

THE DEVELOPMENT OF SEAPORT POLICIES

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1 Introduction and background

In the late 19th century, when *laissez-faire* was a dominant doctrine amongst professional economists - indeed, when the subject itself was more often known as 'political economy' - it was sometimes suggested that, save for a few refinements, the subject was complete; that there was nothing more to learn about it. We now know that this was very wrong. Within the 19th century itself Alfred Marshall developed the concepts of elasticity of demand, of the distinction between the long and short periods, of the representative firm and gave us the custom of illustrating our arguments with graphs, besides much else.

His pupil and successor at Cambridge, Pigou, then developed the concept of the externality, the significant economic factor which, being outside the accounts of the business concerned, is unlikely to be taken into account in their decisions. In transport, especially, this has been a powerful generator of ideas leading, for example, to the development of cost-benefit analysis as a major technique for economists and a tool - though one that is sometimes misused - for assisting decision-makers.

Parallel with this has been the development of the concept of public finance, not in the accounting nor even in the macro-economic sense, but in the sense of discussing what institutions should be in the public sector and why, and which should be left to the private one - sometimes termed 'business'. Meanwhile, Joan Robinson and E H Chamberlin gave us the means of demonstrating that, with most modern industries, the conditions necessary for *laissez-faire* doctrines to provide the greatest economic welfare were highly implausible, since those industries are characterised by a few rather than by numerous competitors. In formal terms they said that marginal cost was more likely to be equalised with marginal revenue than with price and that, in the long run, there were likely to be unexploited economies of scale; neither situation can be said to be ideal. Whilst their modern successors have sometimes suggested that 'competition amongst the few' can have some beneficial results, few of those familiar with the practical application of competition policy feel really confident that their work is superfluous: they have seen too many instances where it was needed.

Much of the discussion on these subjects has been affected by political beliefs by no means necessarily of a marxist or revolutionary nature but more often - at least in Western Europe - to the effect that state-, or at least publicly-operated services would be better than those in the private sector. This, it was argued, was because they would be operated in the interests of the public instead of those of the

businessmen, investors or capitalists - the terms are often switched so as to import the speaker's own bias into the discussion. Much refinement of the principles of economic welfare and of public finance led to a widespread agreement that there could be differences and that they could be significant on particular occasions. While there were many local and national variations all this is consistent with a pragmatic rather than a dogmatic approach.

Frequently, these factors combined with others, eg with strong feelings felt over the loss of life in mining disasters or the rapacious behaviour of individual businessmen like those who controlled certain North American railways around the turn of the century. With their usual technique of 'simplify and then exaggerate', skilled politicians thus found ideas to promote.

Thus, urban transport undertakings were established within the public sector and were often subsidised on the grounds that they diverted traffic away from the roads, where cars are notoriously inefficient users of congested space - and yet capable of providing such direct door-to-door transport as to be very economical to their users. Here, indeed, is an externality for economists to have fun with - I mean in the purely professional sense. Some of us may also have fun recalling that the seminal work on road congestion was done in 1956 by Professor Sir Alan Walters, who is not always regarded as one of the most enthusiastic supporters of expanding the public sector. Indeed, in his capacity (until last year) of personal economic adviser to Mrs Thatcher he tried to contract it.

Still further work has been done in recent years on exploring and analysing the effects of the public sector's operations either by way of establishing direct public sector operations or by regulating operations which remain within the private sector. Much of this work has been done by academics, for example at the University of Chicago; but some of it has been fostered and publicised by politically-oriented bodies like the Institute of Economic Affairs in Britain.

This work led to significant modifications of the original ideas and to policy actions being taken by governments, primarily by way of privatisation and of de-regulation. In Britain our telecommunication service has been privatised, though it seems no better. In Canada, the present Government's White Paper 'Freedom to move' represents a clear statement of philosophy and of their general intentions covering several modes of transport.

In this paper I propose to discuss these developments in the context of seaports. This seems appropriate for a number of reasons: first, I have recently had the opportunity of visiting (and re-visiting) a number of Canadian ports in order to assess the working of the Canada Ports Act, 1982; secondly there seem to me to be problems which cannot be solved by any simple approach to privatisation (eg by selling the port of Vancouver to the highest bidder); and thirdly that recent technological developments in seaports have, and are likely to have in the future, major effects on the extent and viability of competition.

