

FACTORS IMPORTANT FOR THE DEVELOPMENT OF MARITIME TRANSPORT SECTOR IN INDIA

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ABSTRACT

In today's globalized world, maritime transport that links the global supply chain is the engine fuelling countries development and prosperity. The trade competitiveness of many countries today depends greatly on the ability to use of maritime transport as same is the cheapest and most environmental friendly mode of transport. India's geographical location with vast coast line and many navigable rivers necessitates the development of maritime transport for the country's growth and prosperity. Hence development of maritime transport sectors in India cannot be taken too lightly but so far Indian economy mostly relied on road and rail transport. Under this backdrop the present Indian Government has initiated efforts to develop maritime transport sectors that have greater impact on India's trade competitiveness as well as savings in foreign currency and employment opportunity that each Indian maritime sub-sector can provide. Hence it is paramount to know the priority of development for the main three maritime sectors i.e. Overseas Shipping (OS), Coastal Shipping (CS) and Inland Water Transport (IWT) and important factors that are affecting their growth. Many factors are responsible but the paper tries to justify relative importance of availability of easy capital, competent labor and advanced technology as identified in a pilot survey most vital for the development OS, CS and IWT sector. Public awareness and opinion plays an important role for the Government decisions and budgetary allocations in a democratic setup like India. Therefore recommendations in this paper are based on survey done with maritime professionals engaged in different maritime activity as well as other professions and public in general. Survey carried out in Likert Scale of 1 to 5 and analyzed by application of simple statistics. Also literature review has been done to substantiate survey results. It is expected that suggestions will be useful for the Indian maritime transport sector to prioritize policy review and strategize required for development of three main sectors.

Key Words- Overseas Shipping, Coastal Shipping, Inland Water Transport, Easy Capital, Competent Labor, Advanced Technology.

Introduction

Globalization to a large extent has increased the demands for maritime transport worldwide. Today many countries with long coastlines have successfully used their maritime sectors to usher in broader economic development and improve the living standard of their people (IPA, 2016). India's geographical location with 7517 km coast line and 14500 km navigable inland waterways necessitates the development of maritime transport sector in India to boost country's economy. However Indian economy mostly relied on road and rail and maritime transport was grossly neglected in terms of investment for many decades. Maritime transport sector in India covers subsector of OS (overseas shipping), CS (coastal shipping) and IWT (Inland Water Transport).

OS has no other substitute mode of transport as overseas cargo has to be transported by sea but it is highly competitive sector as foreign players can participate freely as per the global trade and shipping norms but CS to a large extent can become a substitute of road and rail transport. Development of OS can save huge foreign currency that is paid as freight to foreign ship-owners and development of CS can reduce India's high logistics cost and increase cost competitiveness. Hence development of coastal shipping is a top priority now for the Indian Ministry of Shipping.

Also present Indian Govt. is taking many steps for the development of Indian shipping in general Hence policy review required for all three main sub-sector need public support which can give confidence to the Govt. machinery for going ahead with all proposed reforms and investments. There is a direct relation between public opinion and Govt. policy in a democratic setup. So poor public awareness and opinion on the possible benefits and tremendous prospects of the maritime transport sector in India is a matter of concern which has influenced policy makers in the Govt. machinery for decades to review and revise Indian maritime policies to accelerate developments.

Numerous papers were written but there is a paucity of primary research for Indian maritime transport. Trying to establish reasons only by literature review and without survey is an exercise often conducted due lack of time to do survey and analyze results but without much benefit. Hence the paper tries to highlight the reality by survey opinion from maritime and other domain.

There are many factors important for the development of maritime transport sector in India however main influencing factors are the availability of Easy Capital, Competent Labor, and Advanced Technology that has affected the growth of three main subsectors at different degree. This was established in the pilot survey conducted earlier with 30 respondents who are senior maritime professionals and associated with the different sections of the Indian maritime industry. So the paper is based on literature review, pilot survey findings and the main survey done now.

