

Seidenfus, Hellmuth St.

Article — Digitized Version

The theory of revenue pooling

Intereconomics

Suggested Citation: Seidenfus, Hellmuth St. (1973) : The theory of revenue pooling, Intereconomics, ISSN 0020-5346, Verlag Weltarchiv, Hamburg, Vol. 08, Iss. 12, pp. 380-383, <https://doi.org/10.1007/BF02929683>

This Version is available at:

<https://hdl.handle.net/10419/138941>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

The Theory of Revenue Pooling

by Professor Hellmuth St. Seidenfus, Münster *

In ocean shipping effective competition cannot be expected without competitive controls as in this case the so called market mechanism frequently fails. The following article discusses the role of revenue pools in the system of organised competition in ocean shipping.

The "special circumstances of ocean shipping and above all the danger of cut-throat price competition and the need for protection on the part of the shippers, who through the setting-up of regular services involve themselves in substantial capital outlay requires the control of the competitive relationship between suppliers. The frequent dissimilarity of services offered by shippers, which together with the cost structure determined necessity of high capacity utilisation, the difficulties arising out of maintaining regular services, the international nature of ocean shipping, and the large number of potential competitors leads, as no individual shipper is in a position to reconcile these problems, to an overoptimal level of competition which itself leads to the formation of cartels." The shipping industry has consequently created institutions which are aimed at regulating the competitive conditions between shippers on particular routes – the well known liner conferences (cartels). "One alternative form of constitution for a cartel is a 'revenue pooling and sharing' arrangement."¹

In order to be in a position to evaluate revenue pools it is necessary to determine more accurately their place in the system of organised competition in ocean shipping².

Shipping Conferences

In order to neutralise the short-term action parameter 'price' as a competitive instrument and thereby to achieve a lessening of the danger of cut-throat competition, rates as well as other conditions of carriage which have direct price effects, are fixed in common within the conference. The

aim of these measures is, therefore, to cut out internal price competition. This is where the problem of the conferences lies, for their efficiency to fix rates is dependent both upon external (outsider problem) and internal competition.

Internal competition cannot be excluded within the framework of a conference if the agreement is only confined to rates. For a workable control of adherence to agreed rates as a precondition for sanctions in the case of non-adherence is in practice just as difficult to accomplish as the prevention of manipulations in the transport of goods to and from the ports or false declarations amongst others³.

Pooling Agreements

Pooling agreements are made between "members of a conference whose common interest in relation to a certain route (or routes) or individual goods categories can lead to a situation of conflict"⁴. Three aims are pursued through the different pooling agreements:

- ☐ The avoidance of cut-throat competition, which in spite of conference agreements arises from the intensity of the internal competition.
- ☐ The realisation of potential rationalisation measures, in particular in container-traffic, which require a degree of coordination over and above the price agreements.
- ☐ The weakening of discriminating practices of certain countries (e.g. landing rights).

The following 6 types of pooling arrangements need to be differentiated.

Regulation of the Departure Frequency

The shippers agree upon a certain number of departures from a specified port and these are

* Institute of Transport Economy at the University of Münster.

¹ E. Bennathan and A. A. Walters, Revenue Pooling and Cartels, in: Oxford Economic Papers, Vol. 21, No. 2, 1969, p. 161.

² H. Jürgensen et al., Der Rationalisierungseffekt von Linienkonferenzen in Fahrtgebieten von besonderem Interesse für die kontinentaleuropäische Schifffahrt (The Rationalisation Effect of Liner Conferences on Routes of Special Interest to the European Continent's Shipping), Verkehrswirtschaftliche Studien 18, Göttingen 1971, p. 90 et seq.

³ From this, for example, have also stemmed certain problems of the North Atlantic Pool since 1953.