Finally, and on a more personal note, may I say that economic policy towards seaports is a seriously neglected subject. I sometimes feel that my own work has suffered from having received insufficient informed criticism; and what follows may, therefore, contain a corresponding

degree of error for which I am wholly responsible. I would therefore welcome discussion and correction.

In the next section of this paper I shall discuss what I understand to be the essence of the attack upon public sector bodies, whether operators or regulators. In section 3 I suggest that there are certain special reasons why port authorities need to remain in the public sector. In section 4 I discuss some problems arising, in section 5 a solution to some of them and in section 6 the vexed problem of the objectives appropriate to a public sector port authority.

2 The attack on the public sector

The world in which we live is a very complicated place and, in attempting to understand and expound it, economists have to make simplifying assumptions; often admittedly unreal but useful nevertheless. For example, we sometimes assume that people are rational, have perfect knowledge and never collude. We usually claim that such assumptions are valid only in the limited sense of enabling us to carry the argument forward. After that they may be relaxed.

The trouble with this procedure is that we sometimes forget to relax them, or have insufficient material with which to explore the effects of doing so. Thus, the advocates of expanding public sector activities seem often to have assumed that the relevant costs were negligible; or, at least, that they were comfortably exceeded by the benefits. Often, however, they neglected to examine the validity of either proposition.

Secondly, they failed to explore the ethos and development of the resulting bureaucracies. Yet, once established, these have aims and, indeed, lives of their own. They usually aim at surviving and extending their influence. As the TV series 'Yes, Minister' has amusingly demonstrated, officials - and the bureaucracies they lead - can be extremely difficult for any elected politician to control, since their permanent officials are often knowledgeable and very expert at controlling those who are supposed to control them. They can, for example, prevent Ministers from following policies they might desire by suppressing all arguments in their favour. (I spent 17 years as a civil servant in London, and I have seen it done. I also know the excellent quality of the research underlying 'Yes, Minister'.)

The views of the public, when expressed to a low level official may extract the perfectly valid response: "it is nothing to do with me". When expressed at a higher level, they may be labelled 'complaints' and referred to a special department, termed 'public relations', which has no powers to do anything except write brush-off letters. (This is what happens to letters addressed to Mrs Thatcher. They are intercepted by officials along the lines revealed in the memoirs of the late Richard Crossman.)

Such official bodies or commissions are often established by statute and given terms of reference expressed in rather general terms. They are, however, expected to follow these terms of reference until they are changed. In this they are essentially different from private sector firms which have to make money out of serving the public; and which

must, therefore, adapt to changes in public demand.

This is, of course, an idealised distinction but it can appear in very practical forms. Shop assistants or supermarket cashiers are at least supposed to serve you so that you will return; the shop will suffer if you do not and they may lose their jobs. In any such public body as a post office you have no choice and everyone knows it.

Thus, in principle at least, there is a fairly simple mechanism which guides private sector firms into giving the public what they want. It is many years since Adam Smith termed this 'the invisible hand'; and it is surprising that the proponents of public sector bodies failed to see the need for some systematic equivalent for dealing with general changes in the structure and pattern, as well as the level, of demand, and distinct from any process of dealing with individual complaints or failings. For example, as living standards rise, so does people's valuation of their personal time, and their willingness to stand in queues as distinct from paying more for a stamp. Decentralised bodies competing with one another are likely to respond to any such general change in trade-off willingness because it is to their advantage: there is no automatic probability that it will even become known to centralised ones.

Yet profit-seeking firms may cut corners, deceive successive generations of their customers (or different customers if they move about) and skimp safety to make profits. The 'Titanic' did not have enough lifeboats for all on board when it hit the iceberg and lost some 68% of those aboard. The Liberian Government's Court of Enquiry established that if the 'Amoco Cadiz' steering gear had not failed off Ushant then it would probably have failed somewhere else. Surely something must be done about these things, if only on safety grounds? Do we not need officials to do this?

But the 'Titanic' complied with all relevant safety regulations. It was, therefore, not the White Star Line but the regulators in the Board of Trade who were wrong; and there is much evidence to show that it was only the fame and wealth of those lost which caused an outcry sufficient for matters to be righted. (Over 18,000 lives had been lost in British-registered ships in the preceding 20 years; not much had been done about it.)