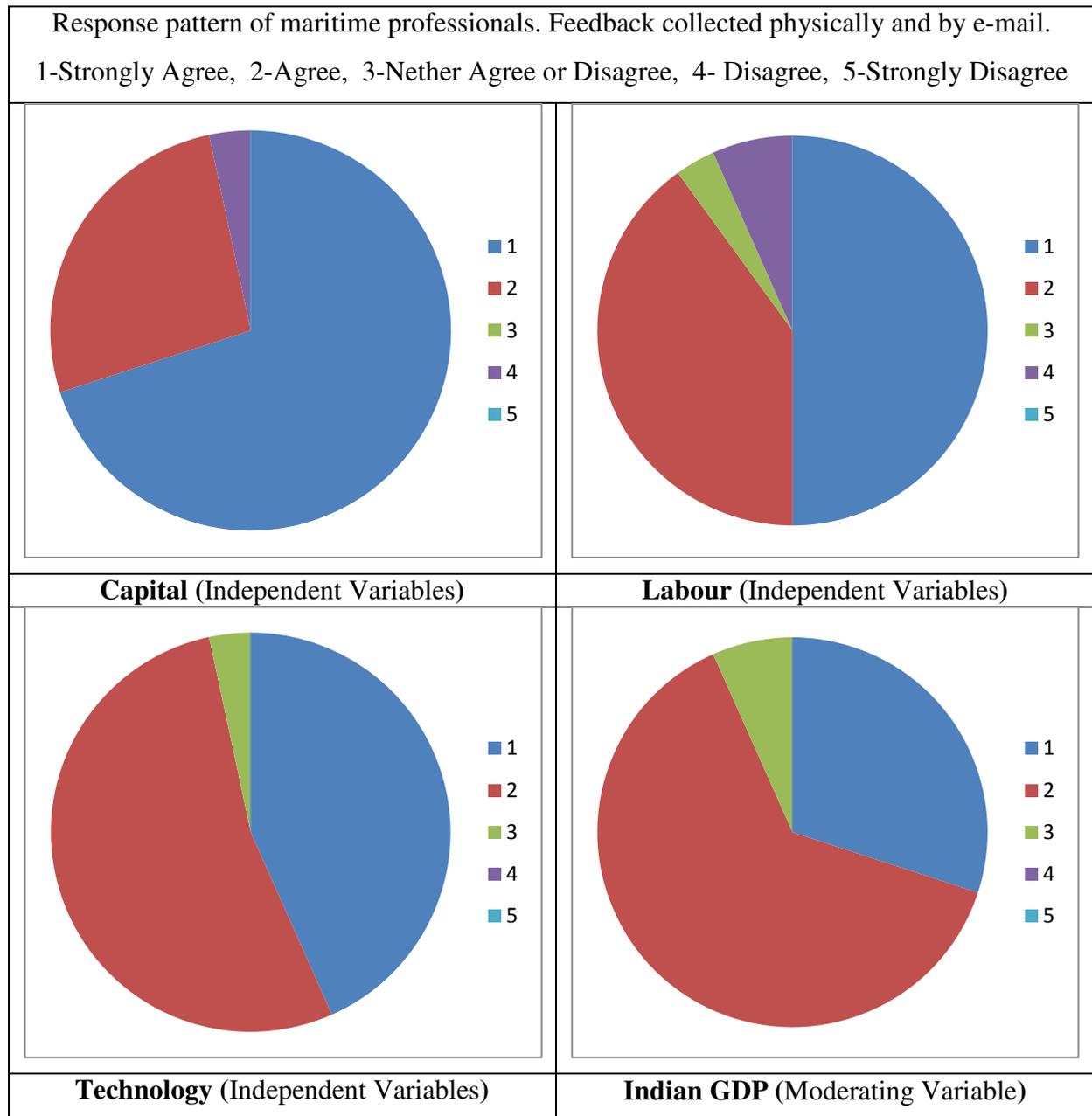
Literature Review

In the last decades Indian seaborne trade, both export and import, has increased remarkably. Maritime transport plays an important role in enabling and driving EXIM (Export Import) trade which has been growing at a rate of 4.5% year on year in last five years. The growth is expected to remain strong, 5-10% CAGR (*Compound Annual Growth Rate*) for most commodities in next 10 years as predicted now. Thus development of Indian maritime transport infrastructure is vital. Planning Commission had projected an impressive 224.33% increase of the budgetary support for the Ministry of Shipping in 12th five year plan which is Rupees 6960 Crore from 11th Five year plan that was Rupees 2146 Crore. (PC,2013). However until recently nothing much has happened. A survey result tabled in the parliament in 2017 indicates that there has been a sharp decline in the share of Indian ships in the carriage of India's overseas trade from about 40% in the late 1980s to only 7% in 2015-16, (ET, 2017) While road accounts for 54% and railways 33% of the cargo transported in the country, out of the remaining, 7% is sent through pipelines and only 6% by coastal shipping and IWT. Hence shipping ministry plans to give firms incentive for modal shift (Sood, 2016). Moreover a World Bank study of 2017 highlights that the share of IWT sector is miserable about only 0.5% in comparison to USA (8.3%), Europe (7.0%), and China (8.7%). Therefore maritime transport sector in India need urgent attention for the growth.

In India, there is a paucity of primary research in the maritime sector. Maritime transport being less visible sector in the eyes of general public in India, research attention is also extremely less. Hobley (2012) concluded that public opinion could help set the pace of policy reform. Wlezien & Soroka (2016) explained in their research paper that a fundamental principle of democratic government is that policy will be a function of public opinion. Therefore it is evident that there is a direct relation between Public Opinion and Government Policy Preferences in a democratic setup. India is often considered as an under-performer in several areas due to policy inadequacy despite its potential and maritime transport is a classic example. Consequently politicians and policy makers were less responsive for more than half a century after independence resulting slow policy reforms in the maritime sectors. This has restricted infusion of fundamental growth ingredients such as capital investment, human resource development and technology adoption