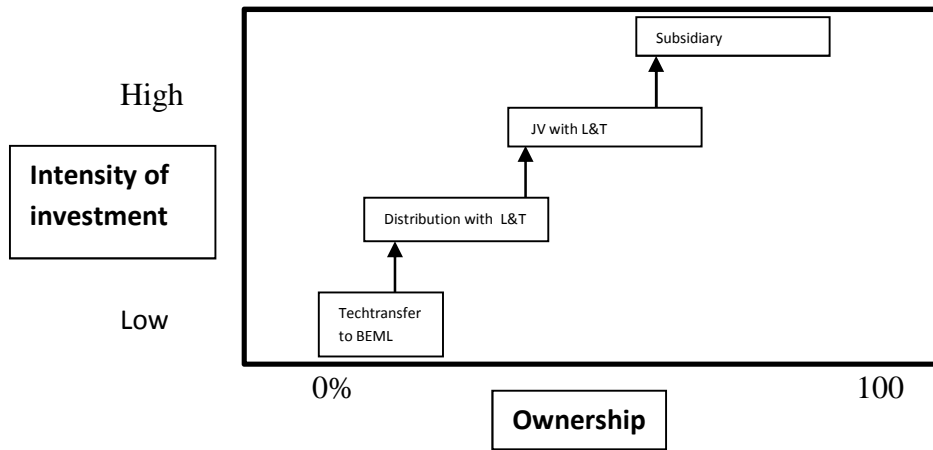


India as a market for Komatsu :

