

4 FAR EASTERN PROMISES

Infrascapes

Infrastructure reconfigures the landscape, economy and society. Capital is aggregated on such a massive scale (think of motorways) that it has the power literally to move mountains. Projects may involve profound social commitments (think of nuclear power stations) such that, if errors are made, freedoms of whole populations may be compromised. The farther removed our lives are from the state of nature, the deeper our reliance on the fabric of the built environment, the component parts of which are bonded together by the services delivered by the infrastructure. Nowhere is this dynamic process more evident than in the great metropolises that are exploding on the surface of the globe.

It so happens that railway stations, airports, motorway service stations and even toll booths are becoming the incubators of a whole new urban experience. Not only are the forms of public space changing, but new models of social behaviour and use of time are also developing. These indirectly reflect upon the way the external city is experienced and utilised. (Clementi, 2003: 41)

If policy errors are to be avoided by the growth centres of the 21st century, a deeper appreciation of optimal financial strategies

will be needed. Fortunately, we are not embarking into the unknown. A glimpse of the future may be gleaned from a look into the past. Valuable lessons may be derived from Hong Kong, Singapore and Japan, where the combination of transport and property policies served as the catalyst for flourishing communities.

- The tax burden in Hong Kong and Singapore is exceedingly low compared with the UK and USA (see Table 3). The important point, however, is *not* the absolute level of tax take, but *how* the revenue is raised; which in the case of Hong Kong and Singapore is biased in favour of rents. This implies that the UK and USA would generate higher per capita incomes if they enjoyed a similarly low tax burden complemented by rental revenue raised direct from what people are willing to pay to use public spaces.
- All three Far Eastern countries are resource poor, but they deliver incomes and productivity levels equal to, or much higher than, countries that are rich in natural resources. If the territories of Hong Kong and Singapore were endowed with domestic sources of petroleum and precious metals, they would outperform the USA in terms of per capita incomes.

The Far Eastern countries are densely populated: they cannot afford to waste space. The market-based tools they developed to deal with that pressure are revealing. Hong Kong and Singapore are rated at the top of the most comprehensive Index of Economic Freedom. Japan's record is also not contested: she came from nowhere after World War II to create the second-largest economy in the world. Comparing their transport policies with those of the UK and USA may help to sharpen the insights

Table 3 Vital statistics of selected countries (comparative data (2002) based on the Index of Economic Freedom)

	<i>Hong Kong</i>	<i>Singapore</i>	<i>Japan</i>	<i>UK</i>	<i>USA</i>
Rank	1	2	35	9	6
Fiscal burden	2	2	4	4	3.5
<i>Income tax rates:</i>					
Top rate	17	22	37	40	39.1
Marginal rate (average payer)	17	8	20	22	27.5
Corporation tax: per cent	16	22	30	30	35
<i>Government expenditure:</i>					
per cent GDP	21.6	18.1	36.9	38.3	30.4
GDP per capita: \$	24,506	26,806	43,042	22,241	31,932
Population (million)	6.7	4.1	127.3	59.8	284.7
Total area (000 sq. km)	1	0.647	377	244	9,629
People per sq. km	6,700	6,384	337	245	29

Source: Heritage Foundation (2003)

that have emerged in this study. We focus our analysis in terms of three hypotheses.

Hypothesis 1: Taxpayer subsidies are an inevitable part of mass transit systems

The durability of this assumption was affirmed by the spokesman for Britain's Strategic Rail Authority. David Thomas (2003) claimed that there are only two types of income for rail projects: fares and subsidy. The demand for subsidies is rationalised by a political vocabulary that presupposes the inability of railways to pay their way. The collateral damage of this doctrine to the fabric of political institutions is significant. If subsidies are to be extracted from taxpayers and transferred to railways, government has the right to control the industry.

One consequence is the touting of solutions that are self-defeating. Take the case of the need to increase fares to pay for infrastructure. This proposition was advanced by Richard Bowker as chairman of the SRA. He argued that upkeep of the rail network rests too heavily on taxpayers and that 'passengers should pay more' (Bream, 2004). To raise fares closer to the actual cost of rail travel would be likely to price more passengers off the railway. This would render rail companies even less able to cover their operating costs, let alone the costs of capital, and consequently increase the demand for more subsidies.

