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# ECONOMICS OF SHIPPING

# A STUDY IN APPLIED ECONOMICS.

BY

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WITH A FOREWORD

BY

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# Bombay .

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# FOREWORD.

This admirably written book deserves to be warmly welcomed in the first instance by the Indian mercantile community and in the second place by the general public who have, for some time past, become fully alive to the vital necessity of developing on wellconceived, sound and practical lines, the productive resources of India with the view of increasing its greater prosperity. One of such activities is the revival of the old ship-building and ship-owning industries. The need for India to possess a national mercantile marine of an up-to-date character has recently been greatly felt by the Indian commercial community. It is now well known that India loses a most profitable source of wealth by reason of the coastal shipping being monopolised, in the main, by foreign capitalists—a trade the gains of which annually amount to lakhs of rupees. The absence of an indigenous mercantile fleet has been so keenly felt and accentuated that the Government of India was obliged to appoint a special committee to consider what measures can usefully be taken to develop an Indian Mercantile Marine. The report ofthe committee, which is now before the public, recommends the adoption of various measures to achieve the end in view. Meanwhile, the practical difficulties in the way of the profitable operation of a merchant fleet

remain as strong as ever Mr. Haji's work seeks to explain these difficulties and suggest their remedies.

The book is also to be welcomed as the fruitful product of the patient industry and research of a talented Indian trained and graduated in history and economics in the great university of Oxford which, along with her sister of Cambridge, has during the last half a century and upwards sent forth many a bright son of India, fully equipped, from the late Mr Satvendranath Tagore down to date. It is indeed gratifying to note that the Science of Economics is being steadily regarded and cultivated not only for its intrinsic worth but for its practical utility. No doubt during the last few years, some excellent and praiseworthy books have been published on Banking, Currency, Finance and Railways as well as on Commerce and Industries, but none on Shipping in its practical aspects as a great future industry of a wealth-producing character save that solitary work by that learned research scholar and historian. Professor Radhakumud Mookerii, on "A History of Indian Shipping and Maritime Activity from the Earliest Times". The book on the "Economics of Shipping" by Mr. S. N. Haji is, therefore, the first of its kind by an Indian gentleman possessing both the academical and practical qualifications necessary for making a detailed analytical study of the subject in all its aspects So far it will not be denied that it is unique in its way.

The author has essayed, and I may add essayed successfully, to present to his countrymen in a practical

form, from his close personal knowledge and experience, the economics of shipping industry, with the view of concentrating the attention of Indian industrialists of courage and enterprise on the importance of building by slow degrees a mercantile marine, specially for thousands of miles of the Indian coast, of which we may well be proud and which may, it is to be hoped, eventually form the nucleus of a nascent Indian navy for purpose of defence on the coast and sea routes of Indian trade, side by side, with the great navy of Great Britain with its glorious traditions of three hundred years and more. The publication of this book at a time when the Indian Mercantile Marine Bill is to be placed on the anvil of the Indian Legislative Assembly is most opportune. It should be in the hands of every member there, as it is full not only of the first principles of Shipping Industry but replete with a wealth of statistical information which only a patient student of research and grasp of his subjects alone is capable of treating scientifically What those principles and what the mass of useful and valuable information are may be well studied from the pages of this book. To encumber this brief foreword with them will be superfluous. But it may not be unuseful to draw special attention of the Indian industrial and commercial public to the able treatment. of some of the knottiest points which are certain to form the subject of an interesting and instructive debate in the Assembly. The points are well put but, like in other large questions, there is the other side to them to which

also the intelligent public will look forward to learn with equal interest and instruction as are to be found in the following pages.

All lovers of a temperate and fair criticism should therefore welcome the volume so far as it is written with a single eye and laudable purpose to educate the public and instruct them in one of the momentous industrial problems of the country of a far reaching and beneficent consequence.

D. E. WACHA.

4th August 1924.

# PREFACE.

The object of this book is to present a scientific treatment of various economic problems involved in the management of the shipping industry. The questions regarding shipping capital, expenditure and rates are treated in the light of the general principles that govern the problems of transport. In the absence of any adequate treatment of the subject of shipping, the author had to examine the general theories of railway problems which have been exhaustively dealt with by experts in various countries and to evolve therefrom principles of general application to sea transport as well. It will thus be seen that the actual field of this work has not been trodden before. It is, therefore, hoped that this book will serve to indicate the main lines along which a scientific enquiry of the subject of the shipping industry may proceed.