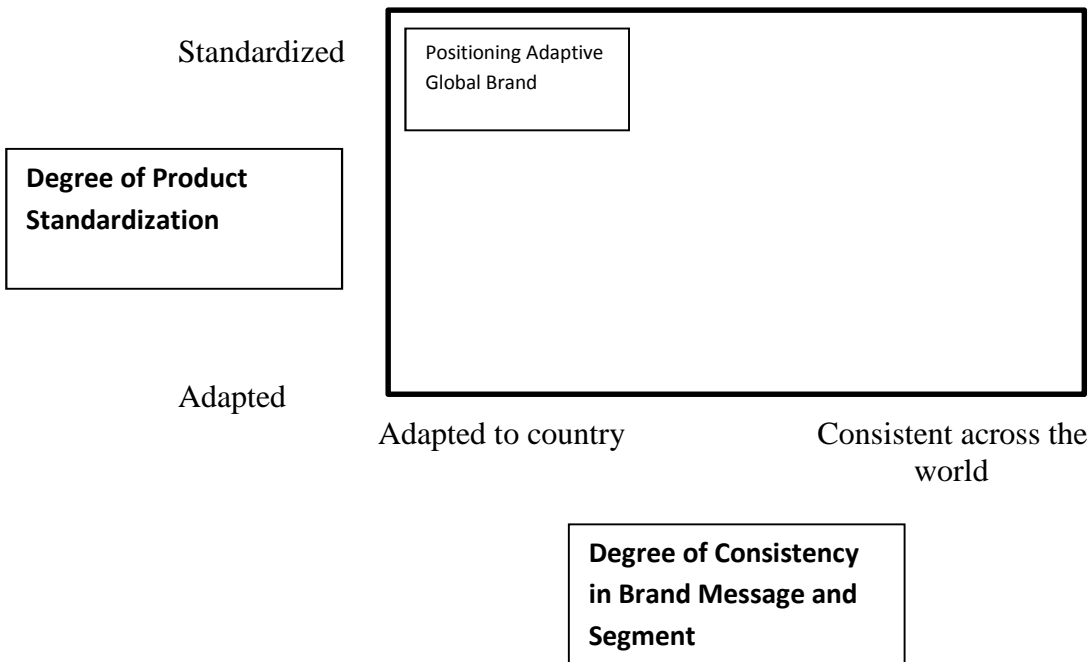


- **Komatsu strategy to lead in India :**

- In 1st chapter we have studied the opportunity in India as a Host country. Now we have to understand how Komatsu travelled the way to reach today's position and further strategy to reach the leadership position.
- Komatsu first took the first mover advantage and got entry into Indian business through technology transfer to the ministry of defence company and positioned it's strength by spreading brand values. They jointly manufactured wide ranges of products with Govt owned defence company BEML Ltd under the licence of Komatsu.
- Each products manufactured by BEML used to distribute to the Indian market under the brand name of Komatsu and the model also was referred to Komatsu model name "PC". By this practice, the Indian consumers were adopted Komatsu technology and products.
- Komatsu appointed M/s L&T, an Indian conglomerate as a distributor for Komatsu Japan models which are not given to BEML for manufacturing.
- BEML and Komatsu broken their tie ups and BEML started manufacturing of old Komatsu model. However, they were not in a position to meet the superior quality standard of komatsu and their product quality started deteriorating after this period.
- To Komatsu, now the major competitor is Caterpillar which was acquired Hindustan.
- Komatsu formed JV with L&T and started selling all Komatsu advanced model with superior features and cut the cost by manufacturing/assembling their products in India factory of L&T.
- Komatsu started increasing it's stake in the JV and finally formed Komatsu India Pvt Ltd a subsidiary of Komatsu Ltd Japan with minority share of L&T.
- Coal India Ltd, the biggest coal reserve company in world has taken strategy to go for 1 Billion ton coal production by 2020 for which massive modernisation plan and high capacity of HEMM is required.
- Komatsu having all ranges of equipment in larger segment w.r.t CAT except Rope Shovel. In this sector, CAT acquired Bucyrus and penetrated to the segment of Rope shovel.
- Komatsu cracked the deal with Joy Global and entered into Rope Shovel & Giant shovel business acquiring Joy Global/P&H. Bucyrus and P&H were the world largest manufacturer for Shovel now been acquired by both the world leader CAT and Komatsu respectively.
- In coal India, now all the high capacity tender are being polarised to CAT and Komatsu.
- But the sluggish demand in Mining Globally, is a challenge to Komatsu for the future move. For which an effort was made to recommend few strategy as a way forward.

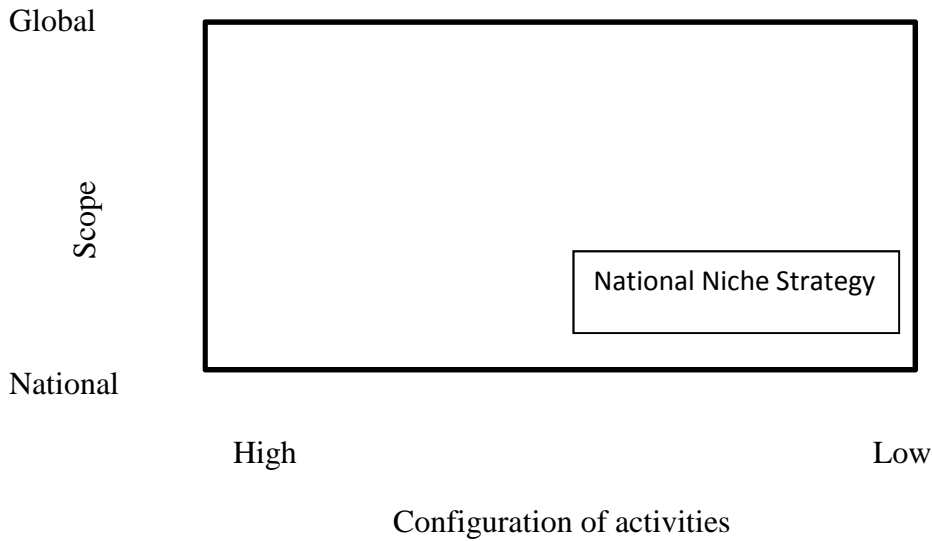


Brand Positioning for Komatsu in India:



Komatsu follows “ Positioning Adaptive Global Brand” in India.