In general terms the argument is that the regulators are likely to be 'captured' by those whose activities they are supposed to be controlling. Example: if the Federal Aviation Administration had dealt properly with the defective cargo doors on DC10s then several of my friends would not have died in the 1974 Turkish Airlines crash near Paris, where 344 people were killed. (To protect the aircraft manufacturer's reputation the FAA had issued advice instead of a mandatory instruction on rectifying a design fault.)

Finally, there is often a tendency for public sector bodies to be dominated by members of one profession - seamen, airmen, or engineers, say - and to ignore solutions which do not seem to suit their discipline. The trouble is that they may fail to consider some other technique, possibly not involving a technological 'fix' at all. For example, the officials concerned with flood control in a river valley may be civil engineers who will tend to build dams, straighten channels and line them with concrete. They may fail to consider the possibility

of planting trees so as to reduce runoff. Numerous examples of these tendencies exist, in and out of the transport field.

These are the attacks that have been made upon official bodies of various kinds and in many different countries. It will be seen that they are much more fundamental than those of the 1950s, when "Parkinson's Law" (Work expands to fill the available time, hence office staffs always tend to expand) was first pronounced. What, and perhaps especially in the context of seaports, can we do about it?

Should we go all the way and privatise seaports altogether? Let us first consider the arguments for having public sector seaport authorities at all.

3 The case for having seaports in the public sector

Apart from a small minority of single-user seaports, where few problems arise and almost everything may be privately-developed and -owned, the vast majority of ports are multi-user and controlled by public authorities. Although much the same physical activities take place in them there is a surprising degree of variation in their constitutions and practices.

Some, like most of those in Canada, are nationally-owned and under at least some degree of central control from the capital. Others, like those of the USA, are a regional or municipal matter so that the federal government has little direct responsibility save in wartime. Still others are established by special statutes and are sometimes referred to as 'trust' ports.

Again, some port authorities - most Canadian ports are again an example - are landlords, with no intention of ever engaging in the loading and unloading of ships. As the director of one such port said to me: 'We believe that if it can be done by business then it should be done by business'. Others, like the ports of Kenya, Israel and Singapore, are comprehensive directly employing most or all of the people working there. There are many intermediate positions, most of which can be found somewhere.

Yet again, there are wide differences in the financial and operating philosophies of ports. Some, like those of Associated British Ports, seek to maximise profits, though never, I am sure, so as to drive trade away. Others see great harm in adopting such policies; their governments agree and they are, effectively, subsidised on capital account, current account, or both. The forms of public assistance are as diverse as one might expect, ranging from outright grants for approved projects to borrowing at a lower rate of interest because some other public body guarantees the funds. This whole subject is, indeed, so important that the editors of Maritime Policy and Management decided some time ago that a special issue should be devoted entirely to the subject, with essays from many different countries and expressing many different points of view. This special issue is in the press and will appear very soon.

Nevertheless, the single dominant point which stands out amidst this diversity of constitutions and practices is that practically all major multi-user ports are controlled by bodies firmly within the public sector. I believe that there are four good reasons for this, though, as I have noted above, there has been little analysis of the topic and, consequently not all of these reasons are widely recognised. Indeed, even my listing may surprise some readers, quite apart from my discussion of them.

First, all but the most primitive of ports have works, like quays or piers, extending into the water. Their landward ends may stand firmly upon ground whose ownership is known; but what about the ownership of the seabed and of the water column through which they pass at the other end? In most countries there is a well-established system for property rights in land: save for such special purposes as shellfish beds and oil drilling there is rarely any equivalent in the water. Yet what lawyers call 'a clear title' is obviously needed: without it no one would erect more than the flimsiest of structures. Some public authority is therefore needed to establish property rights, and since both the activities and structures are rather specialised it may be termed a port authority.

