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THE FLEXIBILITY of institutional arrangements in transport has become particularly important during the 1970's. Technological development has been very rapid in the post-war period and it has brought about new conditions in intermodal and intramodal competition. Market size and market requirements have changed so that new approaches to transportation services have been required. And lastly, but by no means least, social and political attitudes towards transportation have changed.

Consequently, in many countries rail and trucking firms are now subject to a new regulatory system. The new regulations are a response to the growth in size of rail and trucking firms, the modified competition between them and different political attitudes. In international transport the setting of rates by the International Air Transport Association (IATA) has become increasingly difficult and role and structure of international shipping conferences is being challenged.

Change in institutional arrangements is always difficult to achieve. The greater the number of pressures for change the more fundamental and complex the reorganization is likely to be. Concurrent changes in industry technology, market demands and political values will be difficult to accommodate. Under extreme circumstances old institutional arrangements break down entirely and new ones must be set up.

It appears that the 1970's see such a crisis situation for the shipping conferences. The pressures for change, both from within and outside, are so great that the ability of the conferences to adapt is being taxed to the limit. Indeed, there is some doubt whether the organizations can or should persist. The general objective of this paper is to describe and examine the reasons that the conference system is being and must be modified. The specific objectives are threefold: firstly, to identify the major deficiencies which are perceived to exist in the conference system today; secondly, to examine the bases and validity of the complaints; and, thirdly, to examine the immediate reasons for change. It is the urgency with which these pressures must be met which makes the future of the conferences so uncertain.

The practices of conferences have been fully documented elsewhere.[1] The approach taken in this paper is to summarize briefly some of the main problems and complaints which face liner firms and conferences currently. The validity of some of the complaints will then be examined in the light of recent research results. These results suggest that a far more rational approach to change is required than that which is often evident.

Sources of Dissatisfaction

The main criticism that individual shippers or groups of shippers have levied against the conferences is that the freight rates are unreasonably discriminatory. These criticisms have been aggravated by the generally secretive nature of conference affairs, the cartel like nature of the conferences, and the inability of the conferences to provide a clear and concise explanation of the freight rate structure.

In previous decades, investigations into the allegations of unreasonably discriminatory rates have found fault with certain details of conference operation but have found in favour of the conference system.[2] The general support for the system has been maintained by the belief that, notwithstanding the limitation of the system, conferences are generally conducive to the development and conduct of trade through the rate and service stability which they permit. However, dissatisfaction with conference rate making has persisted. The differentials between rates in a tariff and the relationship between the general rate level of different tariffs have both been challenged.[3]

The control of service levels by conferences has also given rise to certain problems. Abuse of monopoly power to the immediate detriment of shippers or non-conference lines has been a source of dissatisfaction and resulted in some controls over conference actions. However, more general concern is also evident currently over the effect of conference service arrangements because of conflicts of interest with national goals.

The development of containerization and rising port costs have encouraged shipping lines to concentrate their activities in a number of "pivotal ports." While the concentration of ports of call may be in the economic interest of the shipping companies it may be in conflict with economic or political goals of nations. This conflict of interest is not easy to resolve.

The conferences have found themselves in conflict in particular with many developing countries. There have been two main bases for this. The first is the freight rate issue mentioned above. The second is the desire of several developing countries to own a national shipping line, a policy in obvious conflict with the interests of conference members. The means and extent of participation of national lines in conference arrangements is now a major issue.

However, if some shippers and governments are dissatisfied with the present operation of the conference system, this is a sentiment shared by many liner firms. The rapid development of con-

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by

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tainerization has brought radical changes into the shipping industry. In spite of amalgamation of firms and the formation of consortia severe over capacity has developed particularly in the North Atlantic and the North Pacific. Rate wars and low utilization following periods of major capital investment have placed a severe strain on the resources of many firms. Because of changing intercorporate relationships it does not seem likely that the earlier type of conference agreement can be reinstituted. The experience since 1971 in the North Atlantic Pool is being considered as the basis for an agreement in the North Pacific. However, while pooling agreements may alleviate some of the immediate problems associated with surplus capacity and low profitability it is by no means clear that the agreements are in the interests of the shipping lines in the long run. It is also uncertain whether the agreements can be made to work.