⁴ Jürgensen, op. cit., p. 91.

then divided between themselves. As the frequency of departures from ports is an important selling point for the shipper⁵, there is a danger of cut-throat competition in the quality of service, if the number of departures is not restricted, which would undermine the stability of the conference. The possible undesirable consequences would be a falling quality of service, as on-shore capacity would not be sufficient to service the increased sailings. In practice an agreement is reached on sailings only in relation to tonnage or revenue pools, as otherwise the possibility of putting certain shippers at a disadvantage in joining the Pool would exist. This is of importance when weaker shippers fear that they will lose cargo as a result of rate and departure regulations alone. Moreover it should be noted that the distribution of departures is frequently carried out in relation to the nationality of the shipper, i.e. the shippers from a specific country are allowed more sailings from the ports of this country than the shippers from other countries.

Tonnage Pools

The problem of putting certain shippers at a disadvantage, and especially those from countries with low levels of national traffic, through departure regulations alone leads to agreements over specific shares of the total traffic or the traffic in certain goods (which a shipper, for different reasons, may be particularly interested in). The disadvantage of these tonnage pools lies in the fact that they lead to competition amongst shippers in the high tariff goods, i.e. "those in which the difference between receipts and costs is greatest."⁶ The size of the quotas of individual shippers depends, on the one hand, upon their performance in the past, and on the other hand, although this is not always clearly stated, upon the cargo-generating country argument. This inter-relationship shows that the tonnage agreements in no way need to lead to limitations in the service offered and thus to irrationality.

Revenue Pools

The revenue pool arises from the problems stemming from the tonnage pool, i.e. the competition for the high tariff goods and the discrimination against the low tariff goods, as well as the fact that within the agreements of the tonnage pools concealed undercutting of rates can be beneficial; thus the stability of the pool is endangered. Such rate-undercutting does not arise solely from the competition for high-tariff goods, it is also worthy of thought that the shipper — in light of the fact

that the past performance is decisive for the new quota — will attempt, shortly before new quota negotiations, to increase his volume of traffic through rate-cutting.

The revenue pool is, therefore, nothing else than a consequence of the experience of the shippers in tonnage pools. Its functioning and working has still to be fully gone into.

Tonnage/Revenue Pool

The objects of the agreement are the distribution of receipts earned from conference traffic, and the distribution of loading quotas.

Slotpool

This new form of cooperation in container traffic is sometimes falsely described as a pool, its character corresponds, however, much more to a charter agreement on the use of a ship's space. The slot-charter agreements offer the established members of a conference the possibility of accepting new members or increasing the levels of their own operations, without increasing the tonnage on a route and consequently to endanger the conference from the resulting over-capacity. This is particularly the case when the shipper concerned is faced with reequipping for containers, without having a loading-share at his disposal sufficient to realise the full use of the capacity of container ships of optimal size through a sufficiently high departure frequency. He must try, therefore, to increase his share through rate undercutting. As a result a beginning for cut-throat competition has been made, and rationalisation possibilities drop out. In order to prevent such a development the shipper concerned is offered certain space, certain slots in the conference ships, on the basis of a charter contract, in return for a specific chartering rent. Such an agreement does not infringe upon pool agreements and the internal competition within the pool.

Consortium Pool

This close form of cooperation between shippers on a route is the last step before merger. It is the result of the claims which intermodal means of transport, e.g. containers, make on the organisation of a transport system. The agreements within the consortium are intended to achieve the realisation of the scale economies, which can result from the use of large container ships and terminals at ports and in the hinterland, through the inefficient use of these facilities. If this were the case, the justification for competition reducing measures, which pool agreements are, would break down, for these are only tolerable so long as "the rationalisation measures which are made possible

⁵ E. Bennathan and A. A. Walters, *The Economics of Ocean Freight Rates*, New York, Washington, London 1968, p. 31.

⁶ Jürgensen, op. cit., p. 91.

are actually carried out"⁷. In particular cases the pool agreements in a consortium can include marketing, attracting of cargo, transport to the port, and documentation as well as cooperation on the sea and in harbours.