Hong Kong (see p. 87) rejects the subsidy mentality. Is this the product of a philosophy of public finance that does not favour taxes that deliver deadweight losses?

Hypothesis II: Road prices are unaffordable and regressive

Roads are a precious finite asset. If we charged rents for the use of that space, would we prejudice the mobility needs of people at the lower end of the income scales? This is one of the fears aroused by the proposal to introduce nationwide road pricing in Britain.

Singapore (see p. 94) favours the road charging philosophy. The very high rents that are voluntarily paid for road space are used to hold down taxes and to fund a high-quality transit system that is available to everybody. Has this policy contributed to the per capita GDP incomes that exceed Britain's?

Hypothesis III: Efficient railways are those in public ownership

The House of Commons Treasury Committee, after reviewing a decade's worth of evidence in running privatised railways,

endorsed this view in *The Future of the Railway*. The view was shared by the head of the Rail, Maritime and Transport Union, who claimed that rail privatisation was ‘an act of vandalism that tore apart our national railway network and handed it in 113 pieces to the private sector to bleed dry’ (Crow, 2003). In the British circumstances, there was force to his claim that separating the ownership of tracks from the operation of the trains ‘would be an act of dangerous folly – and that the only way profits would be made by the private sector was by taxpayers and passengers subsidising them’ (ibid.).

But had the nationalised British Rail (BR) been a paragon of operational efficiency? Transport Minister Kim Howells told the House of Commons Transport Committee that BR had been ‘an appalling service’. It had employed some managers who were ‘rubbish’. An eight-year-old child could have come up with better cost estimates than those managers, he asserted.¹

Japan’s railways (see p. 97) may provide evidence to help us resolve some of the contentious issues. Her rail network is a rich mixture of public and private enterprises, and the latter have not prejudiced the ability of the Japanese to operate an efficient economy.

Hong Kong: a colonial legacy

The colonial roots of Hong Kong’s financial system are revealing. The toehold on China was to be one of the British Empire’s transport hubs. The terms on which the colony would be administered were dispatched from the Foreign Office on

¹ ‘Rail safety too pricey – minister’, *Guardian*, 6 November 2003.

4 January 1843. Lord Aberdeen, the Foreign Secretary, was explicit:

The principal source from which revenue is to be looked for is the Land; and if by the liberality of the Commercial regulations enforced in the Island, foreigners as well as British Subjects are tempted to establish themselves on it, and thus to make it a great mercantile Entrepôt, with very limited dimensions, Her Majesty's Government conceived that they would be fully justified in securing to the Crown all the benefits to be expected from the increased value which such a state of things would confer upon Land. Her Majesty's Government would therefore caution you against the permanent alienation of any portion of the land, and they would prefer that Parties should hold land under Leases from the Crown, the terms of which might be sufficiently long to warrant the holders in building upon their allotments ... It would probably be advantageous also that the portions of land should be let by auction. (Welsh, 1997: 149)

This philosophy integrated public finance with private property rights. It transformed a sterile outcrop on the edge of China into the most dynamic of capitalist economies. If we need a living example of Adam Smith's model of the enterprise economy, Hong Kong met the specifications. The people who made profits that were the envy of corporations in Europe and North America did not own the land on which they constructed their trading empires. The windfall gains were captured by the colonial government through regular auctions. One benefit was the low tax regime, which enabled investors to maximise profits from their capital. This philosophy permeates private enterprise to this day.

The MTR Corporation was established in Hong Kong in 1975 to construct and operate a mass transit railway on prudent commercial principles (see Box 4). It operates six railway lines totalling 88 kilometres and 49 stations. Its Property Director, Thomas Ho, stresses the intimate relationship between those who travel on their trains and the lifestyles they enjoy: 'One of the most attractive elements of our properties is their location. People enjoy working, living and shopping in properties located directly above or adjacent to railway stations, as they offer convenience, added value and efficiency.'²

Who pays for this integrated transport and urban lifestyle? Not the taxpayers of Hong Kong. In fact, the government expects a net gain out of the arrangement. It supplies the land at the market price. MTR Corporation operates as the intermediate agency linking property companies to the people who would buy or rent the apartments and shops. According to Ho:

From the government's perspective, there is no cost associated with the granting of development rights to the Corporation. They obtain the full market value of the land (referred to as 'land premium') for each site from us and in turn, we tender the sites out and award them to the successful developers. Our profits are derived, not from the government, but from developers who offer a share of profits to us.³

In 2002, the corporation achieved a net profit of HK\$4.2 billion (US\$540 million), with profit from property at HK\$3.7 billion (US\$481 million) and property rental and management

2 Interview under the title 'Property as a means of financing railway infrastructure', *Public Transport International*, 6, 2003, p. 33.