and thus affected the developments of this important sector in India until recently. Nevertheless for the right reason the present Govt. at the centre has declared in their election manifesto measures to drive the maritime trade and transport of our country (BJP,2014). In last 2 years Ministry has taken many steps, revised policies, necessary for the growth of this sector as highlighted in Ministry of Shipping document "Achievements in the last 2 years" (MOS, 2016). However much more is needed hence public opinion collected in this survey may become useful. So this research paper is expected to assist policy review in the right direction that India needs.

Primary Research (Pilot Survey)

As part of primary research, pilot survey was conducted to solicit initial information and opinion. While Capital, Labor, and Technology appeared as independent variables, GDP emerged as moderating variable influencing the growth of maritime sector in India to the maximum extent. Also it is established globally that growth in GDP (Gross Domestic Product), merchandise trade and seaborne shipments are interlinked and continues to move in tandem (UNCTAD, 2014). Nevertheless domestic GDP affects CS and IWT sector and global GDP affects OS sector most. With above inputs from pilot survey the main survey was conducted. The impact of independent and moderating variable on OS, CS and IWT as per main survey results are highlighted below.



Primary Research (Main Survey)

After pilot survey a broader survey was conducted for collecting information on the awareness of better prospect of the maritime sector in India as well as opinion of professionals and public in general. This main survey was conducted in physical format, e-mail and through Google forms. Total 168 participants of various age groups and qualifications have participated in the survey. Out of 168 participants 144 were from maritime industry including 8 PhD holders. Professionals not from the maritime industry have very little awareness about the maritime industry and its prospects in India hence only 24 complete survey feedbacks have been collected and evaluated. Also maritime industry is largely male dominated hence only 4 female feedback were collected. The main survey questionnaire was with total 100 questions out of which 98 were compulsory questions to be answered in Likert Scale of 1 to 5 and 2 optional questions in one sentence only. Important survey results are put below in different sections to arrive reasonable conclusions. Main survey questioners which are not parenting to the theme of this paper are not discussed.