Alms of the Revenue Pools

The common interest of a cartel is to reduce the output to a level which lies below that which would exist in a functionless oligopolistic competitive situation. Although all conference members are aware of this common interest, experience has shown that the natural tendency of each member to increase his output outweighs this. Therefore, where this appears to lead to cut-throat competition, internal discipline is required to make the cartel efficient. In order not to endanger the stability of the cartel there must exist alongside an automatic internal disciplining of individuals, a disciplining which does not have recourse to specific sanctions.

All pool agreements have strived towards this end without in fact the departure agreement or loading pools ever achieving it. While the departure pools can lead to the withdrawal of shippers who feel themselves at a disadvantage and who believe that non-membership would be to their favour, the loading pools lead to an exaggerated competition in relation to the high tariff goods. Moreover concealed rate under-cutting cannot be completely cut out. It is, therefore, questionable whether the revenue pool is in the position to achieve the aim of an internal automatic disciplining, without producing the shortcomings common to other pools or new shortcomings. The advantage of such an automatic disciplining procedure is, on the one hand, the speedy adaption of the pool shares to a changed competitive situation, and on the other hand, the fact that there is no necessity for negotiations, whose results would not solely be determined by market forces. Moreover it needs to be investigated whether the revenue pool really is "the tightest form of conference organisation, implying the strongest control of internal competition"⁸ as is generally maintained.

Functioning of the Revenue Pools

The revenues received from traffic by pool members are paid into a central fund which is then distributed amongst members in relation to the previously agreed pool shares. A proportional relationship between output (tonnage) and pool-share cannot be proved, but there is nevertheless a relationship.

One must differentiate between gross and net money pools. Whereas in the first case the receipts

are paid into the pool without regard to the costs, in the second case the direct attributable costs are deducted first. In order to avoid the complicated collection and calculation of cost figures for all members in all the ports and for all types of goods, and also to exclude the additional costs which are frequently bound up with shipping, carrying rates are agreed. These relate to a fixed rate per ton of freight and are deducted from the gross receipts before payment into the central fund. This fixed rate is the same for all pool members. As a rule it is kept relatively low so that a partial realisation of profit is not made possible through artificially low payments into the central fund.

Critique of the Pure Revenue Pools

The first aim of the Revenue Pools is to prevent competition solely in relation to the high tariff goods, the second aim is to prevent concealed rate undercutting. Both aims are only partially achieved as the following example shows.

Expected pool freight based on an extrapolation of the previous year's results or other analyses of freight flows: 200.000 tons

Average rate:	DM 100
Total income:	DM 20 mn
Share of shipper X (= 10 p.c.)	DM 2 mn

The shipper is strongly encouraged to meet his debit quota with the lowest possible expenses, so as not to become an under-earner. For under-earning would weaken his position both in the corresponding accounting period and in future pool negotiations. The shipper will, therefore, attempt to carry the highest possible number of high tariff goods, with the smallest number of ships from the smallest number of ports. It is particularly noteworthy that a policy of cargo selection is not always possible in practice as forwarding agents and wholesale merchants place pressure upon the shipper by offering all or nothing. Alongside this is naturally the outsider problem. Both lead here, as in the tonnage pools, to a weakening of the tendency for competition for the high tariff goods. He is only interested in other goods, the receipts from which will increase the total level of the central fund and consequently will increase the total amount of his share, after he has achieved his quota. Whether the shipper will consider the penalty of being an "over-carrier" worthwhile will depend upon the possibility of revising his quota in new negotiations. The "over-carrier" is penalised to the extent that not only he gains from the exceeding of the quota but also the total pool and therefore the less efficient carriers. This may be considered a necessary evil if it is subsequently possible for him to increase his share of the pool.

⁷ Jürgensen, *op. cit.*, p. 118.

⁸ Bennathan, Walters, *The Economics . . .*, *op. cit.*, p. 32.

If the shipper is of the opinion that there is a real possibility of increasing his tonnage quota, there follow two consequences: The danger of competition for the high tariff goods will be reduced, and the danger of concealed rate-cutting increases.