It will be readily seen that, the treatment of the subject being general, the book would serve a useful purpose in all countries interested in shipping. Shipowners in particular will find in it scientific explanations for their daily work while students in general will find a full exposition of one of the main branches of commerce,

In view of the deplosable fact that India, though a vast maritime country, does not to-day possess a

national mercantile marine, it has been thought destrable to add a special chapter to explain the shortcomings of the present position and the necessary remedies to cure the same. It is a hopeful sign that the Government of India, admitting the necessity for India to have its own mercantile marine, appointed last year the Indian Mercantile Marine Committee to investigate various problems connected with Indian shipping. In view of the fact that the author was intimately associated with the work of the Indian Mercantile Marine Committee and particularly because almost the last pages of this book were being printed when the report of this Committee was made available to the public, it has been thought desirable to omit any detailed reference to the work of the Committee from the pages of this book. However, now that the report is published, it will not be out of place to draw the attention of the reader to the fact that the main recommendations of the Committee are along the lines advocated by the author in his Pamphlets on Indian Shipping published long before the appointment of the Committee in February 1923. The two main desiderata in any scheme intended to develop a mercantile marine for India are (1) Reservation of the Indian Coastal Traffic to Indian vessels and (2) Abolition of the Deferred Rebate System together with the discriminations arising thereunder. These two measures will be found specifically mentioned in the draft of the Indian Merchant Marine Bill which is appended to the last chapter of this book.

Owing to the necessity of keeping the subjects under treatment within reasonable limits, it was not found possible to discuss within this book, as being outside its scope, the general question of nautical training for Indians but the author would like to add his quota of commendation due to the Indian Mercantile Marine Committee for suggesting a very thorough and practical scheme to enable Indians, in adequate numbers, to be trained as deck officers and marine engineers to man the Indian Mercantile Marine of the future

Finally, there remains the pleasant duty of acknowledging obligations to all the gentlemen who, in various ways, have added to the value of the book. It would be invidious to mention names. It is, therefore, hoped that this general acknowledgment will be accepted as an expression of the profound thankfulness of the author to all who have helped him to present an adequate treatment of themain the me of the book.

7th August 1984

S. N. HAJI.

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# BIBLIOGRAPHY.

## BOOKS CONSULTED AND RECOMMENDED:--

### GENERAL.

Annin R. W .- Ocean Shipping

Bombay Chamber of Commerce—Decisions on Shipping and Mercantile Matters.

Brown, H. G - Principles of Commerce.

Hough, B O -- Ocean Traffic and Trade

Huebner, G G -Ocean Steamship Traffic Management

Johnson and Huebner-Principles of Ocean Transportation

Johnson and Huebner-Export Shipping

\*Keeble Chatterton-The Mercantile Manne

Kirkaldy and Evans.—History and Economics of Transport Lindsay, W S —History of Merchant Shipping and Ancient Commerce.

MacMurray and Cree-Shipping and Shipbroking.

Nelson's Ships and Shipping

Owen, Sir Douglas-Ocean Trade and Shipping

Salter, J A -Allied Shipping Control

Shaw & Robinson-The Sea and Its Story from Viking Ship to Submarine.

Smith, I R .- Influence of the Great War upon Shipping.

Smith, J. R. - The Ocean Carrier,

Smith, J. R -The Organisation of Ocean Commerce.

Limmermann, B. W -Foreign Trade and Shipping.

#### GREAT BRITAIN.

British Merchant Shipping Acts.

Cornewall Jones, R J .- The British Merchant Service.

Hakluyt, Richard—The Principal Voyages of the English Nation.

Kukaldy, A W -British Shipping.

Board of Trade—Departmental Committees Reports on Shipping and Ship building Industries after the War

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## AMERICA

Abbot, W. J -American Merchant Ships and Sailors

American Academy of Political Science—The American
Mercantile Marine

Bureau of Navigation-Navigation Laws of the United States

Hurley, E N -American Shipping Pamphlets

Hurley, E N -The New Merchant Marine

Keiler, H --- American Shipping

Marvin, W L -The American Merchant Marine

Soley, J. R .- The Maritime Industries of the United States.

