Governing Spaces: Urban Transit, Land Development and the Local State

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Abstract

In New Zealand and in the United Kingdom, policymakers have assumed that public transport operators are in a similar position to the operators of trucks, taxis, airlines and shipping. As such, a philosophy of commercialisation has been applied to bus operations. In practice, transit commercialisation has been disastrous. A large part of the problem is that transit operations do not compete with each other so much as with the automobile. As such, the agency which has the most incentive and ability to attract new customers to transit is not the operator but rather the city or to be more precise, the ‘local state’. It is up to the local state to organise ‘loss leader’ transit services on priority routes, which will facilitate more intensive land development and eventually pay for themselves through higher rates. Transit commercialisation permits the local state to evade its development responsibilities and forces operators themselves into a defensive mode, reliant on inelastic, ‘captive’ customers and employing market strategies such as non-transferable tickets to retain their share of a small and perhaps shrinking pie.

Disclaimer:
This paper is based on my personal experiences, research and opinions, and does not purport to represent the views of any organisations that I am affiliated with

Introduction

In a recent exercise, the New Zealand Government has undertaken a review of land transport procurement legislation. This review reflects criticism of the Transport Services Licensing Act 1989 (TSLA). The TSLA is an omnibus piece of legislation, modelled on the UK Transport Act 1985, in which freight operations, bus services and taxi services are treated in similar terms, as commercial operations plying for hire. Although the TSLA also provides for publicly contracted fill-in bus routes, its overall philosophy is that an urban bus operator, like a freight or taxi company, is a profitable commercial operation in competition with other, similar operations. In taking this ‘dry’, commercial approach to urban public transport, New Zealand and the United Kingdom are unique among developed countries. In every other country with a large automobile population, including the United States, the equivalent transport legislation assumes that urban public transport will lose money and therefore has to be operated as a social service.
Perhaps unsurprisingly, the common philosophy of the TSLA and the UK Transport Act 1985 has been criticised on the grounds that buses are not so much engaged in commercial competition with each other, as in a more social form of competition with the car. This criticism draws strength not only from the actually loss-making character of urban transit, above a bare minimum of provision, but also from the more subtle observation that to the extent that urban buses are scheduled and timetabled, this implies a network within which no bus route is an island (Mees, 2000). Each bus route acquires added value insofar as it is part of a transit system potentially allowing transfers. By ‘transit’, of course, I mean public transport. Although New Zealand’s state highway authority has been called Transit New Zealand since 1991, this is a solecism that reveals rather a lot about the absence of the word transit, in its more usual sense, from New Zealand policy discourse. Returning to the idea of transit as a network, the posting of routes and timetables also acts as a barrier to competition, or breaking into the network, because it is very difficult to compete against a scheduled operation at the margin. At least on an established route, only ‘predatory’ forms of competition are feasible. A new entrant must run buses between the established incumbent and hope that the incumbent goes broke before the new entrant does. In practice there arises a certain ‘live and let live’ based on a territorial carve-up of the city into local corporate networks, generally somewhat radial in form with the CBD at one end and a depot at the other. In the rare instances where a stable regime of alternating services of two (or more) operators is achieved, such as at the Point Chevalier Shops, this is inconvenient for patrons who have a monthly card with one of the operators that does not work for the others. At a 2004 conference, an Auckland University marketing academic and a consultant engaged by the Auckland Regional Council delivered a realistic, if stylised account of the problem faced by Auckland bus commuters in this regard:
Consider this:
Jack is waiting for a bus home at the bus stop. He hasn’t come to this stop before and only
catches the bus at odd times, but his car is at the panel beater and he thought he would give it
a go. A bus arrives but it is yellow and red, and the one he knows is purple. So he waits, but
he notices that this bus has the same destination as where he is going but is unsure what
route it actually takes. Three more buses arrive, they are different colours, one has Company
1 name but it has green “Moro” advertising on it, and he knows his bus is purple. He also
notices as the bus pulls away that the number corresponds to his normal route. So he asks a
fellow traveller what bus he should catch and they suggest that any bus with the route
numbers 027, 028, 025, 31 or 37 will get him to his destination. Very soon after that a nearly
empty number 31 arrives, he boards and presents his ticket however the bus driver says they
don’t accept that ticket – he is an ABB bus and that is a Company 1 ticket. Jack
despondently gets off and waits another 30 minutes for his purple bus. It has taken more than
an hour for him to catch a bus and the next day he collects his car from the panel beater and
tells his friends about the nightmare he had trying to get home last night. (Parsons and
Stewart, 2004, s. 1.1)

Like a coin with two faces, the timetabled and scheduled system therefore allows operators to
add value in the form of easy transfers, route-based liveries and a common card, but it also
allows a defensive strategy, based on defensible space-time ‘patches’ between the depot and
the CBD and a non-transferable ticket (plus ad-hoc advertising revenue). This defensive
strategy is locally optimal for the operators but globally sub-optimal for the city. Hence,
perhaps, the current procurement review.