This results from the fact that the inefficient (or financially weak) shippers are concerned that they will be forced out of the market in the long run, and they reduce their rates in spite of the absence of any advantage in relation to the service offered. Therefore, in certain situations the two aims appear to be incompatible. However, in practice the incompatibility of the two aims is not so great. For when the new pool quotas are determined not only the past performance is of importance but also the future expected performances of the individual pool members as well as the level of traffic originating from the shipper's home country (a point which will be discussed later).

If the shipper considers that the possibilities of revision are negative, and therefore does not believe that he will be able to increase his pool quota as a result of offering relative advantages in the carriages of traffic, he will attempt to make sure that the pool agreement is such that each member is only interested in exactly achieving his quota. He will, therefore, try and ensure that both the "over-earner" and the "under-earner" are penalised. This means that "under water shooting" is prevented, the tendency for competition amongst the high tariff goods, of course, remains.

In summary it can be said that the revenue pool restrains internal competition to a greater extent than sailing agreements or tonnage pools, and this favours stability in the cartel. However, it does not completely avoid the weaknesses of other pool agreements.

The Process of Competition

In order to discuss this question it is important to establish whether the pool members are attempting to achieve the maximum profit for the total pool or to negotiate a compromise solution between the different aims. If the first aim is the case then an automatic internal disciplining is to be expected and the pool is such that "each firm is induced to produce output at such a level that the aggregate output is that, which gives rise to the maximum cartel profit"⁹. As result the different cost functions of the individual shippers are taken into consideration and there ensues also a reaction in relation to changes in demand. The stability of the pool is increased at the cost of competition. At any rate this is how it appears at the first glance. It can, however, also be shown that a pool

of this type leads to a better distribution of the traffic on a particular route and as a result to a reduction of the total transport costs. Moreover it permits expansion by shippers with relatively low costs, and it promotes the suppression of the inefficient lines. The factual importance of a perfect pool of this type cannot be valued too highly, as it only operates under the condition that all members of a conference are also members of the pool.

In practice one encounters compromise agreements in these pools which take into account the individual aims of the pool members. The internal stability of the pool is therefore substantially lower.

Conservation of Established Shares

In gross money pools as well as in net money pools there is a stimulus to reduce costs in order to reach a position of advantage. As has already been shown the question of the possibilities for the revision of pool shares is the decisive factor in judging the competitive working of a pool.

Now it can of course be established, "that the 'open sea' doctrine has largely disappeared and has been replaced by increasing own-flag government direction"¹⁰. The share which a shipper has in a pool reflects increasingly the trade and shipping policy of the shippers' home country. More and more agreements are being reached on the basis of the bilateral principle i.e. the 40 - 40 - 20 principle, under which each country taking part retains 40 p.c. for ships of its own flag and 20 p.c. is allocated to cross-traders. Although this already leads to a reduction of competition, further factors increase these restricting effects. The traditional shipping countries attempt, in fact, to avoid a revision of the shares as this would act to the advantage of developing countries. As a result the tendency is for conservation in relation to the established relationships - a consequence of the development policy not the pool policy.

Finally, attention should be drawn to the fact that pools are only in a position to control internal competition. Pools guarantee, of course, no firm absolute share in the traffic and receipts. They concede solely the right to carry a specific quota of traffic in so far as the shipper can acquire it.

The external competition of outsiders, tramp shippers as well as so-called specialist carriers (e.g. car transport on the North Atlantic, fertilizers in South American traffic, and rubber transport in the Far East traffic), substitutes like air (in North Atlantic traffic, for example, already 10 p.c. of the pool traffic), and land-bridges, of course, remains.

⁹ Bennathan, Walters, *The Economics . . .*, op. cit., p. 161.

¹⁰ The North Atlantic Pool - After Four Months of Hearings, in: ITZ Nr. 51 of 22. 12. 1972.