Concern about the existing system of liner conference is shared then by shippers, governments and liner firms. Unfortunately, their divergent views tend to mask certain basic issues. It is appropriate, therefore, to examine basic issues with which all three groups are concerned, at least in the long run. Two important issues are the rate structure and the effect of conferences on liner company profits.

The conference rate structure and liner profitability

The publication of conference tariffs has made feasible studies of the rate structure not possible previously. These studies provide an interesting insight into the structure of individual tariffs and the relationship between tariffs.

The tariff structure: Until recently all writers have been very sceptical about the existence of a significant rationale behind conference rates. In 1967 Sturmey stated that "In practice, what the cargo will bear, bargaining between shippers and conferences, and accidents are more important determinants of the individual rates than costs of carriage and handling."[4] In 1966 Koch stated that linear operators have established "a highly differentiated freight rate structure based on differences in demand (what the traffic will bear) rather than on those in costs."[5] The shipping lines themselves have been elusive about the basis of freight rates. The Associated Latin American Freight Conferences state, "Many factors influence the setting or adjustment of freight rates. Only experts with long experience can know them all and balance them against each other so as to arrive at figures that will be fair to both shippers and shipping lines."[6]

Recent studies have found that generally between sixty and ninety percent of the variation between rates in the tariffs studied can be accounted for by a very limited number of factors.[7] Excluding the requirement of refrigerated stowage (a special cost element affecting few commodities), the most important factor is the stowage factor presumably because of its positive relationship with cargo loading and discharging costs and its importance to the utilization of ship weight and cubic capacities. However, the second most important factor is the value per ton of commodities, so that a significant element of price discrimination does exist.

In view of the earlier notions concerning conference rates these results are surprising but, with the benefit of hindsight, they can be explained by the centralised rate making process, the limited information available to the conferences and the importance of "rules-of-thumb." The importance of the stowage factor appears to have been maintained through these rules-of-thumb rather than any conscious effort to consider costs.

The emphasis which has been given to the discriminatory aspect of the freight rate structure is accounted for by two factors. Firstly, ship operating costs have generally been treated as common costs for the cargo carried. It has been argued that for ships on berth the marginal cost of accepting additional cargo is very low, or little more than cargo loading and discharging costs.[8] This low cost was used to explain the need for conferences as well as their ability to practice price discrimination. Further, many liner companies have maintained inadequate costing systems. Even those firms which have maintained detailed

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cost information would be most reluctant to discuss costs at rate meetings with other lines. Consequently, the rate making process has involved virtually no explicit consideration of costs in relation to individual commodities.

It has been believed, therefore, that liner shipping had the ability to practice rate discrimination in the same way as the railways, and the same economic and social arguments could be brought forward in support of the system. The conferences, like the railways, saw the system as a means of promoting commerce and not inimicable to their interests. In this they may have been right in the conditions of the time. But, as occurred with the railways, the structure of freight rates has had considerable inertia and rate making has continued largely to ignore actual costs. The result is that although the conferences have a discriminatory price structure in which a cost related factor is most important, little explicit consideration is given to costs. In some cases rates may be set below costs; how far this is the result of political pressure is not clear. The practice is possible because cross-subsidization is feasible given the conferences' monopoly position. The practice is consistent with the low profits earned by liner firms in spite of the discriminatory price structure.

The relationship between tariff levels: The North Atlantic has been a test case for the comparison of inbound and outbound rates.[9] The main evidence used was the data presented to the Joint Economic Committee on Discriminatory Ocean Freight Rates. In considering this evidence the Committee concentrated on the liner sector of the shipping market and concluded that the directional imbalance of liner cargo was inconsistent with the higher liner rates on U.S. exports than imports. Bennathan and Walters re-examined the evidence and argued that since the overall deficiency of cargo (liner and bulk) is westbound, the lower absolute level of rates is to be expected in this direction.

Statistical analysis of the east and westbound tariffs provide a means of measuring the relative importance of the stowage factor and commodity value in setting rates. It is to be expected that commodity value would be of lesser importance on the more competitive leg. Regression analysis explains 66 and 73 percent of the variation between rates in the eastbound and westbound tariffs respectively, and supports the hypothesis that rate discrimination is more important east than westbound, Appendix 1.

Insufficient analysis of inbound and outbound freight rates on individual routes has been carried out to determine how far statistical analysis can increase our understanding of differences in tariff levels. However, in general, the statistical analyses of rate structures which have been carried out present evidence of the general rationality of rate making. This view contrasts significantly with the view so often presented by the industry that the tariff structure is so complex that it defies general description.