3 *Ibid.*, p. 32.

Box 4 The philosophy of property

In its *Facts and Information* publication, MTR Corporation spells out its philosophy on property: 'Railways, particularly urban underground systems, are recognised to stimulate property development opportunities and enhance land values along their route networks.'

Bottom-line profits are maximised when entrepreneurs – even those whose majority shareholder happens to be the government – view their investments in holistic terms. 'As communities that are comprehensively developed in conjunction with the railway stations [they] will be positioned to form some of the most desirable business, residential and shopping centres with a certain degree of self-sufficiency in terms of social and recreational amenities, retailing provisions and employment opportunities.'

MTR chiefs have their feet firmly planted on the ground, but their aspirations are sky high. 'The Corporation obtains government consent to develop air space above or adjacent to the railway sites.' Deals are done with property developers to build at their cost, to the corporation's standards. 'These costs include the payment of government land premium, construction, finance and other professional costs. The Corporation derives benefit when the property is sold, through the sharing of profits with the developers.'

Community amenities add to asset values. Developments 'include areas of open space, recreational facilities, community and infrastructural provisions to ensure that each development produces a fully integrated and quality environment'.

income at HK\$987 million (US\$126 million). Thus, a transport agency is able to work with the land market to yield a net gain for itself and for the citizens of Hong Kong. Investors in the property companies receive their dividends from the profits of constructing the new urban experience. This model confounds the cherished beliefs hoarded by Western transport planners over the past 40 years.

The MTRC was charged with exploiting its property assets, the value of which soon became more valuable than the Railway Corporation itself!

Between 1972 and 1985, MTRC undertook projects that included two cross-harbour tunnels, a new airport and additional railways. In January 2000 its 50-year exclusive franchise to operate Hong Kong's rail started. Although the government was a 77 per cent owner, the corporation was required to operate like a private company. It is one of the largest estate managers in Hong Kong, with 36,700 residential units as well as office and retail space. It embarked on joint venture developments on the Kowloon and Airport Express stations. The Kowloon project includes a 102-storey landmark tower. On the Airport Express, property developments resulted in HK\$3.3 billion profits. It has been in profit for the last ten years. Rail operations delivered a net profit. For the first six months of 2005, MTR's interim net profit (including a gain on property revaluations of HK\$1.02 billion) was HK\$2.61 billion (Lau, 2005). The travelling public benefits from this remarkable performance: the fares they pay have been frozen since 1997.

In the MTR Annual Report 2000, the chairman's statement discussed the

unique business model, deriving significant benefits from integrating our railway business with the development of substantial properties in conjunction with our railway stations and depots. Providing an efficient transport service has enhanced the attractiveness of properties situated at MTR stations. On the other hand, building communities along MTR lines has enhanced patronage and supplemented the return on our railway investments. Building on the foundations of our successful railway, property and other commercial businesses, we have gained access to a substantial proportion of Hong Kong's population, comprising an average of approximately 2.3m passenger trips per weekday on the railway, approximately 170,000 residents living and working in properties managed by the MTR, [with] approximately 160,000 visitors per day to our shopping centres.

This property philosophy did not obscure the need to expand the rail network 'on the basis of a commercial rate of return'. Even so, noted the chairman, 'new railway lines will also open up further opportunities for property development and commercial activities. Competition from other transport modes had contributed to a drop in patronage in the first half of 2000, which spurred the corporation to control costs and improve efficiency'.

MTR vigorously promotes public awareness of its activities, which include seven developments costing HK\$50 billion (£4.6 billion).

- 16 residential towers containing 5,600 units;
- a 102-storey landmark tower comprising offices of 231,778 square metres, a deluxe hotel of 330 rooms and an observation deck;

- a 64-storey block accommodating 1,100 service apartments and 220 residential units;
- a 64-storey high-quality hotel block;
- a world-class shopping centre of 82,750 square metres;
- transport interchange for public buses, cross-border coaches, minibuses, taxis, hotel shuttle and tour buses;
- more than 6,000 car parking spaces.