Secondly, these works need to be located sensibly relative to one another and with regard to such factors as land access and the hydraulic regime of tides and currents, and of the erosion, sedimentation and littoral drift they cause. There are very few ports where none of these are of any importance or where they are likely to be unaffected by the placing of quays, piers and so on. The locations of such port facilities also need to be considered in relation to other modes of transport - as the Canadian Pacific Railway did when it chose Vancouver, with natural deep water, for its western terminal instead of the well-established settlement at New Westminster. In other words, someone has to do the planning. I would accept that, even with numerous potential users, this could be done by a private sector owner - as could the first, given appropriate statutory authority: but they need to be considered in relation to my remaining two reasons, and particularly the last.

Thirdly, there is a need for what economists term 'public goods', i.e. those goods and services which are unlikely to be provided sufficiently or at all by profit-motivated businessmen. If traffic is to move safely, for example, a port may need to have lights, beacons, buoys, a dredged entrance channel and some safety byelaws. All of these happen to have the characteristic of zero short-run marginal cost. That is to say, there is no variation in the level of cost with modest - or even large - variations in the level of usage. If we accept that the price to be charged for a service should be related to marginal cost, which is zero, then no revenue can be derived from providing such facilities and the only way to get them is through a public body. If, moreover, it is impracticable or undesirable to exclude users who refuse to pay then a second, and equally familiar, 'public goods' argument appears. It is upon precisely parallel arguments that the public provision of street lighting, roads (pace Sir Alan Walters' arguments on congestion) and policing is justified. Again, there is some expertise involved and thus a case for some specialised body. Since they are related to the two earlier functions they may be (but sometimes are not) provided by the port authority.

Fourthly, suppose an instance where all of these were irrelevant or insignificant; or, if you prefer, suppose all my previous arguments to be wrong. Let us then suppose that substantial and efficient port facilities are then provided by several competing private sector businesses. Is this situation likely to remain? Or is it likely that, even without collusion or economies of scale, there might develop some process of bidding leading to mergers?

For profit-seeking businessmen may seek to merge either because there are economies in doing so or because it will effectively diminish competition. Given sufficient time I think that concentration could go a long way; and I think that it is important that there should be an overt and specialised mechanism to control it. We cannot, at this point, call in aid the concept of potential competition, or the newly developed ideas of 'contestable markets' because the essence of the position is the possession of valuable sites which cannot, by definition, be easily duplicated. It is the theory of rent that we need here: not that of profits.

Given a need for establishing property rights in the water, for planning, for the provision of public goods and for the control of competition, all to be carried out in ways that are professionally specialised and intimately related to one another, I think the general case for having public sector port authorities is made. Whether they should be part of national, regional or local government authorities is, I think, a question to be dealt with in the light of the constitution of the country concerned; as is the question of whether they should operate the port, act wholly as landlords or adopt some intermediate position. (Singapore, a largely comprehensive port, is one of the world's most efficient.)

4 Seaports as bureaucratic bodies

Now it may be tempting to suggest that seaports are not like post offices or the FAA because they are essentially commercial bodies performing important economic functions in competition. Nor do most of them have much direct contact with the public. But there are many countries or regions with only one port, or very few: Kenya, Mauritius and Sri Lanka are examples where the sole port has an actual monopoly or so near as makes little difference. There are also examples where the imposition of a central administrative system reduces competition, even in a large country such as Canada. For example, the former National Harbours Board maintained equalised port charges across the country from Halifax to Prince Rupert, though for some reason Vancouver escaped this. In Israel the Ports Authority does the same. Nor is decentralisation any guarantee that this will be avoided. Example: in California, where ports are a municipal matter, the California Association of Port Authorities has established a cartel, equalising port charges throughout the state, regardless of differences in cost, history and the levels and patterns of demand. Anti-Trust Acts notwithstanding, they have assured me that it is quite legal. To me, however, neither this nor the absence of excessive profits justifies the practice.

Competition may, of course, be valuable. It may occur between whole

ranges of ports, such as the east and west coasts of north America; between ports in different countries; between ports in the same country; and, where they are in separate ownership, between facilities within the same port. Competition between different modes of transport may also be relevant. The trouble is that any or all of these 5 types of competition may be irrelevant to any particular case, of little effect or absent altogether.

Obviously, much will depend on the geographical situation of the country and of the port in question. But we cannot usually do much to change these; nor would I advocate the construction of new ports simply to increase competition. What else can be done?