Spears, J. R -The Story of the American Merchant Marine

Reports.

Bureau of Navigation

Bureau of Corporations

Bureau of Statistics

Congress Committee on Promotion of Foreign Commerce by Providing Adequate Shipping Facilities.

## JAPAN

The state of the s

The Financial and Economic Annual of Japan.

Japan Year Book

Mercantile Marine Bureau —History of The Mercantile Marine in Japan.

Yonepro Ito -The Japanese Mercantile Marine

#### INDIA

- Haji, S N -Indian Mercantile Marine.
- Haji, S. N.—Written Statement and Oral Evidence before the Indian Mercantile Marine Committee.
- Mookerji, R A History of Indian Shipping and Mercantile Activity

## SHIPS

Archibald Hurd-The Merchant Navy

Archibald Hurd-The Sea Traders

Archibald Hurd-Triumph of the Tramp Ship.

Chatterton, E B .- Steam ships and Their Story

Chatterton, E R .- The Romance of the Ship

Chatterton, E R — The Old East Indiamen.

Holmes, Sit G. C V -Ancient & Modern Ships

Hughes, C H — Handbook of Ship Calculations, Construction and Operation.

#### XXIX

Miltoun, F.—Ships and Shipping
Noble, E.—The Grain Carners
Reed's Ship-owners' and Shipmasters' Handy Book.
Riegel, R.—Merchant Vessels
Steinitz, F.—The Ship, Its Origin, and Progress.
Walton, Thomas—Know Your Own Ship
Walton, Thomas.—Steel Ships.

#### MARINE INSURANCE.

Gow, W —Marine Insurance
Huebner, S S — Marine Insurance.
Keate — Guide to Marine Insurance.

Lloyds' Annual Calendar.

Martin, F.—History of Lloyds' Marine Insurance in Great Britain.

Templeman, F.—Manne Insurance; Its Principles and Practice Winter, W. D.—Manne Insurance; Its Principles and Practice.

# STEVEDORING

Barnes-The Longshoreman.

Hillcoat, C. H -Notes on the Stowage of Ships

 McElwee and Taylor—Wharf Management and Stevedoring and Storage.

Stevens, R. W.—On the Stowage of Ships and Their Cargoes, Special Acts for Carnage of Grain, Cattle and Dangerous

Taylor, T. R Stowage of Ship Cargoes.

## SHIPPING CONFERENCES.

Annals of the American Academy of Political and Social Science September 1914.— Articles by Eminent Authorities on Shipping Conferences and Allied Subjects.

American Congress Committee on the Merchant Marine and Fisheries,—Proceedings in the Investigations of Shipping Combinations.

Haji, S. N.—The Deferred Rebate System.

Report of the Royal Commission on Shipping Rings.

Report of the Imperal Shipping Committee on the Deferred Rebate System.

#### PASSENGER TRAFFIC.

American Bureau of Foreign and Domestic Commerce,Statistical abstract.

Indian Native Passenger Ships Act

Pocket Books of Leading Passenger Steamship Companies.

Report of the Native Passenger Ships Commission.

Report of the Indian Deck Passenger Committee.

Reports and Financial Statements (Annual) of Passenger Steamship Companies

Scientific American Supplement 14th Sept. 1918. Cost of Carriage of Passengers in Ships.

#### PORTS.

Administration Reports of the Ports of India and Other Countries.

Articles on Ports and Docks in the Encyclopædia Britanica.

Brown's Nautical Almanac

Brown, H S -From Calcutta to Bombay Coasting,

Bureau of Foreign and Domestic Commerce-Ports of the

Carlton Green-Wharves and Piers

Clapp, E J .- The Port of Boston

Cotton, C W. E -- Handbook of Commercial Information for India.

Dues and Port Charges on Shipping throughout the World.

Goode, J P .- The Development of Commercial Ports

McSweeney, E. F .- The Problems of Port Development,

Official Tide-Tables.

Owen, Sir Douglas-Ports and Docks.

Reed's Tables of Distances.