Five property development complexes are being built along the Airport Express, totalling 3.3 million square metres. 'The planning and design of these complexes focus on creating communities that are fully integrated with the railway stations. Some 27,000 flats and 1.3m sq. m. of commercial space will be generated from these station developments' (MTR Corporation, n.d.: 1).

The corporation appears to deliver satisfaction to its 470,000 retail shareholders, as well as its major institutional investors. As for the government, its role as the owner of land in Hong Kong has not confused the approach to property markets or the needs of entrepreneurship. The more prosperous the economy, the more people are willing to pay for the right to exclusive leasehold possession of sites!

Hong Kong's need for an expanded transit system is emphasised by demographic realities. A population of 6.9 million is predicted to grow to 8 million by 2016. With the completion of twelve new railway projects by 2016, the network will have expanded from 143 kilometres to over 250 kilometres. About 70 per cent of the total population and 80 per cent of employment will then be within walking distance of railway stations. The pressing need to transfer people from cars to trains can be detected from the data in Table 4.

In its post-colonial phase, Hong Kong has to service a rapidly expanding flow of capital into its economic hinterland. The Kowloon and Canton Railway Corporation (KCRC) operates the rail link between Kowloon and the border and the light rail system in the North West New Territories. It is owned by the government, but it is also required to operate on commercial principles. It has made a profit for more than ten years. The profit in 2000 was HK\$2.3 billion. This corporation is engaged in massive infrastructure and property-related developments to expand the commercial ties with mainland China.

KCRC also develops commercial properties above or near its stations. Like the MTR, it has not raised fares since 1997. Some of its services lose money, with profitability sustained by the cross-border market and property interests. Government does not take a dividend. It allows KCRC to accumulate profits – to retain enhanced land values to fund new rail projects.

In terms of Hypothesis I, *it is not tenable to argue that railways must necessarily rely on subsidies from taxpayers.*⁴

Singapore: bidding for space

When space is scarce, people are willing to pay a rent for the privilege of monopolising it. In Singapore, market mechanisms have been developed that equalise everyone's ability to share in the benefits of that scarcity. Motorists are free to determine the road rents they are willing to pay. They do so at auctions where they

4 During the colonial era, public investment in infrastructure in Hong Kong automatically yielded higher returns than an equivalent project funded in Britain. That was because the colonial government in Hong Kong funded its projects out of the rent of land, so there was no deadweight-loss hurdle to overcome of the kind that confronted similar projects in Britain.

Table 4 Road Realities (1998)

	<i>Km per 1,000 people</i>	<i>Motor vehicles per km road</i>	<i>Motor vehicles per 1,000 people</i>
Hong Kong	0.28	268.5	75
Singapore	0.99	218.3	215
UK	6.69	71.3	477
USA	23.30	33.6	783

Source: *Transtat*, Hong Kong: Transport Bureau, October 2001

compete to secure the right to drive on the highways. Those who fail in their bids, or who have no wish to own a car, share in the benefits of the road rents which are spent on providing first-class public transport.

The imperative need for rationing is stressed by the data in Table 4. Singapore is an overcrowded island where, if a curb were not placed on the growth of vehicles, life would be intolerable. The government has constrained the growth of vehicles to 3 per cent a year. A range of tools are used, including the Certificate of Entitlement (COE), the Vehicle Quota System (VQS), road taxes and Electronic Road Pricing (ERP).

Each month, a certain number of COEs are released. The vehicle entitlement is valid for ten years from the date of registration of the vehicle. Bidding is by electronic means by which people determine how much they will pay in competition with other would-be motorists.

Electronic road pricing is based on the pay-per-use principle that reflects the true cost of motoring. It has been extended to points of congestion on major highways and is credited with having reduced the volume of traffic during peak periods.

The outcome is a cost of motoring that appears horrendous. Some estimates (in Singapore dollars) are: for an Audi A41.8:

\$182,000; for a BMW 328 (2.8 cc): \$238,000; for a Mercedes 200E: \$201,902; for a Volvo 940 Turbo Estate 2.0: \$160,753. The alternative is to go by bus or train! That demand for COEs almost always exceeds supply is confirmed by the consistent rise in prices. Auctions are open, meaning that bidders are able to observe others' bids before they submit their offers. This avoids the risk of people recklessly overbidding.