One answer, currently fashionable and beloved of those who promote simple, and sometimes exaggerated, ideas is 'privatisation'. This, the selling-off of public bodies or activities to the private sector, is often favoured by Treasury officials who may see it as a way of reducing a public borrowing requirement or deficit. This, again, is a simple-minded view, partly because it cannot continue indefinitely but, more importantly, because it may conflict with the need to promote efficiency. After all, one would expect to get a better price for selling a monopoly than for selling a number of businesses which would then have to compete with one another. Thus, when the former British Transport Docks Board was privatised into Associated British Ports, our Treasury argued that it should be done as a whole rather than piecemeal; and they won.

The result is that we retain an organisation owning and controlling a rather random selection of British ports, most of which have little in common with one another. In South Wales there happens to be a regional concentration of these, so that every port on the north side of the Bristol Channel is in the same ownership; and you need not think that they compete with one another for new business. Nor are there any economies of scale in port management in the ordinary sense of the term, though I think that there are some very tricky problems of co-ordination and especially with new investments.

Such a wholesale, rather than piecemeal, sale is not justified by several of these ports - including all those in the region I have just mentioned - having a depressing record of profits and activities. There is no more reason for linking unprofitable than for linking profitable bodies. In fact, most of the potential value of these ports - and certainly that of Cardiff - lies in landward property development rather than in port operations; and I would rather have seen the opportunity given to some bright businessman (or, indeed, the City council) to exercise his skills. Privatisation, then, should deliberately be organised so as to increase and promote competition. It should not be seen as an end in itself, nor simply as a new way of securing funds for the government.

In recent years, however, there have been some developments in the technology of seaports which severely modify the extent to which this can be done; and, I think, the ways in which it should be done. I refer to the remarkable economies of scale which exist in modern, well-equipped berths. Thanks to the developments of the past 20 years both dry bulk cargoes, like grain and coal, and manufactured goods in containers can be handled on and off ships very rapidly.

This has had a number of effects: it has reduced the numbers of ships needed, partly because of the reduced turnaround time and partly because of the greater ship sizes that go with this. Many ships have been made technologically obsolete. It has enormously increased the productivity of port workers so that redundancy has, for many port employers, become a major problem. It has also increased, by several times, the productivity of berths and it has required them to have much greater areas of land and depth of water alongside as well as quite different mechanical equipment. As one travels around the world one may see that the layout and equipment is becoming fairly standardised, though still within a remarkable variety of port constitutions.

This leads us to a new problem. It is essentially economic rather than technical in nature and stems from the fourth of my reasons for having public sector port authorities. For, with these economies of scale, many ports need only a very few terminals of each kind. There are exceptions, such as Osaka, Rotterdam and the port complex at Long Beach/Los Angeles, and there are many ports with sufficient competing neighbours: but there are many instances where it would be inefficient to repeat the construction of berths when the likely result of such an oversupply would be that none of them would be economically employed. In familiar economic terms we thus have a degree of natural monopoly similar to those well-known examples of economies of scale, the distribution systems for electricity and water. In more recently-developed economic terms, the markets are not contestable, not because there is room for only a few firms but because the need for sunk capital is so great that entry and exit are expensive and difficult. I suggest that this is, in fact, a very common situation - far more so than is commonly appreciated - and it has been caused largely by technical developments, all of which may be welcome on other grounds.

Before bureaucracies had been attacked in the ways I described earlier many would probably have suggested that the maintenance of efficiency required the ownership and operation of such port facilities by the public sector; essentially so as to prevent the exploitation of a monopolistic position. If the culture of the country was strongly business-oriented then we might have modified this into suggesting that there should be private provision and operation of the facilities coupled with some apparatus of public regulation.

Today, and for all the reasons I have described, we find ourselves much more sceptical of the 'public sector' solution. Yet, it seems, there are pitfalls in privatisation too. Given the shortage of suitable sites and the small number of firms, cartels can be formed, exclusive dealing arrangements instituted and any of a variety of familiar anti-competitive devices employed. One, peculiar to seaports, is a de-casualisation scheme developed jointly between the trade union and an employers' association. The latter then becomes mysteriously difficult to join, yet without membership there is no access to the labour pool. Thus, by making entry more difficult the market is made less contestable.