Liner Profitability: At first sight it is anomolous that members of conferences have not earned high profits.[10] It might be expected that as members of a cartel with a significant degree of monopoly power they would be able to practice price discrimination and earn monopoly profits. They have certainly done the former but not the latter. There are several reasons for this.

Firstly, conferences cannot be viewed as profit maximizers. Conference agreements are reached on the basis of bargaining and it is not likely that the output and service decisions will maximise joint profits.[11] Further, on rate making matters, individual conference members act as price takers rather than price setters. The effort of having a conference revise particular rates is generally viewed as too much trouble by individual lines. Firms are prepared to countenance the rate structure as long as they can earn reasonable profits. Periods of dissatisfaction do occur, notably when cost increases have not been matched by general rate increases. Individual firms seek to ensure that the overall level of rates is sufficiently high that they can earn an adequate rate of return. Thus a major part of a normal corporate strategy, pricing, appears to go by default.

Conferences also appear to engage in a number of aspects of cross subsidization. The "pernicious principle of cross-subsidization"[12] between conference rates appears to be a generally accepted phenomenon but one which has been subject to little empirical investigation. However, rates set at less than the relevant cost exist in many conference tariffs because of inadequate treatment of costs in rate making committees and because of political and shipper pressures.

Conferences also follow a number of service practices which may conflict with profit maximization. The most obvious form of subsidization is the maintenance of a single freight rate to a range of ports which have quite different cost levels. No incentive is provided by the ocean freight rates for cargo to move through the low cost post, nor, as is often pointed out, are ports provided with much incentive to reduce ship costs in the hope of benefiting from lower rates. Other forms of cross subsidization may exist in the maintenance of stable price and service levels. These aspects of conference service are generally held to "promote commerce." However, it can only be maintained if a conference has a sufficient level of monopoly power.

It is not possible to say how far these practices are the outgrowth of ignorance, the rigidity of conference agreements, government interference, a desire to promote trade, or the fear of potential competition. However, the result is a number of practices which do not promote the lowest cost system of liner services. The system seemingly has been developed by the conferences. The result is a system with some quasi-public utility features which conflict with low cost and maximum profit objectives. Shippers, who are paying their way, and conference members are now faced with the problem of how to make changes.

Conclusion on the rate structure and liner profits: Some of the shipper complaints about conference pricing appear unfounded. At least, a greater rationale exists in the structure of liner tariffs than the liner companies, themselves, would have us believe. However, aspects of conference rate-making and their output and service levels suggest that the conferences often may not be acting in the interests of member lines or those of overall trade. Indeed, conferences and member lines in many ways appear to be acting as revenue maximizers rather than profit maximizers, rather like the railways in previous decades.

Pressures for Change

The Pressures for change: 1973 will witness further pressure being placed on conferences by shippers and governments. These pressures take three forms. Firstly, negotiations by individual countries with conferences to ensure adequate conditions for the participation of their national lines; Latin American countries have been particularly insistent on such agreements.[13] However, Australia and New Zealand are both developing shipping policies within which national lines will play a more prominent part. The second development will be the strengthening of shippers' councils. Australia which has had strong councils for some time is increasing the number of councils with which conference will be required to negotiate.[14] And thirdly, argument will continue over the acceptance and implementation of a Conference Code of Conduct.[15] This is a contentious issue involving the form and extent of control which might be exercised over conferences.

The pressures for change are also great within the industry, especially on containerized routes. The changing service pattern on the UK/Australia route is only lesser in scale than the problems in the Atlantic and Pacific. While agreements appear desirable to prevent rate wars and uneconomic service competition, new compromise formulas must be developed between lines. It is not clear what form of relationship would be most appropriate in view of new conditions.

Firstly, the competitive situation is different because of the reduction in the number of firms. Now the actions of any one firm are more likely to have a significant effect on the other firms. To this extent it may seem desirable to have more detailed and tightly controlled agreements than existed before. However, there are factors working in the opposite direction.