Report of the Royal Commission on the Port of London

Rickman, W G-The Ship owners' Register of Port Charges.

# CANALS.

Abbot, H. L .- Problems of the Panama Canal

Avery, R E - America's Triumph at Panama

Bennet, I J -- History of the Panama Canal.

Foster-Fraser, J .- Panama and What It Means.

Fitzgerald, P .- The Great Canal at Suez

Huebner, G. G — Economic Aspects of the Panama Canal in the December 1915 number of the American Economic Review.

### xxxi

Johnson, E. R - Panama Canal Traffic and Tolls.

The Panama Canal Official Handbook,

Report of the Royal Commission on Canals and Waterways of Great Britain

Reports (Annual) of the Manchester Ship Canal Company.

Rules of Navigation of the Suez Canal, Panama Canal and Corinth Canal

Reports and Financial Statements (Annual) of the Suez Canal Company.

# STATE AID TO SHIPPING.

Bacon, E. M.-Manual of Navigation Laws

Dunmore, W. T -Ship Subsidies

Haji, S. N -State Aid to National Shipping.

Jones, G. M-Navigation Laws A Comparative Study.

Jones, G. M -- Government And to Merchant Shipping.

Meeker, R .-- History of Shipping Subsidies.

Report of the American Merchant Marine Commission.

Report on Bountes and Subsidies in respect to Ship-building, Shipping and Navigation in Foreign Countries.

Report of the Indian Mercantile Marine Committee.

#### SHIPPING LAW.

The American Merchant Marine Law of 1920.

Arnould, Sir Joseph-Law of Marine Insurance and Average.

British Merchant Shipping Act.

Canfield and Dalzell-The Law of the Sea.

Carver, T G -Carriage of Goods by Sea.

Curtis, G. T -Rights and Duties of Merchant Seamen.

Flanders, H -- Mantime Law.

Indian Merchant Shipping Act.

The Indian Sea Customs Act.

Maclachian on Merchant Shipping.

Marsden, R. G.-Colhsions at Sea.

Oliver-Shipping Law Manual.

Parsons-Shipping and Admirality.

Roscoe, E S -- Damages in Maritime Collisions.

Saunders, A .- Mantime Law.

Scrutton, T. B .- Charter-Parties and Bills of Lading,

Spencer, H. R .- Law of Marine Collisions.

Wheeler, E. P - Law of Carners.

#### XXXII

## SHIPPING AND TRADE STATISTICS.

Angier, E. A V -Fifty Years Freights

Annual Statement of the Coasting Trade and Navigation of British India.

Annual Statement of the Foreign Sea-borne Trade and Navigation of British India.

The British Corporation-Register of Vessels.

Bureau Venitas-General List of Merchant Shipping.

Directory of Ship-owners, Ship-builders and Marine Engineers

Imperial Institute—Indian Trade Enquiry Committee's Reports

on Rice, Timbers, Hides and Skins, Jute and Silk, and Oil and Oil-seeds

Indian Trade Journal.

Journal of the Royal Statistical Society—Papers by Sir Robert Giffen and Sir John Glover.

Lloyd's Register of British and Foreign Shipping.

Reports (Annual) of Leading British Ship-owners' Associations

Review of the Trade of India.

Shipping World Year Book.

Statistics of British India

The Statistical Abstract of the United Kingdom,

#### ATLASES.

Bartholomew's Economic Atlas
The Harmsworth Atlas and Gazeteer
Philips' Mercantile Marine Atlas.
Philips Commercial Map of the Indian Empire

# JOURNALS (American)

International Marine Engineering, Marine Review, Marine Journal, Marine News, Motor-ship, Nautical Gazette Marine Record, Shipping

# JOURNALS (British)

Fairplay, The Shipping World, The Syren and Shipping Illustrated, The Guild Gazette, Merchant Shipping Review, The Motor Ship, The Nautical Magazine, The Shipping and Mercantile Gazette and Lloyd's List, Special Shipping Sup, lements of the "Times" and the "Manchester Guardian"

The Engineer, Marine Engineer and Naval Architect, Transactions of Institution of Naval Architects, Proceedings of the Institute of Marine Engineers, Journal of American Society of Naval Engineers

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