5 Public sector control and private sector enfranchisement

Despite all the attacks which may be made on bureaucracies, in seaports and elsewhere, I would maintain the four reasons for port authorities being public sector bodies quoted above. In no way do they, in themselves, justify a port authority actually operating the port: indeed, one of my favourite examples of the opposite position comes from the Fraser River Harbour Commission, which operates the port of New Westminster, just a few miles from the University of British Columbia. They shift about 1 1/4 million tonnes of cargo a year and, when I first visited them a few years ago, they had a staff of 7, including typists. They are a landlord port, like most others in Canada and, indeed, in an increasing number of other countries. With New Westminster, there is competition from such other ports as Vancouver and, across the 49th parallel, from Seattle and Tacoma. Yet, as I have already indicated, there are other ports where this cannot be relied upon sufficiently or, in some cases, at all.

As I have already indicated, the range of port constitutions and practices around the world is so great that it would require someone far more heroic than I to prescribe any universal answer. Indeed, I would not necessarily prescribe privatisation for all countries, nor in all ports. Yet, it seems to me that we can often move in that direction in two ways: by franchising and by refining our definition of the role of the public sector.

By franchising I mean the leasing of a given port facility, which is owned by the port authority, to a private sector firm for a limited period and without automatic renewal. It is these last two factors which distinguish this proposal from leasing as it is commonly practiced in landlord ports. For if the port facility in question is one of very few competing for the trade in question then we need to strengthen the forces of competition by making the market more contestable. The shorter is the lease, the greater if the concern of the franchisee about what happens at the end of it. Will he secure the renewal of the lease?

Or will one of his competitors, perhaps one he has never heard of? If the lease lasts 5 or 7 years then, I suggest, the franchisee will be more likely to be concerned about the reputation he is acquiring in respect of pricing and all the other aspects of efficiency that are, rightly, the concern of his customers. He will be less likely to exploit his monopolistic position in any of the ways available to him. All this will be eased, and the number of potential competitors increased if the amount of capital a franchisee has to sink, eg into port infrastructure, is minimal. Thus, we may argue, the basic port facilities should be provided by the port authority.

It may be responded that the lessee may wish to have facilities which particularly suit him and his business. The shorter the lease, the less willing he will be to invest in what he may think he really needs. Will this not reduce efficiency? When expressed in such general terms the argument seems to have some force. Actually, however, much of what he will wish to specify will be mechanical equipment which is portable, or resaleable to his successor, or both. Most modern berths are simply flat paved areas of hard standing: we do not have ranges of transit sheds any more.

This argument may thus be regarded as weak, though I admit that some

instances may be found where it is strong. They may then be considered on their merits. In all instances, however, I would favour the selection of lessees by competitive bidding and - since no one can forecast the rate of inflation - with annual rent reviews. Where the trade is unusually risky then the port could share the risk by offering to accept a rather low rent and concentrating the bidding upon a royalty rate, perhaps rising with the volume of business. Other factors, such as reliability, honesty and - in some countries - lack of connexion with the Mafia may also be taken into account by means of a scoring system of which the rental bid is one part.

Current lessees, of course, will oppose any such scheme, even though it will take many years for most of their present leases to end and to be replaced by the shorter ones I am now suggesting; and even though shorter leases will mean lower risks for them. They will often prefer the cosier arrangements, preferably with rent reviews at longer intervals. Above all they are likely to oppose the elements of competitive bidding, in whatever form, that I now advocate. They are likely to seek to retain the rental elements which they do not now pay but which limitations on competition may enable them to charge. They are also likely to seek to confuse the discussion by introducing extraneous topics, such as the creation of jobs in the locality. Apart, however, from suggesting that confusing tactics be recognised as such, I believe that this is best dealt with whilst considering the basic functions of a public sector port authority.

6 Objectives for a port authority

It may well be thought that this paper has touched upon such fundamental aspects (nerves, even?) of port policy that it is at least desirable to consider what we want port authorities to do. In economic terms, what should they maximise, and subject to what constraints?

Many existing functions should be continued, specifically those of appropriating and allocating property rights, planning, providing such public goods as an entrance channel and safety and the general encouragement of efficiency. Personally, I would be inclined to add a greater degree of public appreciation and access. (Tacoma and Fremantle are good examples of the latter.)