The second significant change in the liner industry is the new attitude of top management. The growth of firm size and the development of management companies in which shipping is only one of many commercial interests has brought a change in management philosophy.[16] Increasingly managers do not have a sea-faring tradition. They are concerned with the financial results above all, the rate of return on capital in liner shipping is compared constantly with that in other business enterprises. The development of containerization has also provided an opportunity for new firms (e.g., Sea-Land Services and Seatrain Lines) to expand their services rapidly. The new attitude of liner management is important. Low rates of return will not be acceptable for protracted periods, and management will be less willing to give up managerial powers in conference agreements or to conference committees.

Thus, the technological and ownership changes of the 1960's have created a new dilemma. Some aspects of containerized services suggest that inter-corporate arrangements should be tighter than was previously the case. Other aspects of the services and management structure suggest that greater corporate flexibility and responsibility are desirable. The problem is how to reconcile these requirements.

The solution will be determined in part by the influence of external forces. The stability of any conference agreement is dependent on the significance of non-conference competition. On some routes the old conference system has been terminated because of external competition; this has occurred on short sea routes in particular. On the North Atlantic the viability of the pooling agreement is in doubt because of the action of small independents particularly Polish Ocean Lines, and competition from alternate routes.[17]

The possibility of pooling agreements will also be influenced by the positions adopted by various countries. For example, the final position of the United States on the legality of the pooling agreement is still not certain. In general, however, a number of governments are exercising, or are interested in exercising, more control over conference affairs. What effects these controls will have on conferences is not clear.

The result of these internal and external forces is to make the future of conference agreements uncertain. Unfortunately, the environment within which alternatives may be considered is often charged with too much self-interest and suspicion and too little objectivity and fact. Existing systems are not adequately understood. The consequences of new agreements or regulations are most uncertain. The basic objectives of proposed regulations are often unclear.

In this environment it is necessary to emphasize that the most important result of conference reorganization should be the rationalization of liner services. Rationalization of shipping requires changes in three major areas, pricing, capacity and route patterns. Resistance to change in these areas will not be in the interest of shippers in general although of course it may favour particular groups, at least in the short run.

Rationalization of liner tariffs cannot be achieved quickly. Nor can it be accomplished by requiring lower percentage changes in rates on some route legs than on others. It requires an explicit estimation of appropriate cost levels on which minimum rates may be based and, as unremunerative rates and services are eliminated, a review of appropriate rates on cargoes able to pay more than the minimum. It is to be expected that the rates on the majority of cargoes will continue to be influenced by demand consideration or "what the traffic will bear." Such pricing is necessary to enable liners to cover their total costs, is desirable because it allows the carriage of less profitable cargoes and, within limits, is socially acceptable.

The process of rate change will raise difficult commercial and political problems because raising unremunerative rates will price some goods out of their markets. There is no simple answer to this problem but insistence by shippers or governments that the rates on certain goods cannot be raised will be of no benefit. Means must be found to ease the burden on shippers but it will be impossible to leave the burden entirely on shipping lines.

Similarly, the rationalization of route patterns will not be achieved easily because it will adversely affect some vested interest groups.[18] Planned and phased adjustments appear nceessary. Neither immediate withdrawal of unremunerative services, even if in the lines' selfish interest, nor complete restraint on route rationalization (especially on legal grounds) is warranted. The best chance of achieving a gradual improvement is probably within conference or pooling agreements whereby the various lines can share the short run cost of slow route adjustment. The danger of reliance on intercorporate decisions is that the diverse interests of the firms and pressures on them, will prevent agreements, or at least efficient agreements, being reached. An alternate approach and perhaps the best would be to ensure that the freight rates differ between ports depending on cargo and port conditions. Some move in this direction is being made in the Eastbound Conferences from Europe to India; this could set a pattern for other changes.

It also seems likely that the overtonnaging of trades is more likely to be dealt with within the conference system than in an environment of "free competition." Government interest in the welfare of so many lines makes it unlikely that competition would be allowed to reduce capacity by the elimination of the least efficient lines. Over-tonnaging is more likely to be eased by explicit agreement allocating capacity between lines. These agreements may also make it easier to plan a level of service less than the peak demanded although the level of containerization on some routes will make it particularly difficult to adjust capacity to traffic conditions.