Deregulation as Self-Regulation
It is widely understood that an irreducible element of regulation, in the form of a need to
maintain somewhat rigid and predictable timetables, routes and fares, complicates the
economics of urban transit. The intended result of deregulation in urban transit was therefore
not so much a naive market equilibrium of supply and demand, as a move to industry self-
regulation with regard to service organisation; a form of ‘private government’ in something
like F. A. Hayek’s sense, perhaps (Crowley, 1987). To understand what this means, we need
to appreciate first of all that, most of the time, scheduled services from location A to location
B, running between the depot and the CBD, are at least half empty. These seats could be
filled if the services running half-empty to B could be conveying passengers to some other
destination C via a transfer arrangement, regardless of whose customers the passengers are on each leg. In the airline industry such issues are referred to in the terminology of ‘code sharing’; in economic jargon, the market is ‘empty core’, meaning that ostensible competitors have a strong incentive to cooperate via the sorts of arrangements that have just been described (Sjöstrom, 1989; Davies, 1990). Often this cooperation or handover of passengers from destination B to destination C, which we may assume for the sake of argument is from patch B to patch C as well, is directly beneficial to both firms and to the industry as a whole. It benefits both the firms in question, and the industry, by making it possible to get from A to C via services that are each as efficient and full as possible. Public regulatory authorities, which at one time regarded such private arrangements as restraints on trade, now increasingly recognise their functional necessity and allow them to proceed so long as the deals are made in the open.

Such examples of self-regulation, in which a form of cooperation emerges within the market, enable *laissez-faire* arguments to be generalised from simple, anonymous markets such as the proverbial market for baked beans, to the more complex, networked industries that at one time were thought to require state planning. More radically, the assumption has grown up that because industry self-regulation is feasible in some areas, it must work in all. Urban transport deregulation is an example of this trend, sometimes also described as ‘free-market anarchism’.

At least in Britain and New Zealand, observations concerning the practicality of industry self-regulation have been generalised or extrapolated from the organisation of airline and shipping services to urban transit. If explicit government coordination of timetables, routes and fares is not needed in the airlines or shipping, why should it then be required in the area of municipal bus services? In the context of bus deregulation in the United Kingdom during the mid-1980s, the House of Commons Transport Committee proposed to privatise the
operation of bus services but maintain a generally planned system of routes, while the Cabinet proposed a bolder, Hayek-style withering of the state. The arguments put forward by the Cabinet included the following:

The Committee argues that there are substantial benefits to be gained from co-ordination and integration, predominantly though not exclusively in larger urban areas. They cite first (paragraph 158) systems of through-ticketing and multi-journey ticketing, such as travelcards. Such schemes can, as the Committee say, increase patronage. But the Government believes that travelcards and other systems of through-ticketing will continue to be very attractive to customers and that there will be a strong argument for bus operators to offer them where the market justifies. (Department of Transport, 1985, p. 3)

As such, at least part of the rationale for transit system deregulation was to shift from state regulation to industry self-regulation. But how well have these arguments held up in the twenty or more years since?