Where any real reliance is placed upon the private sector, however, 'efficiency' should include the encouragement of competition and the rigorous prevention of cartels and other anti-competitive practices. It may be found that the port authority, which has the job of promoting the port and thus its tenants' business, is not always the right body to do this. It is always easier to be nice to people than to limit their activities; there is thus a danger of 'regulatory capture' and the answer may be for these functions to be ultimately performed, in part, by some other public body such as those responsible for competition policy in general. But performed they should be and in the first instance by the port authority.

At the national level trade forecasts may also be desirable and expressed so as to be useful for port purposes. This means that they must be in tonnes rather than values or numbers, and disaggregated by

handling characteristics rather than by commodities. (The conversion of most countries' trade statistics into such measures is by no means an easy task, largely because port bodies have not exerted sufficient pressure on the customs in respect of data collection.)

Again, where there is a national element on port administration there is a case for promoting standard systems (as distinct from equal levels) of port pricing and of investment appraisal as well as of more obvious technical factors like documentation, buoyage systems and lights.

Investment appraisal is, however, a peculiarly difficult operation where a country has a number of competing ports, and especially in view of the technical characteristics mentioned earlier. For the economies of scale in modern port facilities are such that the necessary minimum increment is marginal neither to the port nor to the country. It is not just that a container terminal at Halifax may affect the port of Montreal: it probably will. (Indeed, the last two terminals at Halifax did so.) The problem, from the national point of view, is to assess these effects and take them into account so as to get the maximum advantage for the country as a whole. This, surely, is what a co-ordinated system of port administration means.

Despite all the controversy which surrounds it, I think the problem of port charges is very much easier. Given any such system of leasing as I have suggested, many charges are levied by private sector bodies and remain their business. Some, such as pilotage and tug hire (if the tugs are provided by the port authority) are levied for specific services and may thus be related to the cost of providing them. (Exceptions may be made for garbage removal, since most ships can find a cheaper alternative to paying for the port's services, at least after dark.)

This leaves port charges (eg those levied on gross tonnes, deadweight tonnes, ship's length, tonnes of cargo - or whatever the local conventions may be. Mostly, these are aimed at covering the basic costs of infrastructure, above and below water - and including any dredged entrance channel. Since all these are generally regarded as 'overhead costs' there is no logical way of allocating them and it is better not to. Fortunately, given the policies I have been advocating above, the port should have sufficient financial surplus derived from its franchisees' rents to do away with such charges entirely.

Given such policies as these I see no reason why a port authority should not be generally regarded as a body which achieves a satisfactory financial surplus, largely by way of appropriating the economic rents established by competitive bidding, besides providing services to its customers that are efficient and economical. The maximand for a national ports body, such as Ports Canada (I omit the complications of Canadian harbour commissions over which Ports Canada has no control) is thus the national welfare. The maximand for an individual port authority is its financial surplus, obtained largely by way of rentals obtained on a competitive basis and subject to the constraints of maintaining satisfactory levels of safety, pollution, visual attraction and so on. In determining these as well as the pattern of port development there will have to be a great deal of discussion with other authorities, particularly the regional and city governments concerned.

7 Conclusions

This paper has attempted to discuss and to present some conclusions on a variety of topics within title of 'the development of seaport policies'.

I have argued that, despite the validity of many of the attacks made on official bodies in recent years, there are powerful arguments which, taken together, support the general retention of public sector involvement in seaports. Where, as in Canada and the USA, there is a strong business community and ethic, private sector activities may be encouraged or extended, subject to the maintenance of adequate competition. This may be achieved by competitive bidding for fairly short leases on terminals etc built for and owned by the port authority, with the revenues being used for general port purposes. Measures are needed for co-ordination at the national level and, technically at least, economists will be able to have fun with them.

The argument in this paper is, however, in contrast to many current ideas, eg that port authorities should 'cover their costs' (what costs? including the opportunity cost of capital?) or that they may legitimately be regarded as 'maximising jobs in the locality'. This last idea is especially pernicious, partly because modern port facilities, being capital-intensive, provide few jobs directly; and partly because, whilst an efficient port may indeed assist local employment by providing for the movement of exports, it may also reduce it by providing for the efficient movement of competing imports. Nor is it any function of a port authority to operate a protectionist policy of its own, eg by discriminating in favour of the one and against the other.

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