The World Bank has concluded that Singapore's transport policies have helped to attract foreign investment, and that there are no major negative side effects on economic growth or on the welfare of people on the lowest incomes. In addition, 'rationing scarce physical space by the price mechanism ... generated large funds for investment in improvements much beyond transport, and enabled reductions of other, less desirable taxes' (Willoughby, 2000: iii).

This is a truly integrated transport policy. Those who cannot afford to run a car benefit from higher-quality public transport and lower taxes. That is a compensation deal that turns everyone into a winner. Road rents facilitate a sophisticated approach to sharing scarce space. The collateral gains include a dynamic economy at the frontier of technological progress, and wage levels that are the envy of employees in the rich nations of the West.

Commentators generally fail to link the road rents regime with Singapore's low tax rates. But the government is conscious that success in the global markets depends on their being able to recycle rents back into the island's infrastructure so that equity is associated with efficiency. Large fortunes are made in Singapore, but these tend to be earned rather than the result of wind-falls. The housing sector illustrates the point. The government, in providing highways, does not expect to reward landowners while

penalising taxpayers (which is the UK political model). So when land is compulsorily purchased to provide public housing, it has to be sold to the state at agricultural-use prices. Far from undermining the free market, this policy is used to bolster an enterprising economy which places Singapore at the forefront of global commerce.

Today, 86 per cent of Singaporeans live in public housing towns. Their arteries are the road and rail networks which, if allowed to become sclerotic in the way familiar to Europeans and North Americans, would quickly cause seizure in Singapore. About 63 per cent of motorised trips are by public transport. The Singapore philosophy is that travel is always for a purpose, and that it therefore makes sense to integrate land use and transport by locating homes, offices and recreational amenities in appropriate proximity to transport amenities. Singapore's free market ethic is not affronted by her stress on the need for planning, because the two are viewed as working in tandem to produce the best possible outcomes for everyone with a stake in the city-state.

In terms of Hypothesis II, *it is not tenable to believe that road pricing is financially or technologically unrealistic, or that it disadvantages people on the lowest incomes.*

Japan: shopping for efficiency

Britain played a significant role in the construction of railways in Japan. The first line was built in 1872, between Tokyo and Shimabashi. By 1945, more than 25,600 kilometres of lines existed. National Railways operated 20,056 kilometres of lines, private railways operated 5,543 kilometres. By 1981, the JNR (Japanese National Railways) system was 21,418 kilometres long.

But while the technology may have been imported, the funding arrangements were inspired by the emperor in the 1870s (Harrison, 1983: ch. 11). Rising farmland rents were invested in the infrastructure that delivered what was to become the second-wealthiest nation in the world. Japan's entrepreneurs also understood the intimate relationship between capital investment in railways and the rents that were externalised through the land market. That emerges as a historical lesson of major significance. A second lesson, from the privatisation programme of 1987, is that market principles were necessary to achieve maximum efficiency in the use of labour.

The novel feature of Japan's railways originated at the beginning of the twentieth century. Entrepreneurs developed their commercial interests by associating department stores with the construction of their own railways. The tracks were run from the suburbs and the terminus was at the store itself. The railway brought in the customers. The externalised value of the investment in the railway was internalised into the profits of the store, which funded the capital costs of the tracks.

Railways generated added value at both ends of the track. At the residential end, land values rose beneath the homes of families living in the suburbs. At the commercial end, land values rose beneath the retail properties. The capture of the additional value beneath commercial buildings was sufficient to enable the railways to operate profitably. They did not need subsidies from taxpayers. This mechanism was used to regenerate communities after the devastation of World War II. Rents were the catalyst for the emergence of diversified enterprises. During the 1950s and 1960s many private rail companies built lines that 'frequently served as anchors for real estate and commercial development

projects. Private rail companies subsequently diversified their commercial interests outside the transport sector into activities such as hotel and retail operations, as their real estate projects developed' (Kopicki et al., 1995: 75).⁵