**The Limits of Industry Self-Regulation: Land Development as a Complicating Factor**

Experience with deregulated systems since the mid-1980s shows that explicit social coordination of urban transit services (whether publicly or privately delivered) delivers more car-competitive services than deregulated commercial operation. The problems with the TSLA are a testament to that. At the extreme, we may compare Auckland to European city-regions whose transit is organised by ‘local state’ agencies such as the Verkehrsverbund or ‘transport union’ (Pucher and Kurth, 1996). The Verkehrsverbund is a state entity that owns all permitted public transport routes and offers them to private operators, which still exist, as franchises. Among other things the Verkehrsverbund is a characteristic expression of the German ‘social market’ philosophy in which an explicit attempt is made to embed commerce within planning, with clearly defined spheres for each. The usual quid pro quo in a social market structure is that the public sector has an almost free hand to introduce much stronger systems of planning, and greater charges on land development, than is the case in the
English-speaking countries. Discussion of such institutions also shows that, by the local state, I mean not only local government in its usual sense, often rather parochial and powerless in English-speaking countries, but also those potentially more powerful state agencies or entities such as the Verkehrsverbund, whose actions positively affect the organisation of transport and land development on a metropolitan scale. Where local government is weak, as in New Zealand, central state departments and entities may in fact dominate local state outcomes (examples of such powerful actors include Land Transport New Zealand and the Treasury). To continue, comparison between Auckland and Australian cities like Brisbane or Perth—or even Christchurch, where most of the bus services have remained in public ownership—is also damaging to the TSLA model. Much the same comparison has also been made within Britain, where a socially planned model survived in London and delivered consistently better performance than the fully commercialised bus systems of the provinces.

How do we account for the failure of spontaneous economic cooperation with regard to urban transit, when it works for shipping and airlines? Three factors spring to mind, at least one of which is prefigured at the beginning of this paper. First and foremost, urban transit faces fundamental technological competition from the automobile for almost all potential services. Second, because of automobile competition, transit tends to lose money, increasingly so as the city becomes more sprawling. Third, the benefits of high frequency, loss-making transit services tend to be captured by landowners, insofar as transit allows higher densities of development than automobile-only access. These three factors, which are actually interconnected, mean that while it is possible to speak of an airline industry or a shipping industry, it is not actually possible to speak of an urban transit industry, in isolation from urban land development: the actual system is the urban transport-and-land-development system, of which bus (and train) services are just one aspect. To some extent of course airlines and shipping are also tied into their relative port systems; there is a saying that the
more airlines compete, the more money hub airports are able to charge for landing rights. Nonetheless, the coupling between urban transport and urban land use is even tighter than the coupling between airlines and their hubs, or shipping lines and their ports.

The particular point of difference, to which I have repeatedly alluded above, is the ‘radical’ technology competition between urban transit and the automobile. This competition is radical not only because it can result in the near-destruction of transit, but also, because it is linked to long-term changes in urban form that tend to lock in the victor. The automobile promotes a dispersed, low-rise form exemplified by big-box retail and two-storey office parks; transit promotes strong density gradients outward from the railway station to suburban cul-de-sac. These density gradients make transit relatively more profitable as long as it runs in development corridors. At the same time growing urban dispersal means that transit services will tend to lose money with the exception of a very limited number of routes focused on the old CBD. That is to say, as long as the evolution of urban form is largely dictated by the car and takes the form of low-density sprawl outside the old CBD, the commercially profitable bus market will be static or shrinking, and will tend to consist of radial routes between the depot and the CBD that do not require transfers. The operators under these conditions cannot grow the commercial market by any cooperative mechanism. This physical environment rules out the possibility of value-adding cross-town transfers in an all-commercial system, and helps to drive operators in the direction of the somewhat more defensive strategy of patch-protection instead.

The problem the bus operators face is similar to the problem faced by airlines and shipping lines, but with an added layer of complexity. A cooperative strategy is possible, but only if it involves landowners as well. That is, the transit operators could offer a code sharing system across the city, if they could get the landowners to build at greater density near agreed hubs and the landowners had confidence that the increased transit services would be
delivered. In practice, this would also require an agreement that the transit services would serve as ‘loss leaders’ for real estate development, forever making losses on ticket sales but being underwritten by the real estate developers (Vickrey 1977). To some extent this problem of spatial coordination and underwriting of services by rents also applies to airline and shipping hubs; but a critical distinction is that the air- and shipping lines deal with one airport or port company for each hub, whereas in a city, the transit operators must deal with a large number of landowners. If all the operations had to worry about in the way of land development were their own depots, they would be in a similar position to airlines or shipping lines. They could develop the depots as desirable destinations and agree to share their buses between them. But as it stands in the city, the operators’ depots are but a handful of potential development hubs among many, most of which are in multiple ownership. Under complete laissez-faire, any strategically located landowner who had the capacity to stop a large scale development by withholding consent—for instance, a farmer in a valley about to be flooded by a dam—could, in theory, capture all the development rents of the project. In any case, it is clear that some will be more cooperative than others, who will hold out for a better deal or hope to ‘free ride’ on the whole initiative (Olson, 1965). For this reason, the urban public transport operators are in a far more invidious position than their colleagues in the airline and shipping industries, who get to deal with a ‘one stop shop’ in each city.