High Average and low Standard Deviation indicates participants' agreement on the issue.

1	Need for the development of maritime transport in India	AVERAGE	ST. DEV
1.a	Maritime transport is a cheaper mode of transport.	4.60	0.60
1.b	Maritime transport is a greener mode of transport	4.23	0.91
1.c	Maritime transport is not well developed in India	4.13	0.92
1.d	Maritime transport has enormous potential in India	4.48	0.66
1.e	Maritime transport can boost India's global competitiveness	4.62	0.56
2	Awareness on the prospects of Indian maritime transport		
2.a	Maritime transport can reduce road congestion due to trucks	4.37	0.75
2.b	Maritime transport can reduce high cargo load on railways	4.30	0.76
2.c	Maritime transport can reduce India's high logistics cost	4.35	0.65
2.d	Maritime transport can increase India's energy security	4.03	0.77
2.e	Maritime transport development budget in India is too low.	4.23	0.84
3	Maritime transport subsectors and Indian advantages		
3.a	Overseas Shipping (OS), Coastal Shipping (CS) and Inland Water Transport (IWT) are the three main subsectors in India	4.38	0.60
3.b	Development of OS can save huge foreign currency for India	4.30	0.71
3.c	CS and IWT are highly underdeveloped hence need priority.	4.49	0.63
3.d	Development of CS and IWT can create huge employment.	4.52	0.65
3.e	Maritime transport growth in India is cheaper than road, rail	4.29	0.77
<i>Results shows that there is an agreement within participants response on 1.a, 1.d, 1.e, 3c and 3.d</i>			

4	Development and Investment Priority	AVERAGE	ST. DEV
4.a	Inland Water Transport (IWT)	3.49	1.37
4.b	Coastal Shipping (CS)	3.69	1.22
4.c	Overseas Shipping (OS)	3.62	1.21
<i>Results shows that order of development priority as opined by the participants is CS, OS, IWT.</i>			

5	Main factors affecting the growth	AVERAGE	ST. DEV
5.a.1	Availability of easy capital for IWT	3.21	1.36
5.a.2	Availability of easy capital for CS	3.42	1.20
5.a.3	Availability of easy capital for OS	3.38	1.26
5.b.1	Availability of skilled manpower for IWT	3.02	1.35
5.b.2	Availability of skilled manpower for CS	3.19	1.22
5.b.3	Availability of skilled manpower for OS	3.44	1.31
5.c.1	Availability of high technology for IWT	3.02	1.40
5.c.2	Availability of high technology for CS	3.25	1.23
5.c.3	Availability of high technology for OS	3.45	1.25
<i>Easy capital for CS and high technology for OS is clear but for manpower opinion is diversified</i>			

6	Availability of capital	AVERAGE	ST. DEV
6.a.1	Govt. Investment in IWT	2.79	1.43
6.a.2	Govt. Investment in CS	2.99	1.20
6.a.3	Govt. Investment in OS	3.08	1.20
6.b.1	Private Investment in IWT	2.62	1.31
6.b.2	Private Investment in CS	3.02	1.26
6.b.3	Private Investment in OS	3.27	1.25
<i>Availability of capital in the form of both Govt. and Private investment- the order is OS, CS, IWT</i>			

7	Availability of competent labor	AVERAGE	ST. DEV
7.a.1	Seafarers with minimum required qualification for IWT	3.16	1.34
7.a.2	Seafarers with minimum required or STCW qualification CS	3.52	1.27
7.a.3	Seafarers with minimum required or STCW qualification OS	3.97	1.25
7.b.1	MET beyond required qualification for IWT	2.87	1.38
7.b.2	MET beyond STCW qualification for CS	3.23	1.26
7.b.3	MET beyond STCW qualification for OS	3.60	1.30
<i>Availability of competent labor is in the order of highest to lowest OS, CS, IWT</i>			