These changes in pricing and the route structure are essential to a profitable and efficient system of liner services. The ability to rationalize corporate and conference affairs will be affected by the form on conference agreements. It is desirable, therefore, that some impartial and public debate be carried on about the likely effects of different forms of agreement. If conferences are in the best interest of liner firms what form of conference, open or closed, and what type of agreement should companies reach. The current trend is towards pooling agreements. However, it is not clear that pooling agreements are viable given the nature of internal and external competition. Nor is it clear what constraints pooling agreements place on shipping management. Public debate of these questions will not determine the pattern of change in the conference system but it may sharpen our focus on significant issues.

FOOTNOTES

1 D. Marx, International Shipping Cartels, A Study of Industrial Self-Regulation by Shipping

Conferences. Princeton: Princeton University Press, 1958.
——, "Regulation of International Liner Shipping and Freedom of the Seas," Journal of Industrial Economics, Vol. XVI, No. 1, (November, 1967), pp. 46-62.
S. G. Sturmey, "Economics and International Liner Services," Journal of Transport Economics and Policy, Vol. 1, No. 2, (May, 1967), pp. 190-203.
2 Committee of Inquiry into Shipping, Report presented to Parliament by the President of the Board of Trade, London: H.M.S.O., 1970, p. 130. (Hereafter referred to as the Rochdale Committee).
3 U.S. Congress, Discriminatory Ocean Freight Rates and the Balance of Payments. Hearings Before the Joint Economic Committee, 88th Cong., 1st sess. Washington, D.C.: Government Printing Office, 1964.
——, Discriminatory Ocean Freight Rates and the Balance of Payments. Hearings Before the Subcommittee on Federal Procurement and Regulation of the Joint Economic Committee, 89th Cong., 1st sess. Washington, D.C.: Government Printing Office, 1965.
4 Sturmey, op. cit., p. 193.
5 A.G.M. Koch, Current Pricing Behaviour in Liner Shipping, Bergen: Institute for Shipping Research, 1968, p. 5.
6 Associated Latin American Freight Conferences, Straight Talk on Freight Rates. New York, undated, p. 10.
7 T. D. Heaver, "Trans-Pacific Trade, Liner Shipping and Conference Rates," Logistics and Transportation Review, Vol. 8, No. 2, pp. 3-28.
Economic Commission for Latin America, Maritime Freight Rates in the Foreign Trade of Latin America, E/CN 12/812, Oct. 1969.
8 Sturmey, op. cit., p. 191-193.
W. L. Grossman, Ocean Freight Rates, Cambridge: Cornell Maritime Press, 1956, p. 56.
9 Discriminatory Ocean Freight Rates and the Balance of Payments, 1964 and 1965, op. cit.
E. Bennathan and A. A. Walters, The Economics of Ocean Freight Rates, New York: Praeger, 1969, pp. 65-92.
10 Rochdale Committee, op. cit., p. 123.
11 W. J. Fellner, Competition Among the Few, Reprinted by Frank Cass and Co. Ltd., 1965.
12 "Far East, Steps in a Peaceful Direction," Container International, Vol. 5, No. 10, (Oct. 1971), p. 23.
13 "'Seven points' for a Conference pool," Seatrade, Vol. 3, No. 1 (January, 1973), p. 19.
14 "Australian Shippers' Council calls the tune," Seatrade, vol. 2, no. 12, (Dec. 1972), p. 19.
15 "Liner Code: the bargaining begins in earnest," Seatrade, vol. 3, No. 1 (January 1973), p. 13.
16 Rochdale Committee, op. cit., p. 318-321.
17 "N. Atlantic a hive of activity," Seatrade, Vol. 2, No. 8 (August, 1972), p. 39.
18 "U.S. Ports Attack Atlantic Pool Plan," Seatrade, Vol. 2, No. 3, (March, 1972), p. 15.

APPENDIX 1
Analysis of Trans-Atlantic Rates

The structure of conference tariffs, that is the bases for the differences between rates in a tariff, may be determined by means of multiple regression analysis. The tariffs selected for analysis are those of the North Atlantic Westbound Freight Association (applicable from the United Kingdom and Eire to North and South Atlantic U.S. ports) and the North Atlantic United Kingdom Freight Conference (applicable from U.S. Atlantic ports north of Hampton Roads to the United Kingdom and Eire).[1] The rates on these routes are related by linear multiple regression analysis to the following independent variables; the stowage factor (the number of cubic feet of ship space occupied by one long ton), the value per ton and the total quantity shipped per year.