A third layer of complexity is added by the fact that, in practice, urban transit is divided between street-running buses or trams, which tend to be slower than cars on local streets, and ‘rapid’ or ‘mass’ transit on its own right of way, which travels as fast as cars on the motorway and often faster in practice. The latter, which usually takes the form of railways but which can also be a busway, is critically important to the formation of higher-density corridors. One could go so far as to say, no mass transit, no intensification. Where this introduces additional complexity is that a cooperative urban strategy requires not only
cooperation between transit operators of a similar type (bus operator A and bus operator B), and between transit operators and landowners, but thirdly between local transit operators and mass transit operators; the point here is that the former often see development of the latter as a threat to existing markets and do not want to be reorganised into ‘feeders’.

**Putting Government Back In: The Local State as Condenser of Spatial Complexity**

These three coordination problems point to the fundamental, bedrock case for the public planning of public transport. By analogy to airport and seaport hubs, spatial coordination is more likely to be achieved if the transport operators are able to deal with a ‘one stop shop’ at the metropolitan level. Coincidentally, or not, the metropolitan level is the level where the greatest network economies or value-adding from route interconnections is likely to be realised. What this points to is the concept of the ‘city as a firm’ (Vickrey, 1977), whereby the local state interposes itself as a virtual landowner between the operators and the actual landowners, imposing a corridor plan and underwriting ‘loss leader’ transit services in those corridors by means of a development rate. Because the city, or local state, is also now the lead customer for the services of the operators, it is able to impose a common ticket and other measures required to grow the market, and to iron out all the other coordination problems that affect the *laissez-faire* system.

The question that may be asked at this point is why low-patronage strategies persist under a deregulated transit system. Why do we see patch-protection strategies, as opposed to either a cooperative strategy or complete failure of the transit system? The answer to this is that the patch-protection strategy is stabilised by the existence of niches of highly inelastic demand, of which patches are the spatial reflection. These niches include CBD commuters with no car parking, young people with no drivers’ license, old people who have lost their drivers’ license, and foreign students. A patch protection strategy is the natural response to
the combination of routes not requiring transfers and demand niches. The system loses young people to the automobile as soon as they get their drivers’ licenses, but, on the other hand, there are always more young people (and old people, foreign students and CBD commuters) to be had.

Market segregation, and the snowball-like dynamics of the transport network, lead to a further, somewhat curious result. This is the oft-reported finding that long-run transit patronage in English-speaking cities tends to increase linearly with service-kilometres or frequency (Galt and Eyre, 1987; Pund, 2002; Balcombe et al, 2004; Wallis, 2004), a finding that leads at least some observers to the radical conclusion that observed demand for transit is a dependent variable of supply (Setty, 2003). We can explain this by the observation that the base level of service in English-speaking cities is often low and focused on a relatively small pool of inelastic demand. The pool of more elastic, potential demand is relatively large by comparison. Also, as services are added, more potential journeys are added to the system, both directly and by the facilitation of transfers. Measures to expand service beyond an initially low base therefore tend to pull increasing numbers of riders out of the woodwork almost pro rata, provided that the new levels of service are sustained long enough for patronage to build up and not cut prematurely.

Such expansion does not happen under a deregulated system, because it is too complicated to secure the capture of increased land values; yet without capturing increased land values, the expansion is too economically borderline, insofar as the doubling of services is an almost exactly analogous situation to what would happen if a predatory competitor started running buses in between the already-scheduled buses on a city street. Patronage would double in the long run; but this would not happen straight away. Profits might well turn into losses, especially if the elasticity of service were say 0.8 instead of 1.0 or 1.2. That is to say, if a service increase of 100 per cent led to a patronage increase of only 80 per cent,
instead of 100 or 120 per cent. By the same token, a public authority preoccupied with operating losses and intent on delivering the lowest possible rates demand to property-owning constituents will not double services either. Services will only expand under a public system that has made an explicit decision to treat expanded services as a ‘loss leader’ for transit-oriented development and increased land values. This need not imply increased public sector deficits, if a decision is made at the same time to close the economic circle through development contributions and a special transit rate (Figure 1).