Private rail networks provided the major component of Japan's urban and commuter services. One of these was the Odakyu Electric Railway Company Ltd. It was established in 1948, but its origins go back to the Odawara Express Railway Company Ltd (founded in 1923). Its small network of 120 kilometres of tracks served commuters between residential suburbs and Tokyo city centre. Originally, it was built to serve shopping centres. The company continues to operate department stores, tourist facilities that include hotels, and other real estate interests. Then, as the world embarked on the Information Age, it demonstrated its capacity to move with the times. Odakyu realised that it could extract additional rents from its tracks by laying fibre-optic cables. From April 2001 it leased these to two Internet service providers and cable TV companies. With daily passengers totalling 1.8 million, it is investing in new tracks to reduce travel times. Funds are from banks and shareholders. Despite its debt, it remains profitable and pays a 10 per cent dividend to shareholders.

The disasters of World War II required a regeneration programme, and the Japanese government decided to develop a national strategy that would integrate the networks. The JNR was established as a public corporation in 1949. It proved by its size to be too awkward to respond to the needs of passengers and shippers. It found competition from private railways awkward to handle, its operations were hampered by government

5 This account of the Japanese story draws heavily on Chapter 5 of Kopicki et al. (1995).

intervention, inadequate management incentives and labour unions that were protected from market competition.

Technologically, Japan was at the forefront. The first high-speed Shinkansen (bullet train) was introduced in the 1960s. Technology was not matched by the financial performance of the JNR. Its crisis began in the late 1950s. Its market share was eroded by private railway companies. The first operating loss surfaced in 1964. By 1985 it was generating losses at an annual rate of \$20 billion. In 1987, when it was privatised, it could not deliver enough money to service its debt. The government's annual \$5 billion subsidy was insufficient.

Unlike its private competitors, the nationalised network was profligate in the use of labour. The JNR hoarded people. At one point, labour costs were 78 per cent of total revenues on the JNR compared with 40 per cent for private railways. Observing a general shift away from rail traffic, 'private railways responded with profit-oriented operational strategies to cope with the changed competitive environment. In contrast, JNR continues to expand its unprofitable remote railway network, on the grounds that it was a public service-oriented enterprise. Remote railway routes accounted for more than 40 per cent of the lines run by JNR but represented only 5 per cent of total transport volume', observed the World Bank (*ibid.*: 83).

Were these 'remote' routes really drains on the JNR's profit-and-loss account? How did the World Bank know? In the private sector, rail-related land values were monitored through the assets of railway/real estate enterprises. In the public sector, the national accounts failed to offer a comprehensive audit that included the rents that could be attributed to the railways. The strikingly large JNR debt does not help us to reach a conclusion. The alleg-

edly unprofitable railways of Europe reported 'deficits' that were addressed through subsidies, so no debt was carried over to the following financial year. JNR's debt ballooned because its annual deficits were covered by borrowing money. It first borrowed to cover an operational cost shortfall in 1971. By 1987, the debt was US\$337 billion. Ideally, we would like to compare that debt with the value of land of remotely located owners whose assets generated rents because of the punctual arrival and departure of the JNR trains.

The JNR debt was assigned to the Japan National Railways Settlement Corporation in 1987, along with surplus real estate and shares in the newly created Japanese Railways (JRs). It was out of these assets that the JNR Settlement Corporation endowed a fund with income-generating securities to cover the revenue shortfall and capital costs of the three island JRs.

A measure of the constraints on enterprise driven by the public sector's influence is suggested by what happened after privatisation. Employment was reduced in the JRs from 200,650 (1986) to 132,296 employees (1991). But the JNR had not only hoarded labour. Under privatisation, a large amount of undeveloped land was sold, including 3,917 hectares in 1992. The railways had contributed to the land speculation boom of the late 1980s.

Once privatised, the financial fortunes of the individual companies were transformed. This was reflected in the public finances: *the annual \$5 billion drain on the Treasury was turned into a net cash flow contribution of \$3.1 billion in 1991.*

Today, Japan has 148 rail companies, grouped into four types.

- 1 The JR Group. This is the former JNR. It is the single national mainline and freight company that was split in

1987 into six regional and one freight-operating private companies.