8	Availability of advanced technology	AVERAGE	ST. DEV
8.a.1	Ship Designing IWT	2.68	1.31
8.a.2	Ship Designing CS	2.92	1.19
8.a.3	Ship Designing OS	3.03	1.34
8.b.1	Ship Building IWT	2.90	1.16
8.b.2	Ship Building CS	3.05	1.13
8.b.3	Ship Building OS	3.10	1.28
<i>Availability of advanced technology is in the order of highest to lowest OS, CS, IWT</i>			

9	Low incentive for Modal Shift	AVERAGE	ST. DEV
9.a.1	Affecting growth negatively IWT	3.06	1.34
9.a.2	Affecting growth negatively CS	3.17	1.22
9.a.3	Affecting growth negatively OS	3.05	1.29
<i>Low incentive for Modal Shift maximum affecting the growth of CS</i>			

10	GDP growth affecting development	AVERAGE	ST. DEV
10.a.1	Indian GDP growth and IWT	3.39	1.24
10.a.2	Indian GDP growth and CS	3.52	1.17
10.b.1	World GDP growth and OS	3.57	1.28
10.b.2	World GDP growth and CS	3.29	1.29
<i>CS is more affected by the Indian GDP growth rather than world GDP Growth</i>			

	Indian Govt. to budget fund for loan, incentive or investment	AVERAGE	ST. DEV
11	R& D Fund for Indian ship designing organizations	4.29	0.78
12	Fund to incentivize shifting cargo from road, rail to maritime	4.28	0.73
13	Higher Maritime Studies & Research Fund to Indian students	4.33	0.91
14	Fund to set-up world-class university in commercial shipping	4.29	0.94
	Indian Govt. to look into the matter on high priority		
15	Conducive tax laws for Tonnage Tax regime to be attractive.	4.24	0.71
16	Conducive legal landscape for FDI policy to be successful.	4.12	0.75
17	Cargo support for Indian flag Ships to carry Indian cargo.	4.33	0.86
18	Coastal shipping rules to be relaxed from the international norms.	3.96	1.10
	Essential for the growth of Maritime Transport in India		
19	Govt. policy review is a necessity for capital investment in the Indian Maritime Transport Sector.	4.35	0.65
20	Public opinion has an impact on the Govt. policy review in the Indian Maritime Transport Sector.	4.00	0.95
<i>All questions are widely supported by the participants except relaxation of CS rules as in item 18 which has lower average and higher standard deviation indicating participants disagreement.</i>			

Results & Recommendations

Public opinion greatly supports that maritime transport is a cheaper mode of transport and has enormous potential in India. Possible benefits for the development of maritime transport include reducing road congestion; lowering high logistics cost and increasing India's global competitiveness. Maritime transport is underdeveloped in India specially the CS and IWT sector. The development priority as opined in the survey is highest for CS followed by OS and IWT. Availability of easy capital for CS and high technology for OS is the most important factor that is affecting growth. The importance of skilled manpower although an important growth factor but opinion is diversified however availability of competent labor with required minimum qualification as well as beyond that are in the order of highest to lowest in OS, CS and IWT. While capital investment from both Govt. and private is most vital, the availability of advanced technology also a prime factor and the order as opined in the survey for both is OS, CS, IWT. Other important issues that emerged in the survey are that low incentive for Modal Shift in India, maximum affecting the growth of CS. Also CS is more affected by the Indian GDP growth rather than world GDP growth. Issues of Govt. incentive and development funds in higher education, R&D as well as tax benefit and cargo reservation policy all are widely agreed by the participants. Hence Govt. policy review is a necessity for all aspects for the growth of Indian Maritime Sector.

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Note- The paper is based on literature review, survey and professional knowledge of the author in the maritime field. The opinion(s), view(s), finding(s) and conclusion(s) expressed in this paper are purely author's personal and not that of the organization he is employed with.