False Economy: Transit Deregulation as State ‘Abdication’

It is with regard to the closing of the economic circle through value capture, or failure to achieve the same, that the real problems concerning bus service governance are concentrated. Between 1972 and 1982 subsidies to British bus services increased by 1300 per cent in real terms while patronage fell 30 per cent; S. Glaister has therefore argued (in Romilly, 2001, p. 162) that bus service commercialisation was “primarily a result of a determination to reduce overall government expenditure—both central and local authority” in what was presumably seen as a sick industry, a perspective described by Romilly (2001, p. 162) as “difficult to argue against…given the Conservative government’s emphasis on PSBR [public service borrowing requirement] reductions and the continuous large overruns of local authority bus subsidies relative to planned expenditures in the five annual Public Expenditure White Papers between March 1980 and March 1984.” The conclusion is that commercialisation was pursued as an alternative to a more explicit embrace of a form of social modernisation, involving an actual increase of services and funding from land revenues. In the face of growing automobile competition urban transit stood at a policy Rubicon; a social enterprise that had at one time covered costs (more or less) in largely unplanned cities was now making large losses due to automobile competition. The alternative was to embrace a still more
explicit principle of social market competition with the automobile—including more explicit land use planning, and more explicit charges on land development along European, Verkehrsverbund lines—or to literally put a cap on losses by abandoning the idea that transit outcomes are primarily a state responsibility.\(^4\) That such a choice existed, is lent credence by the British Cabinet White Paper *Buses*:

It is certainly obvious that the traveller wants to make convenient journeys, to travel throughout the urban areas, to rely on comprehensive information about the services available. But if they are to stay in a free market operators will have to meet the needs of the customers as the demand arises. They will be alive to those needs and will strive to provide for them. Fares will vary accordingly, as will frequencies. A free market encourages a quicker response to what the customers want than a regulated system ever could. Systems of large-scale, planned public service networks can indeed provide high quality services and connections. That is not disputed. But the question is whether the benefits are great enough to justify the costs and whether the benefits cannot be attained more cost-effectively another way. (Department of Transport, 1984, S. 4-14)

As this passage suggests, urban transit service deregulation is not only an expression of sophisticated self-regulational arguments. It is also—perhaps even primarily?—a means by which to stitch loss-making urban transit into a fiscal corset. More than this, it was a forced statement of the Thatcher government’s ideology. All parties in 1980s Britain might well have been able to tolerate a continuation of transit as a low-profile public utility if the issue of losses had not come to a head; but given that it had, the Euroskeptic, deregulationist Thatcher Cabinet could hardly be expected to concede that the solution was to have *more* planning and charges on land development, not less. As if to remove all doubt about what was at stake, a prominent supporter of commercialisation, John Hibbs FCIT, condemned the European approach as contrary to British traditions, in a paper with the significant title ‘The market alternative to integration’:

Franchise is the common form whereby private operators with lower costs are allowed to ‘exploit’ the public services in countries with a Napoleonic structure of law; it is foreign to
the notion of the Common Law, and the freedom of entry to the market that the Common Law enshrines. (Hibbs, 1986, p. 24)

Introducing the omnibus transport bill that would eventually give rise to the TSLA, New Zealand’s transport minister Bill Jeffries seems to have conflated the actually quite different discourses of neoclassical environmental economics (in which there is no coordination), industry self-regulation (i.e., private coordination within a single industry) and the still more explicit spatial coordination implied by the social market:5

For too long, transport planning has been a contradiction in terms. There has not been a proper opportunity to make trade-offs between building a new urban motorway or improving the public passenger transport system…. The bill puts an end to the separation, and puts all the elements of land transport into one integrated planning framework that permits within it the dynamics of the market. (Jeffries, 1989)

In practice, as in Britain, urban bus transport was commercialised with a cap on subsidies, yielding some savings to Treasury. But these ‘savings’ are achieved through a form of coordination failure, whose net effect is to prevent agglomerative forms of land development in new areas of the city. This is clearly of some significance from an amenity and urban-design point of view, as well as in the sense of distributing development around the region and making it easier to travel around the region by transit. It is also likely that failure of agglomeration will require more tax money to be spent in the long run on motorways and other services, of the kind that are said to subsidise urban sprawl. To phrase these arguments in an alternative and perhaps more fundamental way, transit deregulation is a false economy if we take the view that transit-oriented agglomeration is not just a redistribution of growth that would happen anyway, but actually a net gain in agglomerative effect, that is to say in the ‘uneearned increment of association’ which is the city’s *raison d’être*, but not that of the bus companies.
Conclusion

To sum up, there are good grounds to judge urban transit deregulation as deregulation gone too far. What works for airline and shipping networks does not work for urban transit networks. Instead, the withering of the state in urban transit amounts to an abdication of one of the local state’s most basic responsibilities, namely that of underwriting future urban agglomeration.