- 2 The urban private rail companies. These operate largely as commuter services. The majority are associated with department store and real estate companies. They own the infrastructure. Some facilities are shared between several train networks.
- 3 The publicly owned underground. Some local authorities operate subway systems. The Tokyo subway has twelve lines.
- 4 Small rural operations. These include many reportedly non-profitable local services which are operated by 'third sector' agencies involving local governments or prefectures.⁶

Since 1987, the government's role has been limited to maintaining the national infrastructure on the advice of the Transport Policy Council. The government assumes all or some of the investment cost and the risk in relation to infrastructure on the grounds of national development, and allegedly because this is beyond the capacity of private companies. This belief is undermined by the performance of the private railway/real estate companies. Odakyu's track-widening programme in 2002 was privately funded.

Because of the deeper relationship between operating costs and land values, the three largest JR companies and most of the urban companies such as Odakyu are profitable. While these companies are frequently associated with other commercial operations, the transport businesses are profitable, and are deemed not to be dependent on subsidies from, for example, their association with department stores.

6 We have no estimates of the potential decline (if any) in land values if those local services were withdrawn.

The privatised rail companies are vertically integrated. They control tracks, signalling and rolling stock up to the commercial activities associated with real estate at the stations. Japanese managements believe that ownership of, or responsibility for, the infrastructure provides them with the incentive to invest capital. They believe in first-rate tracks being necessary for first-rate rolling stock. In contrast to the British system of limited-life franchises, there are no such curbs on Japan's companies. They own the infrastructure for as long as they remain in business; similarly where the infrastructure is leased.

JR East is the largest railway company on the eastern end of Honshu. It has 7,538 kilometres of tracks and carries 16 million passengers every day. Its profits come from merchandise sales, shopping centres and hotels. Operating revenues have reached \$20.1 billion. Fares are set on the basis of marginal costs. They have remained unchanged since 1987, which means they are considerably lower than UK rail fares. Infrastructural investment is funded out of the land values that are recycled back into the operation through the real estate interests.

Some rail companies do make 'losses'. Osaka's Nankai Railway Company undertook staff reductions in 2002 to deal with its deficit. Three companies that operate on the islands would not be financially viable without funding from the Railway Management Stabilisation Fund. This is composed of the rail assets that were retained by government. Income from the fund is allocated to invest in infrastructure on the islands. Funds are also allocated where a 'social' need is perceived. For example, some JR companies were reluctant to abandon some of the social obligations that were acknowledged by the publicly owned rail organisation, and they are unwilling to close loss-making local lines. A full accounting

would reveal whether land values in those localities would decline if the rail services were withdrawn.

While the financial performance of the private railway companies speaks for itself, Japan lost its fiscal way in the twentieth century. The emperor's optimum pricing policies became a victim of the democratisation of the political process. But the Japanese government continues to search for ways to align transport with its scarce landed assets. In January 2001 the ministries of construction and transport were merged into the Ministry of Land Infrastructure and Transport (MLIT). Its mission is to integrate land use and transport 'through the comprehensive and systematic utilisation, development and conservation of land, integrated improvement of infrastructure and the pursuit of innovative transport policy'.

The economic realities of mass transit systems have been corrupted by policy errors, so that even the most seasoned transport chiefs, such as Bob Kiley, whose success in operating New York's metro led to his appointment as London's Traffic Commissioner, could erroneously claim: "There is not a transport system in the world which is run without public subsidy. There is no break-even transit system anywhere."⁷

Our review of the evidence from the Far East casts a completely new light on transport economics. In terms of Hypothesis III, *the notion that the only model for railways is state ownership based on the power of the public purse is discredited.*

The general conclusion is unambiguous. The way in which a community uses and distributes the rent of land is the key to achieving optimum efficiency and the solution to problems that

7 Bob Kiley, interview on *The Politics Programme*, BBC1, 19 October 2003.

have hitherto defeated governments. We need a deeper assessment of rent and the role of the state. People need to know that there are penalties for not paying the market price for the use of highways, for example, as happens in Singapore. Under-payment has a reciprocal effect in the land market. One illustration is what happened to the value of the UK's housing stock over the ten years to 2004: it increased by 200 per cent, reaching £3.3 trillion (50 per cent higher than in 2001, according to Halifax). If motorists had to pay the market price for using the highways, they would end up bidding less for residential property. As it was, under-payment for the use of roads contributed to the house price barrier that denied affordable homes to many people.