For each route leg a sample was obtained of items in the conference tariff and for which the trade data are available from Bureau of the Census data.[2] The value per ton, the total tonnage and the total value of a commodity traded were recorded from the trade statistics. This implies that the value per ton recorded for the U.S. trade with the U.K. is similar to that for the Atlantic coast trade and that the total quantity traded nationally is pertinent to rate making for the Atlantic coast trades. These assumptions are quite arbitory and necessitated by nature of the data sources used. The stowage factor of commodities was estimated with the assistance of shipping firms. The commodity characteristics selected are generally recognized as being significant in rate making.

The system required matching items described in the tariff with those described in the trade statistics, hardly the best way to obtain a random sample. However, a wide cross-section of items actually traded was obtained for each leg.[3]

Regression Results

The regression results shown in Table 1 have only the stowage factor and the value per ton as independent variables. Neither the total tonnage nor total value traded was found to be statistically significant on either leg. This is surprising in view of the importance attached to tramp competition westbound. The absence of a statistically significant finding does not negate the argument that tramp competition is important but it does suggest that the bargaining power afforded by the presence of tramp competition does not enable shippers generally to gain rate of concessions on the basis of the total quantity of a commodity shipped. The regression results do suggest that the discriminatory power of westbound conference is less than that of the eastbound conference.

The level of explanation achieved by the regressions is good, R^{-2}, .66 and .73. However, in view of the inadequacies of the data and the traditional belief that conference tariffs are not based consistently on measurable factors, perhaps the level of explanation achieved should be viewed as surprisingly high.

The relative importance of the stowage factor in explaining differences between rates is higher westbound than eastbound as expected; the coefficients of partial correlation for the stowage factor are .83 and .53 respectively. How-

TABLE 1

Multiple Regression Equation for Trans-Atlantic Rates, January 1971

	Number of commodities	Constant $ per ton	$ per cu. ft. Stowage factor	$ per $100 of value per ton	R—2
Eastbound	24	23.82	0.43	0.91	.66
		*(2.5)	(3.06)	(4.70)	
Westbound	29	23.81	0.41	0.42	.73
		(5.2)	(7.9)	(2.7)	

*Figure in brackets are t-statistics.

ever, there is virtually no difference between the regression coefficients (eastbound is slightly higher). The latter result is not expected on the basis of the linear load factors.

Both the coefficient for the value per ton and its contribution to explaining the difference between rates is higher eastbound (partial correlation coefficients for value per ton are .70 eastbound and .42 westbound). This appears to support the hypothesis that the conference outbound from the U.S. is in the stronger monopoly position. Indeed the route appears unusual because the value per ton is the most important independent variable.

FOOTNOTES

1 The rates were in effect in January, 1971. Westbound the rates used are the "Service 2" contract rates. Service 2 rates apply on all cargo other than that delivered in containers to the carriers terminal and for ultimate delivery beyond the carriers discharging terminal. Service 2 rates are generally 1.11 times the Service 1 rates. Eastbound the rates are contract rates and only one such rate is quoted; "house to house" container movements (equivalent to Service 1 westbound) received a 5 percent discount.

2 U.S. Bureau of the Census, U.S. **Exports World Area, Country, Schedule B Commodity Grouping and Method of Transportation.** Report F.T. 455, 1970 Annual: Washington, D.C. 1971.

U.S. Bureau of the Census, U.S. **General Imports World Area, Country Schedule A Commodity Groupings and Method of Transportation.** Report FT 155, 1970 Annual: Washington, D.C., 1971.

3 Commodities in the eastbound sample; canned fish, honey, cigarettes, groundnuts, rubber, mohair, synthetic fabrics, linoleum, carpets, bricks and other refractory materials, iron and steel billets, iron and steel rough forgings, iron and steel sheet, tin plate, hadware, iron and steel chains, typewriters, office appliances, synthetic rubber, fire clay, cooperage products, powered tools, pulp and paper processing machines, bearings.

Commodities in the westbound sample: canned fish, malt extract, peanuts, jam, cider, beer, jute, lubricating oil, ink, soap, printing paper, stationery, linoleum, asbestos cement goods, refractory bricks, tiles, iron and steel sheets, iron and steel angles etc., cutlery, hardware, typewriters, calculating machines, toilet ware, leather (calf and bovine), sewing machines, bearings, batteries, motor cycles, cycles.