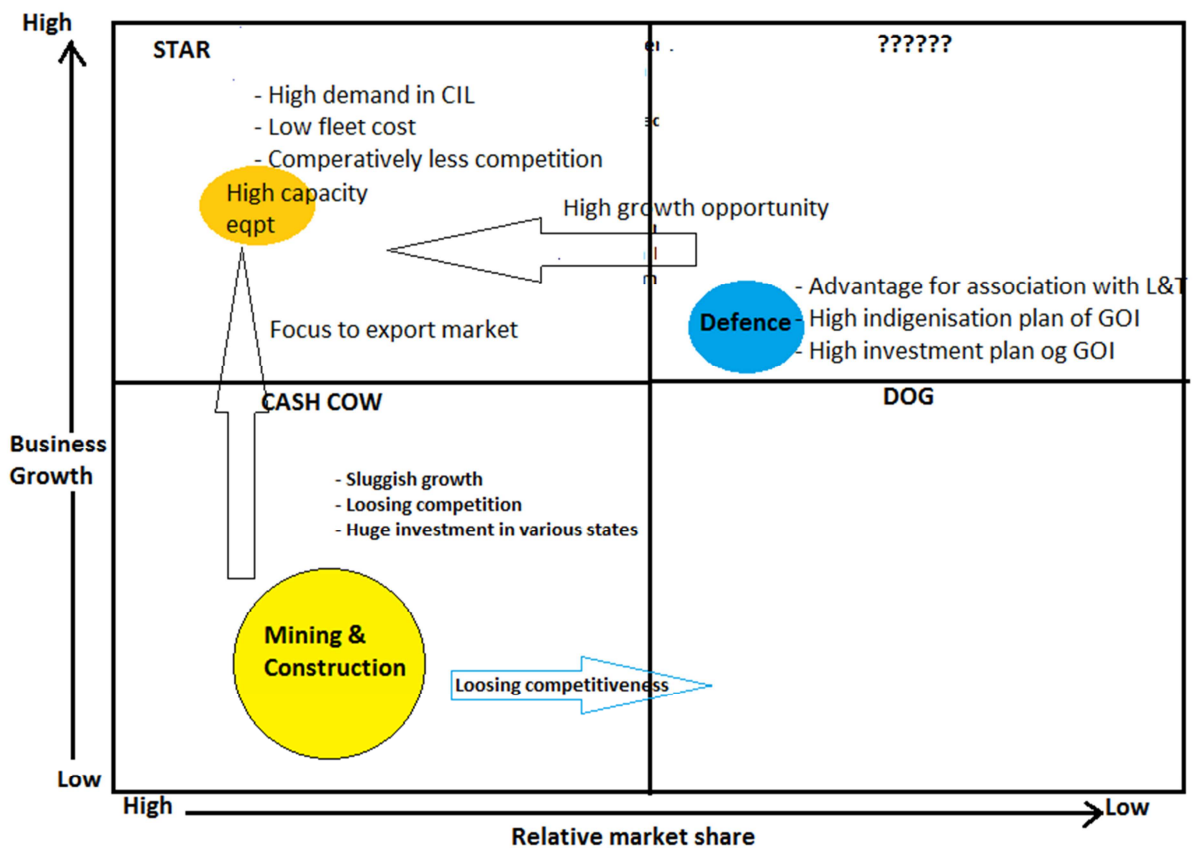
International Marketing Strategy in India:



Komatsu follows National niche strategy specially on national scale to avoid competition with firm of National High Share like BEML, TATA Hitachi, Caterpillar. Being a Govt owned PSU, BEML receive lot of privileges like purchase preference on domestic bidder & component through Make in India initiative. To compete with BEML Komatsu is investing huge amount for indigenisation, sourcing/vendor development, parts availability etc.

- Recomensation for Way forward:

Explanation of Komatsu further plan for India operation through BCG Matrix :



- Due to low demand in Indian market for mining, the overall HEMM market is facing the challenging time.
- Govt policy towards renewable energy discourages coal mining.
- Massive privileges towards Make in India initiative becomes a big challenge to the MNC like Komatsu which are partially/fully dependent on imported assemblies.
- New entrant like Volvo, Kobelco, Hyundai, Belaz are dumping advanced equipment with lower cost which makes the market more tough.
- Chinese manufacturers like SANY, Zoomlion, XCMG etc are aggressively penetrating.
- More benefits to export promotion and growing opportunity in Africa and AEAN region brings competitive advantage to komatsu India.
- Therefore, Komatsu should divesting in this segment and should utilise their capacity in high capacity equipment for domestic and international market.
- Govt massive allocation in defence budget and also indigenisation plan in defence opened a biggest opportunity for Komatsu india. They should invest more into defence sector to explore the domestic opportunity.
- Massive opportunity in dredging can be a new niche market to Komatsu India.
- New upcoming policy towards pollution norms can be an added advantage for Komatsu make advanced equipment compare to other domestic manufacturers.
- Electrification in HEMM shall be another comparative advantage to Komatsu.
- **Conclusion :**
- Macro environment determine business focus and corporate strategy

- The Komatsu's reasons in expanding into foreign market :
 - Gain access to new customer
 - Achieve lower cost and enhance competitiveness
 - Spread business risk across wider market base
- Different leaders had different strategy
- Strategic option used by Komatsu for entering International Market :
 - Export Strategies
 - Acquisition Strategies
 - Alliance and Joint Venture Strategies
- Strategic approach used by Komatsu : Global Strategy
 - Komatsu's strategy could not handle financial crisis and global recession very well
 - Lack of diversity on "Senior Leadership Team".