It is of course an open question to what extent this abdication is deliberate or accidental: ‘conspiracy or cock-up?’ as a famous dichotomy has it. The former view is supported by the well-known policy agenda of the Thatcher Cabinet, not only with regard to cost-cutting and deregulation but also in terms of its explicit battles with left-wing local authorities determined to pursue a more explicitly planned agenda. On the latter score, however, it may equally be that ‘failure through fragmentation’ of urban systems such as transit reflects equivalent problems in the architecture of the local state, not least the well-known problem of managing territorial systems via functional silos. This is a problem that is of course made worse by commercialisation; Figure 1 is not the only ‘policy cycle’ here by any means. If it were not for the fragmentation of the local state and the attendant loss of deliberative capacity, it is possible that Cabinets might at least be better informed about the costs of the road not taken. One suspects that it is the latter, passive explanation that best explains continuing attachment to the policy of commercialisation today.

References


Figure Follows

1 I.e. ‘central business district’ or original downtown, to which most public transport in the region has traditionally run and which usually has its tallest buildings. In an otherwise automobile-dominated Auckland, the CBD continues to display a landform that depends on high levels of transit service, albeit mostly local and street-running in origin (see below), a fact that has limited the growth of the CBD relative to the region as a whole. This form may be contrasted with some American urban regions where the old inner city has actually decayed.

2 The Auckland Regional Transport Authority offers common tickets for such problem areas where operator competition exists (!) along with an NZ$199 monthly pass, but it seems a condition of operator acceptance that such products should be significantly more expensive than any single-operator equivalent. See URL http://www.maxx.co.nz.

3 It is important to note that average regional densities may be the same or not very different under either system; but where transit is well-developed, there will be more obvious density gradients and islands of concentration, even in the suburbs. Often, great parks are traded off for local intensification as a kind of quid pro quo in the planning system; this helps to explain why average regional densities may vary so little. Does average density of X refer to suburban Auckland? Or, to a collection of four-storey apartments plus the Vienna Woods?

4 A key principle of social market philosophies is the idea that competition and monopoly can exist on more than one level, so that the state has to step in to prevent the more subtle forms of monopoly as well as monopolies of the more obvious kind. It is therefore common in social market economies for the state to deliberately favour or operate public transport in order to prevent automotive takeover. Similar considerations lie behind a permanently large state presence in such areas as broadcasting, banking, insurance and housing, similar to pre-1984 New Zealand. A common denominator in most of these areas is state command of metropolitan land development and capture, in one way or another, of increasing land values. Although it has some authoritarian antecedents of the kind alluded to by Hibbs, below (Tribe, 1995), the social market is thus also a variation on the theme of the ‘social liberal’ ideology once also strong in New Zealand. In the latter, the role of the state is not just to keep the peace (as in narrower forms of liberalism) but also to positively develop the benefits of association while ensuring that they remain universally accessible.

5 Many readers will infer a similarity between the social market and the social view of ‘unearned increments’ in land and mortgage interest advocated by John Stuart Mill, Henry George and other such social liberal philosophers and reformers. The latter have, however, tended to express their views in one-shot libertarian panaceas (‘the single tax’, ‘social credit’) and as such, have not developed it into a mature planning philosophy. Hence a common, if hasty, view of George as a single-issue ‘prairie populist’ whose views became outdated with urbanisation and growing social complexity (Thomas, 1983). The problem of a reluctance to engage with economic complexity is a more general problem for Anglo-American social liberalism, which sometimes degenerates into a set of vaguely populist attitudes lacking in any kind of economic rigour whatever. An rare example of an Anglo-American economist who has explored the links between social liberal causes and their logical planning implications was the 1996 Nobel economics laureate William S Vickrey (Vickrey, 1977).
Figure 1: Cycle Diagram, from Marks (1971), p. 8. Reproduced with permission of the US National Academy of Sciences.